



Performance review body  
of the single european sky



# PRB Monitoring Report 2021

## Annex II – Member States’ detailed analysis for experts

The 2021 monitoring consists of six reports:

1. PRB Monitoring Report 2021
2. Traffic light system for environmental performance
3. Annex I – Member States’ factsheets
4. **Annex II – Member States’ detailed analysis for experts**
5. Annex III – Safety report
6. Annex IV – Investments report

October 2022

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## 1 Introduction

This document is Annex II to the PRB Monitoring Report 2021. It presents a summary of the Union-wide and local performance in 2021 for each key performance indicator (KPI), followed by detailed analyses at Union-wide and local levels in each of the four key performance areas.

It has been prepared in a collaboration between the Performance Review Unit (PRU) of Eurocontrol and the European Union Aviation Safety Agency (EASA).

The legal basis for monitoring the performance of the air traffic management in the Single European Sky (SES) area during the third reference period (RP3) is defined in Articles 11, 12, 14, 15 and 16 of Regulation (EC) No 549/2004 (the Framework Regulation), and in the Implementing Regulation (EU) No 2019/317 (the Performance and Charging Regulation).

Due to the outbreak of the COVID-19 pandemic, the European Commission adopted exceptional measures for RP3 (Commission Implementing Decision (EU) 2020/1627 of 3 November 2020) and adopted revised Union-wide targets for RP3 in June 2021 (Commission Implementing Decision (EU) 2021/891 of 2 June 2021). For the KPA of cost-efficiency, the targets at Union-wide and local level should cover the determined costs of calendar years 2020 and 2021 as a single period.

The Member States submitted their draft performance plans containing revised targets for RP3 ensuring consistency with the revised Union-wide performance targets in October-November 2021.

The European Commission issued decisions on consistency and inconsistency of the performance targets of the plans pursuant to Regulation (EC) No 549/2004 of the European Parliament and of the Council on 13 April 2022, as follows:

- Commission Decisions (EU) 2022/764 to 2022/779 of 13 April 2022 on the consistency of the performance targets contained in the draft performance plan submitted by Croatia, Finland, Ireland, Portugal, Slovakia, Lithuania, Denmark, Estonia, Czech Republic, Italy, Austria, Hungary, Spain, Slovenia, Bulgaria and Poland;
- Commission Implementing Decision (EU) 2022/728 of 13 April 2022 on the inconsistency of certain performance targets contained in the draft national and functional airspace block performance plans submitted by Belgium, Germany, Greece, France, Cyprus, Latvia, Luxembourg, Malta, the Netherlands, Romania and Sweden;
- Commission Implementing Decision (EU) 2022/780 of 13 April 2022 on the inconsistency of certain performance targets contained in the draft functional airspace block performance plan submitted by Switzerland.

Member States with consistent targets should now adopt and publish the final versions of their respective performance plans. Member States with inconsistent targets have submitted revised draft performance plans to the European Commission in July 2022 (as per Article 14(3) of (EU) No 2019/317), which are currently being assessed.

It should be noted that a number of States affected by significant decreases in traffic due to Russia's war of aggression against Ukraine may also enter in the process of performance plan revision and request permission from the Commission (as per Article 18 of (EU) No 2019/317).

## 2 Summary of the performance in 2021 at Union-wide level

Table 1 shows the Union-wide performance in 2021 against the targets for the Key Performance Areas of Environment and Capacity.

KPI (UNION-WIDE)	2021		Actual vs target
	EU TARGET	PERFORMANCE	
<b>ENVIRONMENT</b>			
KEA (horizontal en route flight efficiency – actual route)	2.37%	2.59%	✘
<b>CAPACITY</b>			
Average en route air traffic flow management (ATFM) delay per flight (Minutes)	0.35	0.32	✔

Table 1 - Actual performance at Union-level (2021) – Environment and Capacity

Table 2 presents the actual real en route unit cost (AUC) recorded at Union-wide level for the combined year 2020-2021 compared to the Union-wide target - determined real en route unit cost (DUC) from Commission Implementing Decision (EU) 2021/891 of 2 June 2021.

KPI (UNION-WIDE)	2020-2021		Actual vs target
	EU TARGET	PERFORMANCE	
<b>COST-EFFICIENCY</b>			
Real en route unit cost for en route ANS (€ <sub>2017</sub> )	110.53	98.52	-10.9%

Table 2 - Actual performance at Union-level (combined year 2020-2021) – Cost-efficiency

Table 3 shows the actual unit cost incurred by users separately for en route and terminal air navigation services at Union level compared to the average DUC in euro in nominal terms for the combined year 2020-2021.

PI (UNION-WIDE)	2020-2021		Actual vs target
	DUC	AUCU	
<b>COST-EFFICIENCY</b>			
Actual unit cost incurred by users for en route (€)	104.65	102.18	-2.4%
Actual unit cost incurred by users for terminal (€)	380.85	337.41	-11.4%

Table 3 - Actual performance at Union-level (combined year 2020-2021) – Cost-efficiency

## 3 Summary of the performance in 2021 at local level (FAB/national)

### Environment and capacity:

Table 4 shows the operational performance in 2021 against the targets for the Key Performance Areas of Environment and Capacity at local level.

State / FAB	Provisional Targets								
	Flt Efficiency (% KEA)		En route delay (minute / flight)			Arrival delay (minute / flight)			
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	
Austria	1.96	1.87	✓	0.10	0.00	✓	0.47	0.11	✓
Bulgaria	2.25	2.48	✗	0.04	0.00	✓	N/A	N/A	
Croatia	1.46	1.32	✓	0.09	0.07	✓	N/A	N/A	
Cyprus	3.84	4.49	✗	0.10	0.00	✓	N/A	N/A	
Czech Republic	2.05	2.03	✓	0.06	0.01	✓	0.40	0.01	✓
Denmark	1.14	1.08	✓	0.03	0.00	✓	0.10	0.02	✓
Estonia	1.22	1.43	✗	0.01	0.00	✓	0.00	0.00	✓
Finland	0.88	0.77	✓	0.03	0.00	✓	0.21	0.10	✓
Greece	2.00	2.54	✗	0.32	0.43	✗	0.90	1.63	✗
Hungary	1.50	1.64	✗	0.06	0.01	✓	0.05	0.00	✓
Ireland	1.13	1.01	✓	0.01	0.00	✓	0.25	0.01	✓
Italy	2.67	2.79	✗	0.07	0.05	✓	0.41	0.03	✓
Latvia	1.25	1.62	✗	0.01	0.00	✓	0.02	0.02	✓
Lithuania	1.93	3.01	✗	0.01	0.00	✓	N/A	N/A	
Malta	1.82	3.11	✗	0.01	0.00	✓	0.01	0.01	✓
Norway	1.55	1.34	✓	0.06	0.00	✓	0.50	0.01	✓
Poland	1.65	2.33	✗	0.07	0.07	✓	0.02	0.00	✓
Portugal	1.80	1.65	✓	0.09	0.07	✓	0.90	0.58	✓
Romania	2.10	2.22	✗	0.02	0.00	✓	0.50	0.00	✓
Slovakia	2.15	2.29	✗	0.05	0.00	✓	N/A	N/A	
Slovenia	1.55	1.48	✓	0.05	0.00	✓	N/A	N/A	
Spain	3.08	3.30	✗	0.12	0.09	✓	0.44	0.19	✓
Sweden	1.05	1.04	✓	0.05	0.00	✓	0.05	0.00	✓
<b>FABEC</b>	2.75	2.96	✗	0.27	0.39	✗	N/A	N/A	
<i>Belgium</i>		3.55			0.01		1.08	0.04	✓
<i>France</i>		3.25			0.45		0.40	0.23	✓
<i>Germany</i>		2.31			0.22		0.45	0.28	✓
<i>Luxembourg</i>		N/A			N/A		0.12	0.14	✗
<i>Netherlands</i>		2.73			0.04		1.40	0.54	✓
<i>Switzerland</i>		3.87			0.06		1.03	0.37	✓

Table 4 - Actual performance at local level (2021) – Environment and Capacity

N/A: No airports included in the Performance Plan / Indicator not monitored at FAB level.

Note: FABEC only set FAB targets, not national targets for both en route capacity and for flight efficiency.

#### En route Capacity:

Only FABEC and Greece did not achieve their local target for en route capacity performance in 2021.

FABEC explained that the delays were mainly caused by limited ATC capacity, staffing and severe weather in France and Germany, predominantly at four ACCs: Reims ACC, Marseille ACC, Bremen ACC and Karlsruhe UAC.

Greece attributed the capacity shortfall primarily to ATC staffing and explained that staff shortages were negatively affected by changes to recruitment plans caused by the COVID 19 crisis.

Portugal, having missed its local en route capacity target in 2020, improved significantly and surpassed its target for 2021.

All other States achieved their national / FAB targets albeit with still substantially reduced traffic levels compared to 2019.

### Cost-efficiency:

Figure 1 for en route) and Figure 2 (for terminal) show the details per charging zone of the AUC for the combined year 2020-2021 against the DUC in real terms in €2017.

2020-2021 AUC vs DUC (€2017) for en route				
En route charging zones	AUC vs DUC	Costs actual vs determined	TSUs actual vs forecast	
Poland	-13.2%	-12.5%	0.8%	
Greece	-8.4%	-7.4%	1.1%	
Slovakia	-8.2%	-7.9%	0.3%	
Slovenia	-8.1%	-3.4%	5.1%	
Latvia	-6.9%	-4.4%	2.6%	
Finland	-6.3%	-4.9%	1.5%	
Croatia	-6.1%	-5.8%	0.3%	
Cyprus	-5.5%	-3.9%	1.7%	
Spain Canarias	-5.1%	-1.9%	3.3%	
Austria	-4.4%	-4.6%	-0.2%	
Germany	-4.2%	-3.4%	0.8%	
Bulgaria	-4.0%	-3.1%	0.9%	
Estonia	-3.8%	-1.3%	2.6%	
Ireland	-3.7%	-1.3%	2.5%	
Czech Republic	-3.5%	-3.5%	0.0%	
Italy	-3.5%	-0.8%	2.8%	
Sweden	-3.4%	-1.6%	1.8%	
Netherlands	-3.1%	-1.4%	1.7%	
Belgium-Luxembourg	-3.0%	-2.8%	0.3%	
Hungary	-2.3%	-2.3%	0.0%	
France	-2.1%	-1.1%	1.1%	
Norway	-1.8%	-0.4%	1.5%	
Spain Continental	-1.7%	-1.6%	0.1%	
Lithuania	-1.5%	0.8%	2.4%	
Denmark	-1.4%	-0.2%	1.2%	
Portugal Continental	-1.3%	0.5%	1.8%	
Malta	-1.0%	-3.6%	-2.6%	
Romania	0.6%	0.1%	-0.5%	
Switzerland	1.5%	2.7%	1.2%	
<b>Union-Wide</b>	<b>-3.3%</b>	<b>-2.3%</b>	<b>1.1%</b>	

Figure 1 - Actual en route unit costs vs the DUC for the combined year 2020-2021

2020-2021 AUC vs DUC (€2017) for terminal				
Terminal charging zone	AUC vs DUC	Costs actual vs determined	TNSUs actual vs forecast	
Poland zone 2	-16.1%	-14.7%	1.8%	
Poland zone 1	-16.0%	-17.4%	-1.6%	
Greece	-13.2%	-13.1%	0.1%	
Malta	-8.4%	-7.7%	0.8%	
Finland	-8.0%	-3.6%	4.7%	
Estonia	-7.2%	-2.0%	5.6%	
France zone 1	-6.1%	-4.4%	1.8%	
Ireland	-6.0%	-2.8%	3.4%	
Switzerland	-4.5%	-4.4%	0.2%	
Latvia	-4.2%	-2.6%	1.8%	
Sweden	-4.1%	-0.4%	3.9%	
Italy zone 2	-3.9%	-0.2%	3.9%	
Italy zone 1	-3.9%	-1.7%	2.2%	
Spain	-3.8%	-2.9%	0.9%	
Czech Republic	-3.2%	-3.5%	-0.3%	
Belgium Brussels	-3.1%	-3.6%	-0.5%	
Luxembourg	-3.0%	-4.5%	-1.5%	
Hungary	-3.0%	-3.0%	0.0%	
Germany	-2.7%	-1.9%	0.8%	
Denmark	-2.4%	-0.3%	2.2%	
Netherlands	-1.8%	-1.9%	-0.1%	
Austria	-0.9%	-2.0%	-1.1%	
Portugal	-0.1%	1.7%	1.9%	
Norway	1.2%	0.3%	-0.9%	
France zone 2	1.7%	2.1%	0.4%	
Romania	2.1%	-2.6%	-4.6%	
<b>Union-Wide</b>	<b>-3.0%</b>	<b>-2.1%</b>	<b>0.9%</b>	

Figure 2 - Actual terminal unit costs vs the DUC for the combined year 2020-2021



Table 5 (for en route) and Table 6 (for terminal) provide details per charging zone of the actual unit cost incurred by users for the combined year 2020-2021 against the DUC in nominal €.

En route charging zones	DUC (€)	AUCU (€)	AUCU vs. DUC (%)
Belgium-Luxembourg	197.24	195.76	-0.7%
Germany	134.83	132.65	-1.6%
Estonia	62.39	60.50	-3.0%
Finland	83.62	71.52	-14.5%
Netherlands	159.49	151.58	-5.0%
Ireland	48.14	44.40	-7.8%
Denmark	127.64	125.95	-1.3%
Norway	80.06	48.11	-39.9%
Poland	75.85	74.06	-2.3%
Sweden	137.43	133.35	-3.0%
Latvia	41.92	41.61	-0.7%
Lithuania	53.32	52.59	-1.4%
Spain Canarias	107.38	87.05	-18.9%
Bulgaria	51.24	50.83	-0.8%
Cyprus	50.35	48.81	-3.1%
Croatia	70.24	65.86	-6.2%
Spain Continental	110.16	112.68	2.3%
France	136.72	135.73	-0.7%
Greece	41.19	40.72	-1.1%
Hungary	53.91	53.38	-1.0%
Italy	125.99	123.86	-1.7%
Slovenia	104.56	96.06	-8.1%
Czech Republic	84.80	84.11	-0.8%
Malta	45.45	44.79	-1.5%
Austria	114.85	112.01	-2.5%
Portugal Continental	66.88	66.27	-0.9%
Romania	67.43	67.34	-0.1%
Switzerland	212.52	212.38	-0.1%
Slovakia	85.37	80.67	-5.5%
<b>Union-wide</b>	<b>104.65</b>	<b>102.18</b>	<b>-2.4%</b>

Table 5 - Actual en route unit cost incurred by users vs plan for the combined year 2020-2021

Terminal charging zones	DUC (€)	AUCU (€)	AUCU vs. DUC (%)
Belgium Brussels	415.36	324.46	-21.9%
Germany	441.14	436.34	-1.1%
Estonia	280.57	209.52	-25.3%
Finland	379.03	372.16	-1.8%
Netherlands	315.39	301.50	-4.4%
Ireland	289.52	242.96	-16.1%
Denmark	361.53	360.39	-0.3%
Luxembourg	356.36	303.05	-15.0%
Norway	287.59	159.82	-44.4%
Poland zone 1	184.11	183.17	-0.5%
Poland zone 2	416.08	410.25	-1.4%
Sweden	403.06	394.68	-2.1%
Latvia	312.73	312.59	0.0%
Spain	236.76	58.80	-75.2%
France zone 1	196.26	329.27	67.8%
France zone 2	684.85	447.86	-34.6%
Greece	236.82	216.32	-8.7%
Hungary	469.82	464.71	-1.1%
Italy zone 1	412.94	410.81	-0.5%
Italy zone 2	344.06	338.47	-1.6%
Czech Republic	541.13	526.46	-2.7%
Malta	310.41	305.05	-1.7%
Austria	432.30	428.53	-0.9%
Portugal	244.47	246.22	0.7%
Romania	429.55	438.35	2.0%
Switzerland	811.99	814.95	0.4%
<b>Union-wide</b>	<b>380.85</b>	<b>337.41</b>	<b>-11.4%</b>

Table 6 - Actual terminal unit cost incurred by users vs plan for the combined year 2020-2021

## 4 Cost-efficiency monitoring at State level: Reader's Guide

### 4.1 Introduction

- 4.1.1 The objective of this section is to facilitate the understanding of the analysis made in the cost-efficiency monitoring reports at State level.
- 4.1.2 The source of the data used for on the cost-efficiency monitoring are the June 2022 en route and terminal Reporting Tables provided by the States for each charging zone (CZ). These have been complemented by the updates provided a) in the NSA monitoring reports on cost exempt due to be submitted by 1 September 2022 and b) the revised RP3 performance plans submitted on 13 July, currently under verification.
- 4.1.3 The analysis is structured into three main parts: en route charging zone(s), terminal charging zone(s) and gate-to-gate ANS cost-efficiency monitoring for all the charging zones covered by the SES performance scheme under the responsibility of the State. Common templates and analytical frameworks are used for both en route and terminal ANS, and for the States having several en route (Spain) or terminal (Italy, France and Poland) charging zones, the framework is replicated for each charging zone.
- 4.1.4 Graphs, tables and comments are displayed into "boxes", with each box focusing on a particular aspect of the monitoring analysis. Section 1.2 below provides explanations on the content of each box constituting the en route and the terminal analysis. Section 1.3 presents the content of the gate-to-gate analysis.

### 4.2 En route and terminal ANS analysis

#### 1. Contextual economic information

Box 1 presents information on:

- The State's share in SES ANS actual costs in 2019;
- The national currency and the exchange rates against the € (source: Average of the daily "Closing Rates" calculated by Reuters based on daily BID rates) for the years:
  - 2017: used for the conversion in real €2017;
  - 2020: used for the conversion of 2020 costs into €;
  - 2021: used for the conversion of 2021 costs into €;
- The date of issue of the performance plan and whether or not it was found consistent with the references of the relevant EC decision. Information on the adoption and submission of final performance plans or revised performance plans where applicable.
- For en route charging zones, the FAB membership;
- For Terminal Charging Zones, box 1 also indicates the number of airports in the TCZ (with a classification per number of air transport movements).

#### 2. Monitoring of the en route (or terminal) determined unit costs (DUC) at charging zone level

Box 2 contains standard text identical for all States, explaining the notions of determined unit costs (DUC) and actual unit cost (AUC).

#### 3. En route (or terminal) actual unit cost (AUC) vs en route (or terminal) determined unit cost.

Box 3 identifies whether the AUC is lower (improvement of the performance indicator) or higher (deterioration of the performance indicator) than the DUC target set in the Performance Plan (PP), and what were the drivers for the improvement or deterioration (costs, traffic).

It provides transparency on the different steps required to undertake the monitoring of the DUC, for the combined year 2020-2021, showing:

- The planned performance (based on RP3 PP data);
- The actual performance (based on the June 2022 Reporting Tables for the all RP3 years);
- And the differences between actual and planned performance.

To ensure consistency with the determined costs data provided in the adopted PP, actual costs are expressed in 2017 prices. Planned and actual inflation indices are also shown in box 3.

#### 4. Focus on en route (or terminal) DUC monitoring at charging zone level

Box 4 contains graphical summaries (right-hand side) of the differences in traffic (service units), costs by entity, and costs by nature for the main ANSP as well as comments (left-hand side) on the situation observed for the combined year 2020-2021.

The comments provide an analysis and general conclusions on the 2020-2021 DUC at State/Charging zone level, including:

- Comparison between the AUC and the DUC;
- Comparison of actual costs and traffic to the costs and traffic in the PP;
- Comments on the application of the traffic risk sharing mechanism in the State;
- Comments on which entity is driving the difference between actual and planned costs, and on which drivers for the main ANSP.

For the purpose of analysing the differences between determined and actual costs, as presented in box 4, all cost items are expressed in real 2017 terms on the basis of the inflation index computed using the planned/actual inflation rates provided by States in the en route and terminal reporting tables. Specifically, as provided by article 26 of Regulation (EU) 2019/317, costs incurred by competent authorities, qualified entities and EUROCONTROL costs are not corrected for inflation. Similarly, for all the ANSPs and METSPs, depreciation costs and the cost of capital are not corrected for inflation.

#### 5. Monitoring of the en route (or terminal) actual unit cost for users (AUCU) at charging zone level

Box 5 contains standard text identical for all States, explaining the notion of actual unit cost for users (AUCU).

#### 6. En route (or terminal) actual unit cost for users (AUCU) at charging zone level

Box 6 shows all the adjustments required to calculate the AUCU for the combined year 2020-2021, starting from the DUC (in national currency in nominal terms). This reflects the unit cost that airspace users genuinely incur in respect of the activities performed in 2020-2021.

The bar on the left-hand side of the chart presents the 2020-2021 DUC and each bar moving to the right shows the contribution (in nominal terms) of each adjustment to reach the 2020-2021 AUCU (the last bar on right-hand side of the chart). The detailed figures, both in national currency and in € are given in the table on the right-hand side.

The 2020-2021 DUC bar is displayed with two colours:

- The grey sub-bar corresponds to the part of the DUC which has already been charged to airspace users through the 2020 and 2021 unit rates, which were calculated on the basis of the initial draft RP3 PPs submitted in October-November 2019, before the outbreak of the COVID19 pandemic and the subsequent revision of the union-wide targets. The formula behind this calculation only reflects the DC through the unit rates:  
$$= ((UR \text{ applied in } 2020 - (\text{Adjustments contained in the } 2020 \text{ UR} / \text{forecast TSUs used for the calculation of the } 2020 \text{ UR})) * \text{actuals TSUs } 2020) + (UR \text{ applied in } 2021 - (\text{Adjustments contained in the } 2021 \text{ UR} / \text{forecast TSUs used for the calculation of the } 2021 \text{ UR})) * \text{actuals TSUs } 2021) / \text{actual TSUs for the combined year } 2020-2021;$$
- And the dark blue sub-bar represents the part of the DUC from the draft RP3 revised PPs submitted in October-November 2021, which will be charged through the retroactive application of the unit rates via the adjustment foreseen in Art. 29(5) of (EU) 2019/317 and Art. 5(4) and 5(5) of (EU) 2020/1627. As for the DUC already charged, the formula behind the calculation only reflects the DC through the unit rates:  
$$= (UR \text{ for the combined year } 2020-2021 \text{ calculated on the basis of the draft updated RP3 PP of October-November } 2021 - (\text{Adjustments contained in the UR for the combined year } 2020-2021 / \text{forecast TSUs used for the calculation of the UR for the combined year } 2020-2021)) * \text{actual TSUs for the combined year } 2020-2021.$$

The rationale for the different adjustments, and the methodology used for their conversion into € is provided below:

- Inflation adjustment: to reflect the impact of higher/lower inflation index in 2020 and 2021 which will be charged/reimbursed to airspace users in year 2023; The adjustment is converted into € at the 2021 average exchange rate, since it only applies to 2021.
- Costs reported by the State as being exempted from cost-sharing in accordance with Art. 28(3) to 28(6) of Regulation (EU) 2019/317 (i.e. costs exempt from cost-sharing): to reflect the elements of the cost sharing mechanism, where differences between determined costs included in the performance plan and actual costs for 2020 and 2021 are shared between air navigation service providers and airspace users, in accordance with the provisions of Article 28 (EU) 2019/317 and will be charged/reimbursed to airspace users in future years' unit rates. The adjustment is converted into € at the 2021 average exchange rate, since it only applies to 2021.
- Traffic risk sharing adjustment: to reflect the gain/loss in revenues due to higher/lower traffic than planned in

2020-2021, which will be reimbursed/charged to airspace users in 2023 and 2024. The adjustment is converted into € at the 2021 average exchange rate, since it is triggered by a difference in traffic for 2021 only.

- **Traffic adjustment (for costs not subject to traffic risk sharing):** to reflect the fact that, for the costs not subject to traffic risk sharing, over/under recoveries due to higher/lower traffic than planned in 2020-2021 will be fully reimbursed/charged to airspace users in 2023 and 2024. The adjustment is converted into € at the 2021 average exchange rate, since it is triggered by a difference in traffic for 2021 only.
- **Traffic adjustment on adjustments:** Left blank. The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.
- **Financial incentives:** Not applicable for 2020-2021.
- **Modulation of charges:** to reflect the adjustment relating to 2020-2021 that be fully reimbursed/charged to airspace users in 2023 and 2024.
- **Temporary UR:** Left blank. The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (DUC to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.
- **Cross-financing:** to reflect the amounts of cross-financing between en route charging zones, or between terminal charging zones, in accordance with point (e) of Article 15(2) of Regulation (EC) No 550/2004;
- **Other revenues:** to reflect the deduction of “other revenues” obtained in 2020 and 2021. As the breakdown between amounts obtained in 2020 and 2021 is not available, the adjustment has been allocated to 2020 and 2021 using the proportion of forecast TSUs and further converted into € at the 2020 and 2021 average exchange rates, respectively;
- **Application of a lower unit rate:** to reflect the actual reduction per service units given to airspace users through the application of a lower unit rate as foreseen in Art. 29(6) of (EU) 2019/317. The adjustment is converted into € for each year separately, using the 2020 and 2021 average exchange rates.

For the calculation of the AUCU in box 6, all cost categories listed above are divided by the actual TSUs for the combined year 2020-2021.

### 7. En route (or terminal) costs exempted from cost-sharing

Box 7 contains a table presenting the costs reported by the State (in the June 2022 Reporting Table) as being exempted from cost-sharing (Differences between determined and actual costs referred to in (EU) 2019/317 Art. 28(4) to 28(6)). Costs are listed by item (in nominal national currency, in nominal €, as well per actual service unit in nominal national currency and in nominal €). The total costs exempted from cost-sharing are summed at the bottom of the table. If the total is negative, the costs are to be recovered from airspace users in future years; if costs are positive, they are to be reimbursed. These data are taken from the “NSA Report on the verification of cost-sharing for the combined year 2020-2021” submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317 for the ANSPs. For the NSAs, these are taken from the June 2022 reporting tables, updated with the revised RP3 performance plans submitted on 13 July, if applicable.

### 8. En route (or terminal) regulatory result at charging zone level

Box 8 presents the share of the regulatory result (RR) in the AUCU at charging zone level. For this, the AUCU is considered before the deduction of the other revenues (financing from other sources) in order to show a fair view of the share and to be consistent with the computation of the RR itself (described in boxes 10 to 14).

The RR is shown separately for each ANSP/METSP, in nominal national currency, in nominal €, as well per actual service unit in nominal national currency and in nominal €. For the NSAs and Eurocontrol costs, it is considered that there is no RR since the amounts charged *in fine* to users are their actual costs, through the cost-exempt and traffic adjustment mechanisms.

The RR in percentage of the AUCU corresponds to the total RR for the charging zone divided by the AUCU before the deduction of the other revenues. It indicates the share of “margin” contained in the bill paid *in fine* by the airspace users.

### 9. Focus on en route (or terminal) AUCU monitoring at charging zone level

Box 9 summarises the conclusions on the AUCU for the combined year 2020-2021, its components and comparison with the DUC. It also refers to the share of the regulatory result in the AUCU.

## 10. Monitoring of the en route (or terminal) regulatory results (RR)

Box 10 contains standard text identical for all States, explaining the notion of regulatory result (RR), including the net gain/loss.

## 11. Net gain/loss for the main ANSP for the en route (or terminal) activity at charging zone level

Box 11 focuses on the main ANSP net gain/loss on ANS activities for the combined year 2020-2021. A graphical illustration of this analysis is also shown on the left-hand side of box 13. The main ANSP is the most significant contributor to the State's costs and the only (or main) entity subject to costs and traffic risk sharing mechanisms foreseen by the performance and charging regulation ((EU) 2019/317).

The net gain/loss calculated in the bottom line of box 11 results from the combination of three distinct items:

1. The outcome of the cost-sharing mechanism to be retained by the ANSP, including
  - the difference between determined and actual costs to be retained/borne by the ANSP;
  - the impact of the inflation adjustment to be charged/reimbursed to airspace users;
  - the impact of the costs exempt from cost-sharing that will be recovered from or reimbursed to users (as per the "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317).
  - The outcome of the traffic risk sharing mechanism. For this, the following elements are taken into account:
    - The difference in total service units (actual vs. PP) in percentage terms.
    - The determined costs subject to traffic risk-sharing of the main ATSP for the combined year 2020-2021.
    - The features of traffic risk sharing mechanism (standard as applied by all Member States): if actual traffic is  $\pm 2\%$  compared to the PP, the gain/loss in revenues is borne entirely by the ANSP; between 2% and 10% (higher or lower) than the PP it is shared between the ANSP (30%) and airspace users (70%); and if the difference between actual and planned traffic exceeds  $\pm 10\%$ , the gain/loss relating to traffic beyond  $\pm 10\%$  is entirely borne by the airspace users and has therefore no impact on the ANSP gain/loss from traffic risk sharing.
2. The outcome of the financial incentive mechanism for capacity and environment targets is set to zero, as this mechanism is not applicable for 2020-2021 (as per Art. 3(3) of (EU) 2020/1627).

The computation of the net gain/loss is presented in nominal national currency. The total net gain/loss is also presented in nominal € on the basis of the 2021 average exchange rate.

## 12. Regulatory result (RR) for the main ANSP at charging zone level

Box 12 presents the computation of the regulatory result (RR) for the main ANSP for the combined year 2020-2021. It is important to emphasise that this analysis focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Indeed, the latter include revenues from other activities (e.g. consultancy services) which are not covered by the SES performance and charging scheme, as well as revenues and costs pertaining to other years of activity.

The RR combines two elements:

- The return on equity (RoE) in value embedded in the cost of capital; and
- The main ANSP net gain/loss on ANS activities (see box 11).

Box 12 is structured in two parts.

- A first table presents the computation of the ex-ante RR for the charging zone, consisting in the RoE in value included in the determined cost of capital for the main ANSP from the RP3 PP. For an ANSP which is 100% financed through debt, the ex-ante RR will be null, while for an ANSP which 100% financed through equity, the entire cost of capital will be considered as the ex-ante RR.
- The second table shows the computation of the ex-post RR, comprising the RoE in value included in the actual cost of capital for the main ANSP from the RP3 PP and the net gain/loss on ANS activity, as presented in box 11.
- In both tables, indicators are calculated:
  - The RR in percent of en route revenues;
  - And the resulting ex-ante (determined) or ex-post (actual) return on equity (in %).

The elements taken into account to calculate the RoE in value:

- The total asset base, as reported in the PP and the June 2022 Reporting Tables.
- The proportion of financing through equity (in %), as reported in the PP and the June 2022 Reporting Tables.
- The RoE (pre-tax) rate in %, as reported in the PP and in the June 2020 Reporting Tables (with the actual RoE % expected to match the determined RoE % from the PP).

The actual RoE in value is then calculated as the actual (=determined) RoE (pre-tax) rate multiplied by equity (total actual asset base x proportion of financing through equity). The elements taken into account to calculate the net gain/loss on ANS activities are presented in box 11.

For the ANSPs having no equity, the ex-ante and ex-post return on equity cannot be calculated and is indicated as N/A, not applicable.

It is important to note that the computation of the RR does not take into account the use that will be made of it in the sense that some ANSPs reimburse to airspace users all or part of their RR through commercial other revenues, or through the application of a lower unit rate as per Art. 29(6) of (EU) 2019/317. When such case has been identified, it is highlighted in a note in the table.

### 13. Focus on the main ANSP regulatory result on en route (or terminal) activity

Box 13 provides:

- On the left-hand side, a graphical summary of the ANSP net gain/loss for the combined year 2020-2021 arising from variations in costs, traffic, and incentives (see box 11).
- On the right-hand side, a bar chart comparing the ex-ante and ex-post RR, both in value (in national currency) and in % of the en route revenue (see box 12).

The notion of revenue used in boxes 12 to 14 corresponds to the revenue arising from the activity in the year, ex-ante it corresponds to the determined costs of the ANSP and ex-post to the sum of the actual costs and the net gain/loss for the ANSP. Box 13 also provides conclusions on the net gain/loss of the main ANSP for the combined year 2020-2021 and the overall regulatory result for the ANSP in the charging zone.

### 14. Other ANSP(s) / METSP(s) regulatory result on en route (or terminal) activity

Box 14 presents the ex-ante and ex-post regulatory results for the other ANSPs/METSPs providing services in the charging zone, if any. The computation of these results is made in accordance with the same methodology than that described for the main ANSP in boxes 10 to 13. Box 14 also provides conclusions on the net gain/loss of the other ANSPs/METSPs for the combined year 2020-2021 and the overall regulatory result for the other ANSPs/METSPs in the charging zone.

## 4.3 Gate-to-gate ANS analysis

### 1. Monitoring of gate-to-gate ANS costs

The monitoring at gate-to-gate level takes account of all the charging zones covered by the SES under the responsibility of the Member State. Box 1 presents the list of the charging zones concerned. Since, they have a common en route charging zone, Belgium and Luxembourg are presented together in this section.

Box 1 presents an aggregation of en route and terminal costs (in €<sub>2017</sub>) as well as the share of en route costs in total gate-to-gate costs. It also shows the difference between actual and planned data measured at gate-to-gate level (in €<sub>2017</sub> and in %).

### 2. Share of en route and terminal in gate-to-gate actual costs (2020-2021)

The left-hand side of box 2 shows a graphical presentation of the planned and actual split of gate-to-gate costs between en route and terminal. It helps identify possible changes in cost-allocation methodology. Comments and conclusions are provided on the left-hand side of box 2.

### 3. Gate-to-gate regulatory result (RR) 2020-2021

Box 3 presents the gate-to-gate regulatory result (RR) covering all the charging zones covered by the SES under the responsibility of the Member States. The ex-ante and ex-post RRs in percentage of the revenues for the ANSPs/METSPs of the State are shown in the graph at the bottom on the right-hand side.

The RR is then shown separately for each ANSP/METSP, in nominal national currency, as well as in percentage of their revenues. Comments and conclusions are provided at the bottom on the left-hand side of box 2.

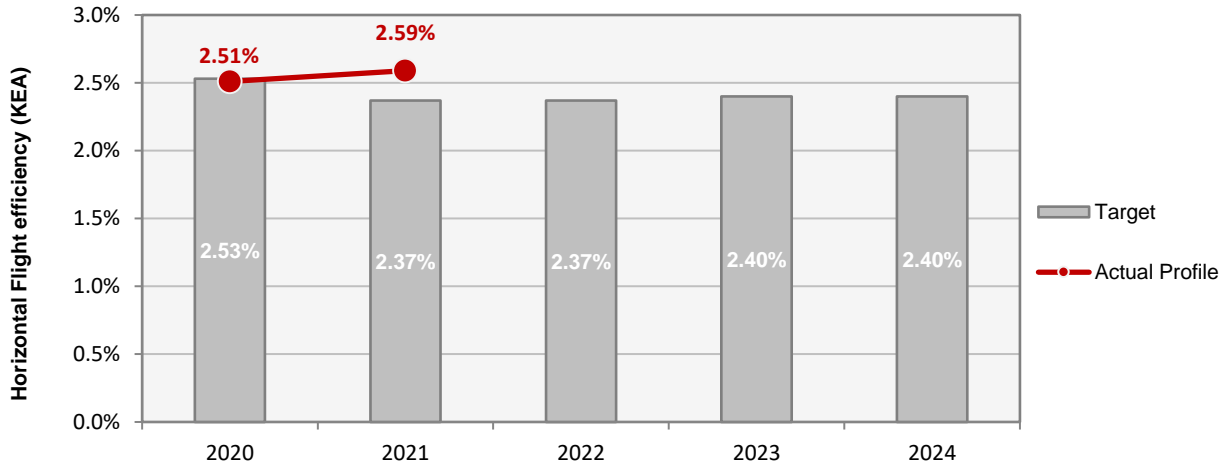
# Annual Monitoring Report 2021

## Union-wide view

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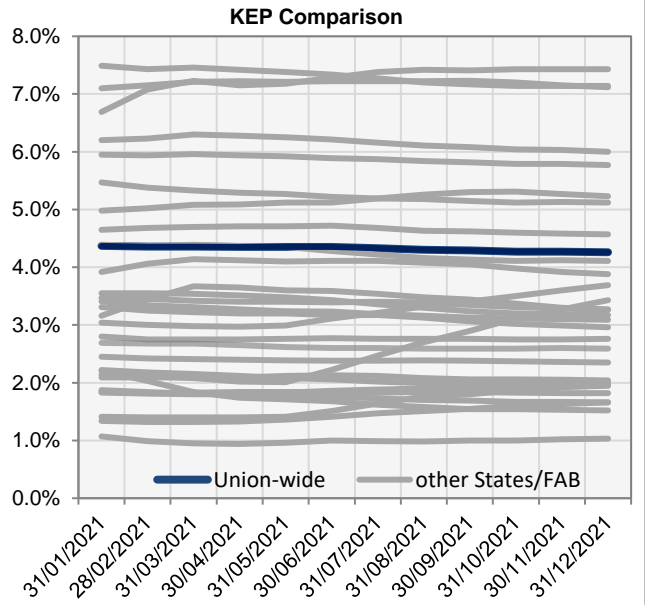
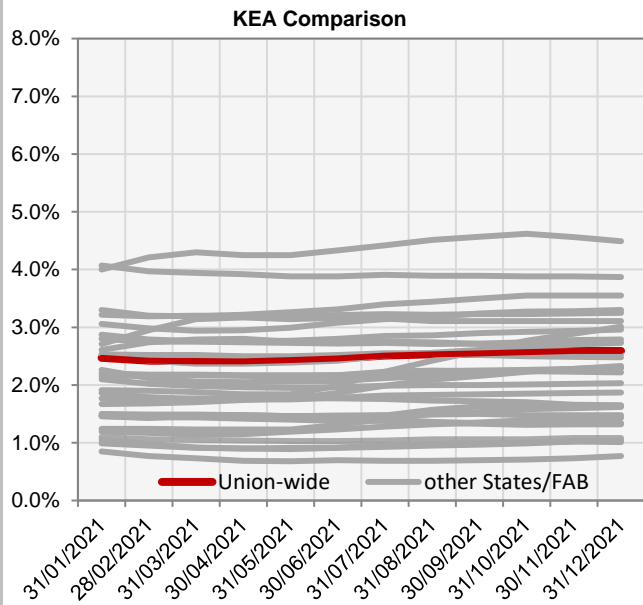


KEA					
	2020	2021	2022	2023	2024
Target	2.53%	2.37%	2.37%	2.40%	2.40%
Actual performance	2.51%	2.59%			

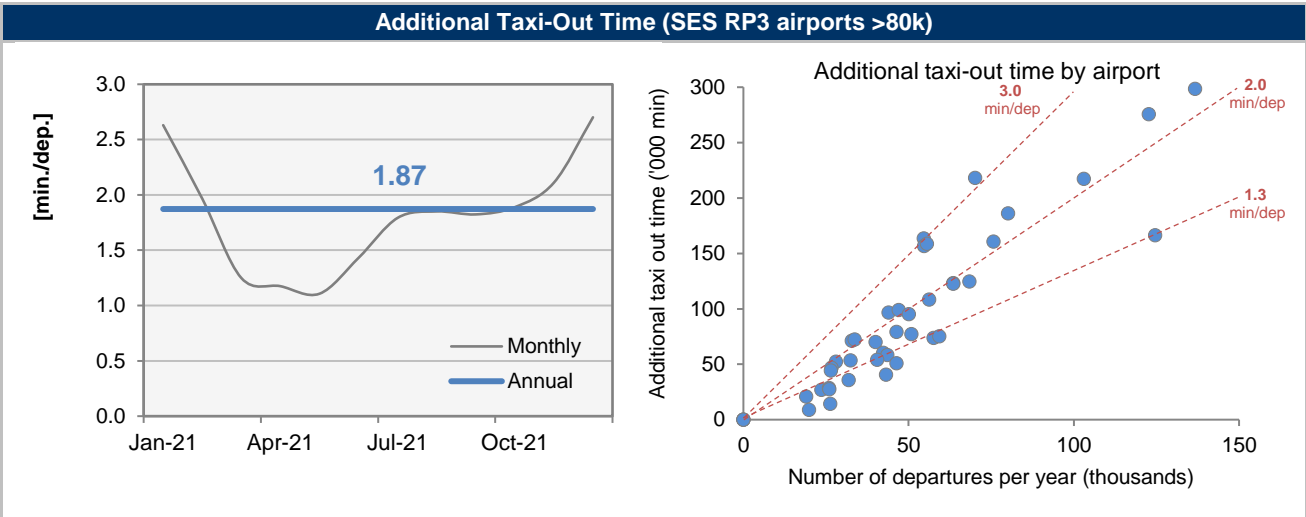


End of month indicators evolution in 2021

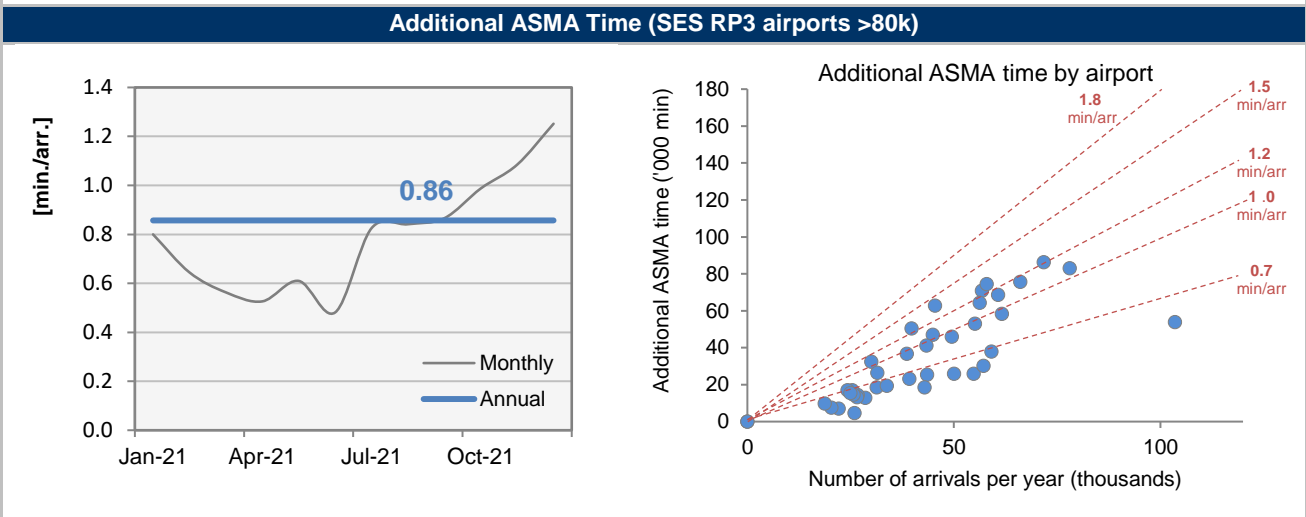
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	2.47%	2.42%	2.41%	2.41%	2.43%	2.46%	2.51%	2.53%	2.55%	2.57%	2.59%	2.59%
KEP	4.37%	4.36%	4.36%	4.35%	4.35%	4.35%	4.33%	4.30%	4.29%	4.27%	4.27%	4.26%
KES	3.96%	3.94%	3.94%	3.94%	3.96%	3.97%	3.97%	3.95%	3.95%	3.95%	3.96%	3.96%



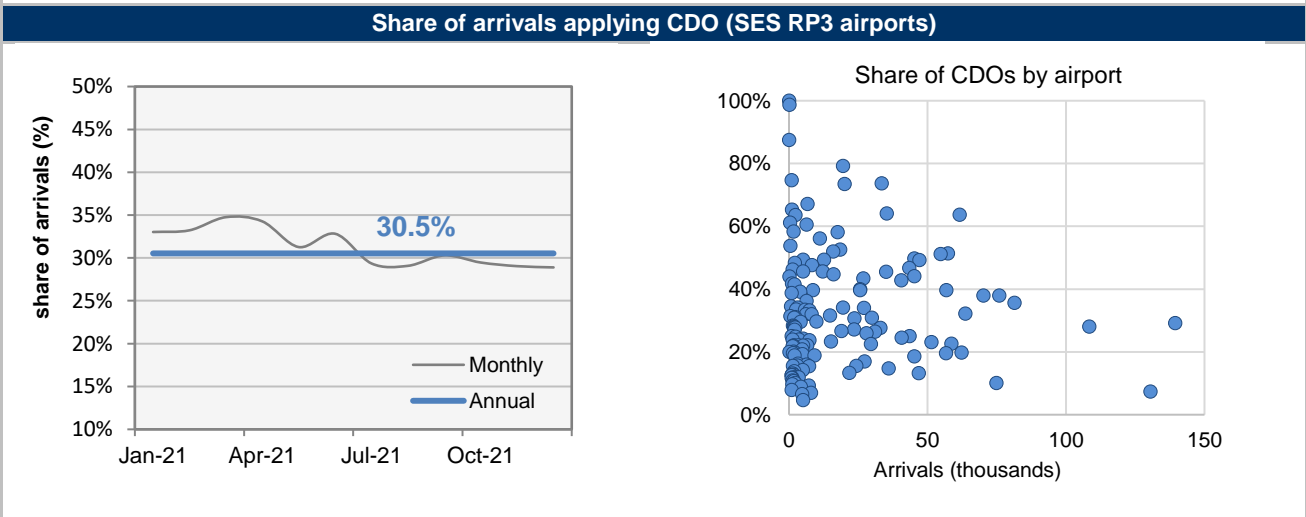
The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.



In 2021, the average additional taxi out time at the SES RP3 airports (>80k) was 1.87 minutes per departure. At airport level, average additional taxi-out time varied between 0.45 for Toulouse (LFBO) and 3.1 minutes for Munich (EDDM). No data was available for Bergen (ENBR) and Marseille (LFML) airport.



In 2021, the average additional ASMA time at the SES RP3 airports (>80k) was 0.86 minutes per arrival. At airport level, average additional taxi-out time varied between 0.18 for Lyon (LFLL) and 1.51 minutes for Frankfurt (EDDF). No data was available for Bergen (ENBR).



In 2021, 30.5% of the arrivals at the SES RP3 airports applied Continuous Descent Operations (CDO). The share of arrivals applying CDOs increased notably when traffic levels were substantially lower as a result of the pandemic but decreased again in the second half of 2021 when traffic continued to recover. At airport level, the share of arrivals applying CDO varied from close to zero to above 70% for the three Norwegian airports Trondheim, Stavanger and Bergen

Minutes of ATFM en-route delay						Observations
	2020	2021	2022	2023	2024	
<b>Union wide Target</b>	0.90	0.35	0.50	0.50	0.50	
<b>Actual performance</b>	0.35	0.32				

**Union wide Performance Indicator: Percentage of flights with ATFM delay greater than 15 minutes.**

Total IFR flights within SES RP3 area during 2021 : 5,47 million.

Only 6% of all traffic was subject to ATFM regulations in 2021: 370k flights.

Just over half of regulated flights (190k) were subject to ATFM delay.

One third of the delayed flights were delayed by greater than 15 minutes (66k).

The percentage of aircraft with an ATFM delay of greater than 15 minutes in 2021 was 0,7%, equalling the 0.7% in 2019

**Capacity Planning**

Many States refer to changing traffic forecasts as creating uncertainty about capacity planning, particularly in regards to staffing, with several even highlighting a potential adverse impact on ANSP finance.

The monitoring reports show that staffing levels are below planned levels in most ANSPs and this will have a significant detrimental effect on capacity as traffic levels increase - adversely impacting airspace users finance.

**ATCO in OPS (FTE)**

Only two ANSPs did not provide information regarding ATCOs in operations, both planned and actual. However, several ANSPs reported different values for historic numbers of actual ATCO FTEs, that were already reported in previous monitoring reports.

In one case, there is a discrepancy of more than 100 ATCO FTEs in the figures previously reported by the ANSP/ NSA.

Even though monitoring the number of FTEs has limited value for operational purposes, (it would be preferable to monitor the number of ATCOs with current licences) it is very difficult to perform meaningful analysis if the numbers provided cannot be relied upon.

**Summary of capacity performance**

The Union-wide target for en route capacity was achieved in 2021. there were 1,78 million minutes of en route ATFM delay equivalent to an average of 0,32 minutes per flight. Only two entities failed to achieve their en route capacity targets: FABEC and Greece.

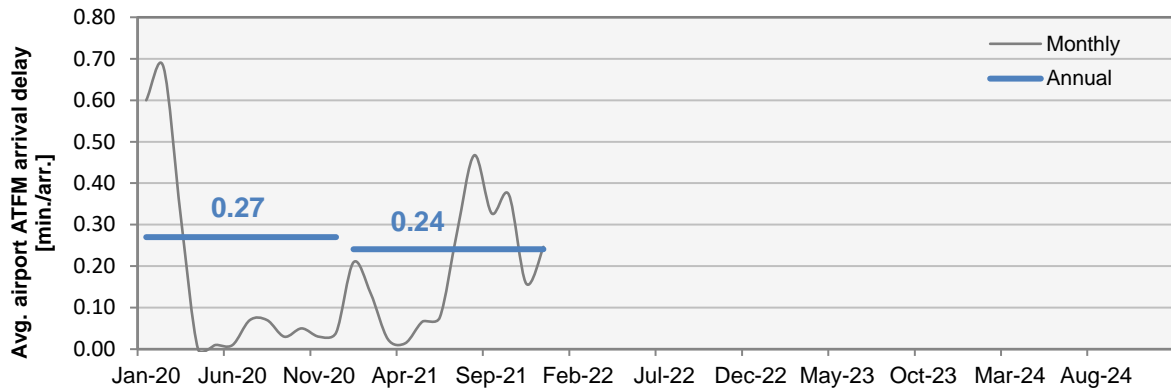
The number of flights (5,47 million) increased by 24% on 2020 levels but remained only 55% of 2019 levels (9,93 million) due to the COVID 19 pandemic.

**En route Capacity Incentive Scheme**

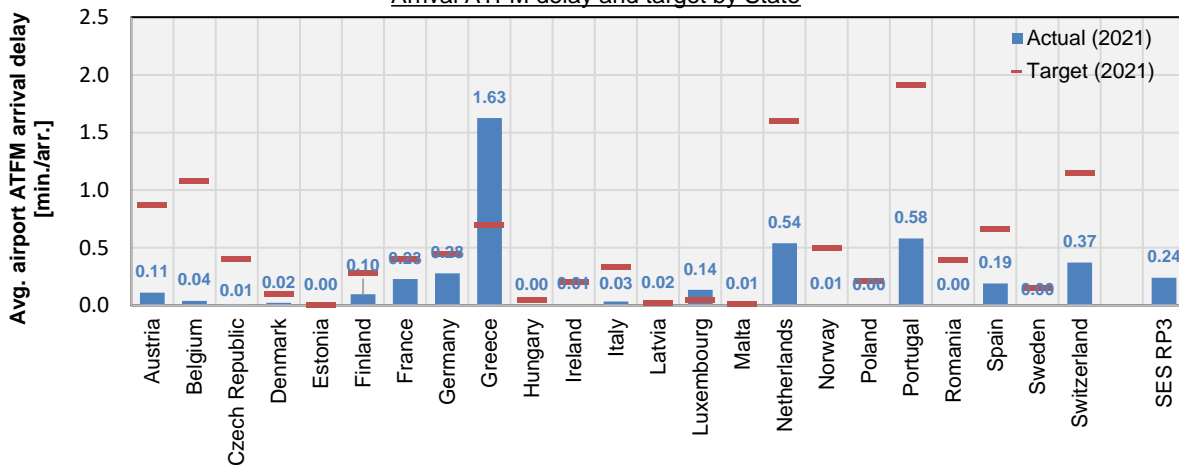
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

Information provided in the following sections are for illustrative purposes only.

**Arrival ATFM Delay (SES RP3 airports)**

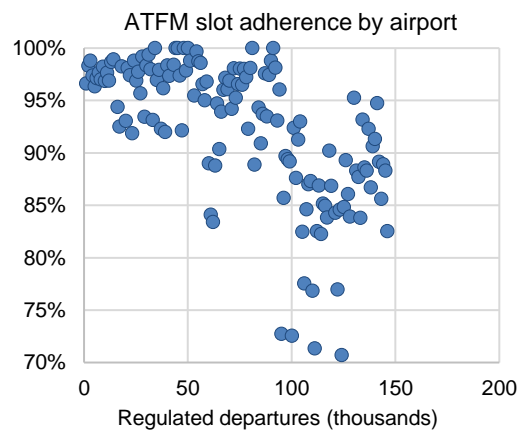
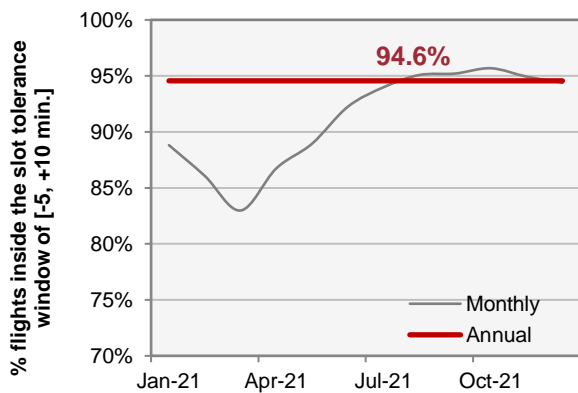


**Arrival ATFM delay and target by State**



In 2021, the average arrival ATFM delay at the SES RP3 airports was 0.24 minutes per arrival. As a result of the pandemic, airport arrival ATFM delay was very low. At local level, all but Greece met their national target on arrival ATFM delay in 2021.

**Adherence to ATFM slots (SES RP3 airports)**



In 2021, 94.6% of the ATFM regulated flights at the SES RP3 airports departed inside of the slot tolerance window. ATFM slot adherence also varied notably among airports.

**All Causes and ATC Pre-departure Delay (SES RP3 airports >80k)**

In 2021, total (all causes) delay compared to the scheduled departure time was 12.3 minutes at the SES RP3 airports (>80k). The ATC-pre departure delay at EU wide level is not available due to data quality issues at many airports.

1. Union-wide - list of en route charging zones																				
<b>29 en route charging zones</b>	Estonia	Finland	Malta	Spain Canaries																
Austria	<u>FABEC</u>	Greece	Norway	Spain Continental																
Bulgaria	Belgium-Luxembourg	Hungary	Poland	Sweden																
Croatia	France	Ireland	Portugal Continental																	
Cyprus	Germany	Italy	Romania																	
Czech Republic	Netherlands	Latvia	Slovakia																	
Denmark	Switzerland	Lithuania	Slovenia																	
2. Monitoring of the en route determined unit cost (DUC) at Union-wide level																				
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.																				
The monitoring of the DUC / AUC at Union-wide level is carried out in € in real terms, at 2017 prices.																				
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)																				
Data as per EC Decision on revised Union-wide targets for RP3	2020D	2021D	2020-2021D	2022D	2023D	2024D														
Real en route costs EUR2017			12,155,324,436	5,889,693,283	6,015,005,906	6,077,662,218														
Total en route service units			109,969,026	86,656,273	101,925,348	116,358,421														
<b>Real en route DUC per service unit EUR2017</b>			<b>110.53</b>	<b>67.97</b>	<b>59.01</b>	<b>52.23</b>														
Data from RP3 Performance Plans	2020D	2021D	2020-2021D	2022D	2023D	2024D														
Real en route costs EUR2017	5,985,268,296	6,049,525,461	12,034,793,758	6,243,329,495	6,377,524,301	6,423,250,862														
Total en route service units	52,500,142	65,612,954	118,113,096	104,538,630	121,140,705	129,459,538														
<b>Real en route DUC per service unit EUR2017</b>	<b>114.00</b>	<b>92.20</b>	<b>101.89</b>	<b>59.72</b>	<b>52.65</b>	<b>49.62</b>														
Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A														
Real en route costs EUR2017	6,007,001,474	5,755,742,397	11,762,743,871																	
Total en route service units	52,500,142	66,892,686	119,392,827																	
<b>Real en route AUC per service unit EUR2017</b>	<b>114.42</b>	<b>86.04</b>	<b>98.52</b>																	
Difference between Actuals and EC Decision on Union-wide targets	2020	2021	2020-2021	2022	2023	2024														
Real en route costs EUR2017	in value	-	-392,580,565																	
	in %	-	-3.2%																	
Total en route service units	in value	-	9,423,801																	
	in %	-	+8.6%																	
<b>Real en route unit cost per service unit EUR2017</b>	<b>in value</b>	<b>-</b>	<b>-12.01</b>																	
	<b>in %</b>	<b>-</b>	<b>-10.9%</b>																	
Difference between Actuals and Performance Plans	2020	2021	2020-2021	2022	2023	2024														
Real en route costs EUR2017	in value	21,733,178	-293,783,064	-272,049,887																
	in %	+0.4%	-4.9%	-2.3%																
Total en route service units	in value	0	1,279,732	1,279,732																
	in %	-	+2.0%	+1.1%																
<b>Real en route unit cost per service unit EUR2017</b>	<b>in value</b>	<b>0.41</b>	<b>-6.16</b>	<b>-3.37</b>																
	<b>in %</b>	<b>+0.4%</b>	<b>-6.7%</b>	<b>-3.3%</b>																
4. Focus on en route DUC monitoring at Union-wide level																				
<p><b>AUC vs. DUC from the EC Decision on Union-wide targets</b>                      Compared to the EC Decision on Union-wide targets, the en route AUC at Union-wide level was -10.9% (or -12.01€2017) lower than the DUC. This results from the combination of significantly higher TSUs (+8.6%) and lower en route costs in real terms (-3.2%, or -392.6M€2017) than the assumptions underpinning the Union-wide cost-efficiency target for the combined year 2020-2021.</p> <p><b>AUC vs. DUC from the aggregation of the Member States' performance plans</b>                      In the combined year 2020-2021, the en route AUC at Union-wide level was -3.3% (or 3.37€2017) lower than the planned DUC. This results from the combination of slightly higher than planned TSUs (+1.1%) and lower than planned en-route costs in real terms (-2.3%, or -272.0M€2017).</p> <p><b>En route service units</b>                      At Union-wide level, the TSUs were higher than planned in the performance plans (by +1.1%). Traffic was higher than planned in nearly all en-route charging zones, except for Malta, Romania and Austria.</p> <p><b>En route costs by entity</b>                      Actual real en route costs are -2.3% (-272.0M€2017) lower than planned in the performance plans. This is driven by the main ANSPs (-2.3%, or -229.4M€2017), the other ANSPs (-0.5%, or 2.9M€2017), the METSPs (-1.0% or -4.0M€2017) and the NSA/EUROCONTROL costs (-3.7%, or -35.7M€2017).</p> <p><b>En route costs for the main ANSPs at Union-wide level</b>                      The lower than planned en route costs in real terms for the main ANSPs (-2.3%, or -229.4M€2017) result from:                      - lower staff costs (-2.4%, or -165.2M€2017), of which -39.0M€2017 for PANSAs alone;                      - lower other operating costs (-3.0%, or -50.2M€2017);                      - lower depreciation (-1.8%, or -22.2M€2017)                      - lower cost of capital (-5.5%, or -24.1M€2017); and,                      - higher exceptional costs (+36.8%, or +31.5M€2017), of which +30.9M€2017 for Skyguide.</p>																				
<p><b>Costs by entity at Union-wide level (M€2017):</b></p> <table border="1"> <tr><td>Main ANSPs</td><td>-2.3%</td></tr> <tr><td>Other ANSPs</td><td>-0.5%</td></tr> <tr><td>METSPs</td><td>-1.0%</td></tr> <tr><td>NSAs/EUROCONTROL</td><td>-3.7%</td></tr> <tr><td>Total</td><td>-2.3%</td></tr> </table>			Main ANSPs	-2.3%	Other ANSPs	-0.5%	METSPs	-1.0%	NSAs/EUROCONTROL	-3.7%	Total	-2.3%								
Main ANSPs	-2.3%																			
Other ANSPs	-0.5%																			
METSPs	-1.0%																			
NSAs/EUROCONTROL	-3.7%																			
Total	-2.3%																			
<p><b>Costs by nature for main ANSPs (M€2017):</b></p> <table border="1"> <tr><td>Staff costs</td><td>-2.4%</td></tr> <tr><td>Other operating costs</td><td>-3.0%</td></tr> <tr><td>Depreciation</td><td>-1.8%</td></tr> <tr><td>Cost of capital</td><td>-5.5%</td></tr> <tr><td>Exceptional costs</td><td>36.8%</td></tr> <tr><td>VFR exempted costs</td><td>-2.0%</td></tr> <tr><td>Total Main ANSPs</td><td>-2.3%</td></tr> </table>			Staff costs	-2.4%	Other operating costs	-3.0%	Depreciation	-1.8%	Cost of capital	-5.5%	Exceptional costs	36.8%	VFR exempted costs	-2.0%	Total Main ANSPs	-2.3%				
Staff costs	-2.4%																			
Other operating costs	-3.0%																			
Depreciation	-1.8%																			
Cost of capital	-5.5%																			
Exceptional costs	36.8%																			
VFR exempted costs	-2.0%																			
Total Main ANSPs	-2.3%																			

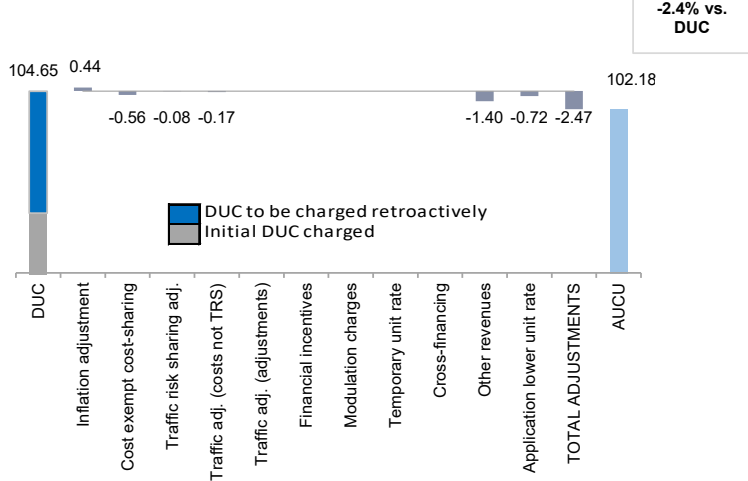
5. Monitoring of the en route actual unit cost for users (AUCU) at Union-wide level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU at Union-wide level is carried out in € in nominal terms.

6. En route actual unit cost for users (AUCU) at Union-wide level

Union-wide 2020-2021 DUC vs. Actual Unit Cost for users in € in nominal terms



Components of the AUCU	EUR/SU
Initial DUC charged	54.63
DUC to be charged retroactively	50.02
<b>DUC</b>	<b>104.65</b>
Inflation adjustment	0.44
Cost exempt from cost-sharing	-0.56
Traffic risk sharing adjustment	-0.08
Traffic adj. (costs not TRS)	-0.17
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	-1.40
Application of lower unit rate	-0.72
Total adjustments	-2.47
<b>AUCU</b>	<b>102.18</b>
<b>AUCU vs. DUC</b>	<b>-2.4%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

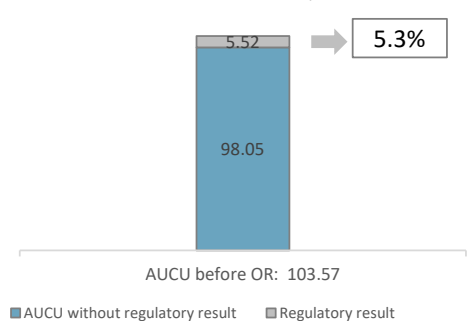
7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-20,742	-0.17
Competent authorities and qualified entities costs	-8,394	-0.07
Eurocontrol costs	-26,945	-0.23
Pension costs	-10,793	-0.09
Interest on loans	169	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-66,705</b>	<b>-0.56</b>

Source: NSA Reports on the verification of cost-sharing for the combined year 2020-2021 submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at Union-wide level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	EUR '000	EUR/SU
Main ANSPs	642,527	5.38
Other ANSPs	7,437	0.06
<b>METSP(s)</b>	<b>EUR '000</b>	<b>EUR/SU</b>
Other METSPs	9,471	0.08
<b>Total charging zone</b>	<b>659,434</b>	<b>5.52</b>
<b>Actual cost for users***</b>	<b>12,366,094</b>	<b>103.57</b>
<b>Regulatory result (% AUCU)</b>	<b>5.3%</b>	<b>5.3%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at Union-wide level

At Union-wide level, the actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (102.18€) is -2.4% lower than the nominal DUC (104.65€) which includes the DUC initially charged: 54.63€; and to be charged: 50.02€. The difference between these two figures (-2.47€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.44€/SU);
- the adjustments resulting from the costs exempted from cost-sharing mechanism (-0.56€/SU);
- the traffic risk sharing adjustment (-0.08€/SU)
- the traffic adjustment (-0.17€/SU) for the costs not subject to traffic risk sharing;
- the deduction of the other revenues (-1.40€/SU); and
- the impact of the application of a lower unit rate by Norway (-0.72€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 5.3%.

Union-wide - list of main en route ANSPs						
<b>29 en route main ANSPs</b>	Estonia - EANS	Finland - Fintraffic ANS	Malta - MATS	Spain Canarias - ENAIRE		
Austria - Austro Control	<u>FABEC</u>	Greece - HASP	Norway - Avinor	Spain Continental - ENAIRE		
Bulgaria - BULATSA	Belgium-Luxembourg - skeyes	Hungary - HungaroControl	Poland - PANSA	Sweden - LfV		
Croatia - Croatia Control	France - DSNA	Ireland - IAA	Portugal Continental - NAV Portugal			
Cyprus - DCAC Cyprus	Germany - DFS	Italy - ENAV	Romania - ROMATSA			
Czech Republic - ANS CR	Netherlands - LVNL	Latvia - LGS	Slovakia - LPS			
Denmark - NAVIAIR	Switzerland - Skyguide	Lithuania - Oro Navigacija	Slovenia - Slovenia Control			
10. Monitoring of the en route ANSPs regulatory results (RR)						
<p>The <b>Regulatory Result (RR)</b> corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.</p> <p>The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.</p> <ul style="list-style-type: none"> <li>- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.</li> <li>- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.</li> </ul> <p>The <b>net gain/loss</b> calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).</p> <p>The monitoring of the RR is carried out in € in nominal terms.</p>						
11. Net gain/loss for the main ANSP for the en route activity at Union-wide level						
Cost sharing (EUR '000)	2020-2021		2022	2023	2024	
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSPs	193,109					
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	47,552					
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-30,655					
<b>Gain (+)/Loss (-) to be retained by the ANSPs in respect of cost sharing</b>	<b>210,007</b>					
Traffic risk sharing (EUR '000)	2020-2021		2022	2023	2024	
Difference in total service units (actual vs PP) %	1.1%					
Determined costs subject to traffic risk sharing for the ANSPs (PP)	10,324,179					
<b>Gain (+)/Loss (-) to be retained by the ANSPs in respect of traffic risk sharing</b>	<b>104,409</b>					
Incentives (EUR '000)	2020-2021		2022	2023	2024	
<b>Gain (+)/Loss (-) to be retained by the ANSPs in respect of incentives (bonus/penalty)</b>	<b>0</b>					
<b>Net ANSPs gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>314,415</b>					
12. Regulatory result (RR) for the main ANSP at charging zone level						
Main ANSPs planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	7,091,441	8,228,099	15,319,541	8,653,783	8,444,993	8,134,308
RoE (in value)	167,348	170,291	337,638	164,454	179,605	189,187
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>167,348</b>	<b>170,291</b>	<b>337,638</b>	<b>164,454</b>	<b>179,605</b>	<b>189,187</b>
<b>Revenue for the en route charging zone</b>	<b>5,152,056</b>	<b>5,254,125</b>	<b>10,406,180</b>	<b>5,519,887</b>	<b>5,733,869</b>	<b>5,859,291</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>3.2%</b>	<b>3.2%</b>	<b>3.2%</b>	<b>3.0%</b>	<b>3.1%</b>	<b>3.2%</b>
Main ANSPs actual regulatory result (EUR'000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	7,089,940	7,781,563	14,871,503			
RoE (in value)	168,051	160,061	328,111			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	314,415	314,415			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>168,051</b>	<b>474,476</b>	<b>642,527</b>			
<b>Revenue for the en route charging zone</b>	<b>5,175,803</b>	<b>5,351,684</b>	<b>10,527,487</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>3.2%</b>	<b>8.9%</b>	<b>6.1%</b>			
13. Focus the main ANSP regulatory result on en route activity						
<p>Net gain/loss for 2020-2021 MEUR</p>			<p>En route main ANSP regulatory result in percent of revenues</p>			
<p><b>Net gain on en route activity at Union-wide level in the combined year 2020-2021</b></p> <p>At Union-wide level, the net ANSPs gain on en route activity amounts to +314.4M€, resulting from a gain of +210.0M€ arising from the cost sharing mechanism and a gain of +104.4M€ arising from the traffic risk sharing mechanism.</p> <p><b>Union-wide overall regulatory results (RR) for the en route activity</b></p> <p>Ex-post, the overall RR corresponding to the net gain from the en route activity mentioned above (+314.4M€) and the RoE (+328.1M€) amounts to +642.5M€ (6.1% of the en route revenues), compared to 3.2% ex-ante.</p>						

14. Other ANSP(s) / METSP(s) regulatory results for en route activity at Union-wide level						
Union-wide - list of other en route ANSPs						
<b>14 en route other ANSPs</b>	Italy - ITAF	Sweden - ACR				
<b>FABEC</b>	Lithuania - NINTA ADAXA	Sweden - ARV				
Luxemburg - ANA LUX	Norway - KJE	Sweden - SDATS				
MUAC (Belgium)	Portugal Continental - SAR					
MUAC (Germany)	Spain Canarias - EA					
MUAC (Luxembourg)	Spain Continental - EA					
MUAC (Netherlands)						
<b>Other ANSPs planned regulatory result €'000</b>	<b>2020D</b>	<b>2021D</b>	<b>2020-2021D</b>	<b>2022D</b>	<b>2023D</b>	<b>2024D</b>
Ex-ante regulatory result (+/-) for the en route charging zone	223	754	977	1,107	1,418	1,690
Revenue for the en route charging zone	301,748	309,749	611,497	366,016	380,348	388,212
Ex-ante regulatory result (+/-) in percent of revenues	0.1%	0.2%	0.2%	0.3%	0.4%	0.4%
<b>Other ANSPs actual regulatory result €'000</b>	<b>2020A</b>	<b>2021A</b>	<b>2020-2021A</b>	<b>2022A</b>	<b>2023A</b>	<b>2024A</b>
Ex-post regulatory result (+/-) for the en route charging zone	223	7,213	7,437			
Revenue for the en route charging zone	301,748	316,682	618,430			
Ex-post regulatory result (+/-) in percent of revenues	0.1%	2.3%	1.2%			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for the other ANSPs at Union-wide level corresponds to 1.2% of the en route revenues, compared to 0.2% ex-ante.						
Union-wide - list of en route METSPs						
<b>26 en route METSPs</b>	Finland - MET	Norway - MET	Slovakia - MET			
Austria - MET	<b>FABEC</b>	Greece - MET	Poland - MET BYDGOSZCZ	Slovenia - MET		
Cyprus - MET	France - MET	Hungary - MET	Poland - MET IMWM	Spain Canarias - AEMET		
Czech Republic - MET	Germany - MET	Ireland - MET	Poland - MET Radom Meteo	Spain Continental - AEMET		
Denmark - MET	Netherlands - MET	Latvia - MET	Poland - MET WIM	Sweden - MET		
	Switzerland - MET	Lithuania - MET	Portugal Continental - MET			
<b>METSPs planned regulatory result €'000</b>	<b>2020D</b>	<b>2021D</b>	<b>2020-2021D</b>	<b>2022D</b>	<b>2023D</b>	<b>2024D</b>
Ex-ante regulatory result (+/-) for the en route charging zone	2,695	2,805	5,501	2,862	2,995	3,013
Revenue for the en route charging zone	194,735	203,550	398,285	206,981	211,179	212,666
Ex-ante regulatory result (+/-) in percent of revenues	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
<b>METSPs actual regulatory result €'000</b>	<b>2020A</b>	<b>2021A</b>	<b>2020-2021A</b>	<b>2022A</b>	<b>2023A</b>	<b>2024A</b>
Ex-post regulatory result (+/-) for the en route charging zone	2,695	6,775	9,471			
Revenue for the en route charging zone	194,735	205,072	399,806			
Ex-post regulatory result (+/-) in percent of revenues	1.4%	3.3%	2.4%			
<b>Total METSPs overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for the METSPs at Union-wide level corresponds to 2.4% of the en route revenues, compared to 1.4% ex-ante.						



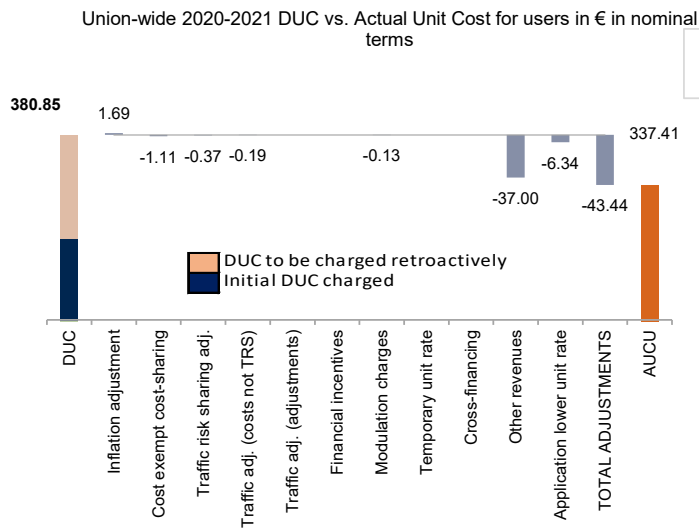
1. Union-wide - list of terminal charging zones						
<b>26 terminal charging zones</b>	France zone 2	Ireland	Portugal			
Austria	Germany	Italy zone 1	Romania			
Czech Republic	Luxembourg	Italy zone 2	Spain			
Denmark	Netherlands	Latvia	Sweden			
Estonia	Switzerland	Malta				
<b>FABEC</b>	Finland	Norway				
Belgium Brussels	Greece	Poland zone 1				
France zone 1	Hungary	Poland zone 2				
2. Monitoring of the terminal determined unit cost (DUC) at Union-wide level						
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in € in real terms, at 2017 prices.</p>						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Data from RP3 Performance Plans	2020D	2021D	2020-2021D	2022D	2023D	2024D
Real terminal costs (EUR2017)	1,201,988,985	1,235,013,482	2,437,002,467	1,249,383,834	1,279,767,622	1,305,337,143
Total terminal service units	3,013,351	3,589,005	6,602,356	6,083,242	6,771,716	7,155,361
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>398.89</b>	<b>344.11</b>	<b>369.11</b>	<b>205.38</b>	<b>188.99</b>	<b>182.43</b>
Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Real terminal costs (EUR2017)	1,202,417,708	1,183,139,011	2,385,556,718			
Total terminal service units	3,013,351	3,649,683	6,663,034			
<b>Real terminal AUC per service unit ( EUR2017)</b>	<b>399.03</b>	<b>324.18</b>	<b>358.03</b>			
Difference between Actuals and Planned Performance Plans	2020	2021	2020-2021	2022	2023	2024
Real terminal costs (EUR 2017)	in value	428,723	-51,874,471	-51,445,748		
	in %	+0.04%	-4.2%	-2.1%		
Total terminal service units	in value	0	60,678	60,678		
	in %	-	+1.7%	+0.9%		
<b>Real terminal unit cost per service unit (EUR2017)</b>	in value	<b>0.14</b>	<b>-19.93</b>	<b>-11.08</b>		
	in %	<b>+0.04%</b>	<b>-5.8%</b>	<b>-3.0%</b>		
4. Focus on terminal DUC monitoring at Union-wide level						
<p><b>AUC vs. DUC from the aggregation of the Member States' performance plans</b>                      In the combined year 2020-2021, the terminal AUC at Union-wide level was -3.0% (or -11.08€2017) lower than the planned DUC. This results from the combination of slightly higher than planned TNSUs (+0.9%) and lower than planned terminal costs in real terms (-2.1%, or -51.4M€2017).</p>						
<p><b>Terminal service units</b>                      At Union-wide level, the TNSUs were higher than planned in the performance plans (by +0.9%). Traffic was higher than planned in most charging zones.</p>						
<p><b>Terminal costs by entity</b>                      Actual real terminal costs are -2.1% (-51.4M€2017) lower than planned in the performance plans. This is driven by the main ANSPs (-2.2%, or -50.8M€2017), the other ANSPs (-3.5%, or -0.4M€2017), the METSPs (-1.3% or -1.2M€2017) and the NSAs costs (+5.0%, or 1.0M€2017).</p>						
<p><b>Terminal costs for the main ANSPs at Union-wide level</b>                      The lower than planned terminal costs in real terms for the main ANSPs (-2.2%, or -50.8 M€2017) result from:                      - lower staff costs (-1.9%, or -29.7M€2017);                      - lower other operating costs (-2.3%, or -9.5M€2017);                      - lower depreciation (-2.6%, or -6.8M€2017);                      - lower cost of capital (-11.3%, or -9.7M€2017), of which -9.2M€2017 for DFS alone; and,                      - higher exceptional costs (+22.6%, or +5.3M€2017), of which +5.3M€2017 for Skyguide.</p>						

5. Monitoring of the terminal actual unit cost for users (AUCU) at Union-wide level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in € in nominal terms.

6. Terminal actual unit cost for users (AUCU) at Union-wide level



Components of the AUCU	EUR/SU
Initial DUC charged	180.01
DUC to be charged retroactively	200.84
<b>DUC</b>	<b>380.85</b>
Inflation adjustment	1.69
Cost exempt from cost-sharing	-1.11
Traffic risk sharing adjustment	-0.37
Traffic adj. (costs not TRS)	-0.19
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	-0.13
Temporary UR**	
Cross-financing	0.00
Other revenues	-37.00
Application of lower unit rate	-6.34
Total adjustments	-43.44
<b>AUCU</b>	<b>337.41</b>
<b>AUCU vs. DUC</b>	<b>-11.4%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

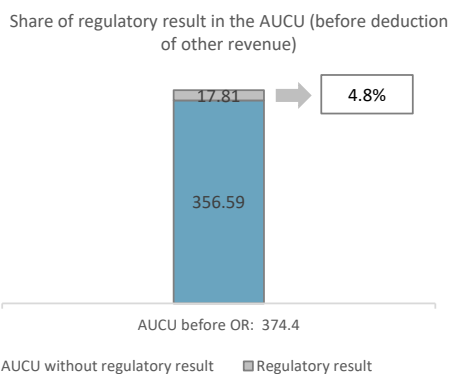
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR'000	EUR/SU
New and existing investments	-7560	-1.13
Competent authorities and qualified entities costs	994	0.15
Eurocontrol costs	0	0.00
Pension costs	-869	-0.13
Interest on loans	23	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-7412</b>	<b>-1.11</b>

Source: NSA Reports on the verification of cost-sharing for the combined year 2020-2021 submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at Union-wide level



ATSP(S)	EUR'000	EUR/SU
Main ANSPs	115,747	17.37
Other ANSPs	1,292	0.19
METSP(s)	EUR'000	EUR/SU
Other METSPs	1,659	0.25
<b>Total charging zone</b>	<b>118,699</b>	<b>17.81</b>
<b>Actual cost for users***</b>	<b>2,494,673</b>	<b>374.40</b>
<b>Regulatory result (% AUCU)</b>	<b>4.8%</b>	<b>4.8%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at Union-wide level

At Union-wide level, the actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (337.41€) is -11.4% lower than the nominal DUC (380.85€) which includes DUC initially charged: 180.01€; and to be charged: 200.84€. The difference (-43.44€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+1.69€/SU);
- the adjustments resulting from the costs exempted from cost-sharing mechanism (-1.11€/SU);
- the traffic risk sharing adjustment (-0.37€/SU);
- the traffic adjustment (-0.19€/SU) for the costs not subject to traffic risk sharing;
- the deduction of significant other revenues (-37.00€/SU); and,
- the application of a lower unit rate by Norway, Germany, Greece and the Czech Republic (-6.34€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 4.8%.

Union-wide - list of main terminal ANSPs			
<b>26 terminal main ANSPs</b>	France zone 1 - DSNA	Greece - HASP	Norway - Avinor
Austria - Austro Control	France zone 2 - DSNA	Hungary - HungaroControl	Poland zone 1 - PANSA
Czech Republic - ANS CR	Germany - DFS	Ireland - IAA	Poland zone 2 - PANSA
Denmark - NAVIAIR	Luxembourg - ANA LUX	Italy zone 1 - ENAV	Portugal - NAV Portugal
Estonia - EANS	Netherlands - LVNL	Italy zone 2 - ENAV	Romania - ROMATSA
<b>FABEC</b>	Switzerland - Skyguide	Latvia - LGS	Spain - ENAIRE
Belgium - skeyes	Finland - Fintraffic ANS	Malta - MATS	Sweden - LFFV

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost. The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.
- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021). The monitoring of the RR is carried out in € in nominal terms.

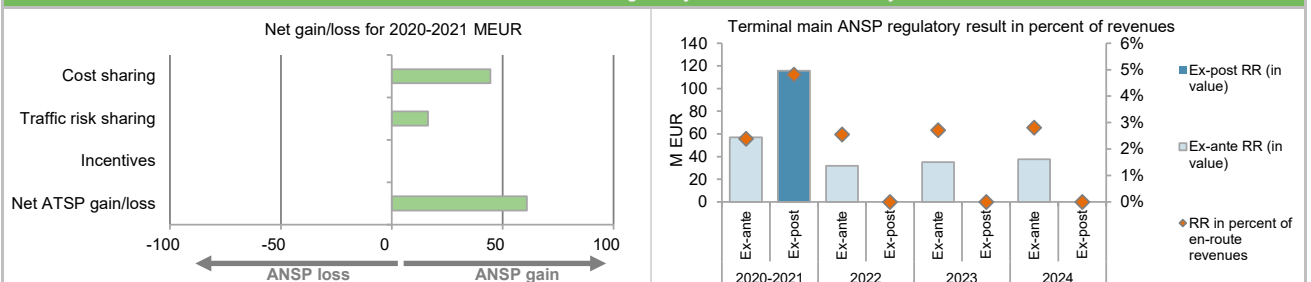
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	41,861			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	10,786			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-8,134			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>44,513</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.9%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	2,363,981			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>16,394</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>60,907</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

Main ANSPs planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	1,553,780	1,833,476	3,387,256	2,121,079	2,081,537	2,000,702
RoE (in value)	28,517	28,390	56,907	31,875	35,104	37,602
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>28,517</b>	<b>28,390</b>	<b>56,907</b>	<b>31,875</b>	<b>35,104</b>	<b>37,602</b>
Revenue for the terminal charging zone	1,168,733	1,217,536	2,386,269	1,250,397	1,296,661	1,340,344
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>2.4%</b>	<b>2.3%</b>	<b>2.4%</b>	<b>2.5%</b>	<b>2.7%</b>	<b>2.8%</b>
Main ANSPs actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	1,553,929	1,794,754	3,348,683			
RoE (in value)	28,818	26,022	54,840			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	60,907	60,907			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>28,818</b>	<b>86,929</b>	<b>115,747</b>			
Revenue for the terminal charging zone	1,169,163	1,236,152	2,405,315			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>2.5%</b>	<b>7.0%</b>	<b>4.8%</b>			

13. Focus on main ANSP regulatory result on terminal activity



Net gain on terminal activity at Union-wide level in the combined year 2020-2021

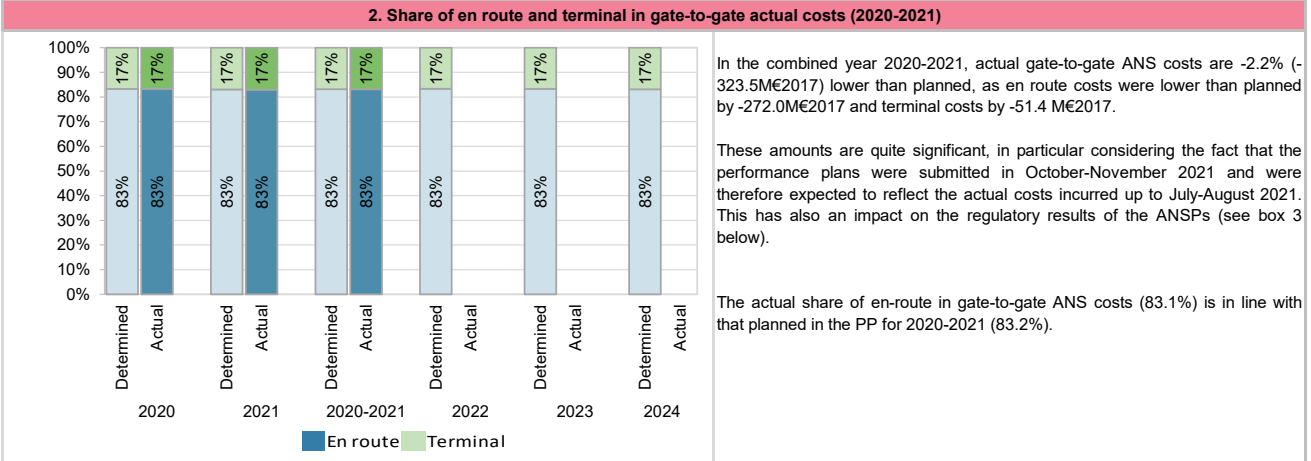
At Union-wide level, the net ANSPs gain on terminal activity amounts to +60.9M€, resulting from a gain of +44.5M€ arising from the cost sharing mechanism and a gain of +16.4 M€ arising from the traffic risk sharing mechanism.

Union-wide overall regulatory results (RR) for the terminal activity

Ex-post, the overall RR corresponding to the net gain from the terminal activity mentioned above (+60.9M€) and the RoE (+54.8M€) amounts to +115.7M€ (4.8% of the terminal revenues), compared to 2.4% ex-ante.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Union-wide - list of terminal other ANSPs						
<b>4 terminal other ANSPs</b>	Malta - MIA	Poland zone 2 -Warmia-Mazury				
	Poland zone 2 - BYDGOSZCZ	Sweden-SWEDAVIA				
<b>Other ANSPs planned regulatory result EUR'000</b>	<b>2020</b>	<b>2021</b>	<b>2020-2021D</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Ex-ante regulatory result (+/-) for the terminal charging zone	239	277	516	340	390	466
Revenue for the terminal charging zone	5,915	6,031	11,945	6,587	6,994	7,285
Ex-ante regulatory result (+/-) in percent of revenues	4.0%	4.6%	4.3%	5.2%	5.6%	6.4%
<b>Other ANSPs actual regulatory result EUR'000</b>	<b>2020</b>	<b>2021</b>	<b>2020-2021A</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Ex-post regulatory result (+/-) for the terminal charging zone	239	1,052	1,292			
Revenue for the terminal charging zone	5,915	6,443	12,357			
Ex-post regulatory result (+/-) in percent of revenues	4.0%	16.3%	10.5%			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity</b>						
Ex-post, the overall RR for the other ANSPs at Union-wide level corresponds to 10.5% of the terminal revenues, compared to 4.3% ex-ante.						
Union-wide - list of terminal METSPs						
<b>22 terminal other METSPs</b>	France zone 2 - MET	Hungary - MET	Poland Zone 2 - MET BYDGOSZCZ			
Austria - MET	Germany - MET	Ireland - MET	Poland Zone 2 - Warmia-Mazury			
Czech Republic - MET	Netherlands - MET	Latvia - MET	Poland Zone 2 - Radom Meteo			
Denmark - MET	Switzerland - MET	Norway - MET	Portugal - MET			
FABEC	Finland - MET	Poland Zone 1 - MET IMWM	Spain - AEMET			
France zone 1 - MET	Greece - MET	Poland Zone 2 - MET IMWM	Sweden - Arlanda MET			
<b>METSPs planned regulatory result EUR'000</b>	<b>2020</b>	<b>2021</b>	<b>2020-2021D</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Revenue for the terminal charging zone	47,500	49,137	96,637	50,317	51,248	51,750
Ex-ante regulatory result (+/-) in percent of revenues	0.8%	0.7%	0.7%	0.6%	0.7%	0.7%
<b>METSPs actual regulatory result EUR'000</b>	<b>2020</b>	<b>2021</b>	<b>2020-2021A</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Revenue for the terminal charging zone	47,500	49,226	96,726			
Ex-post regulatory result (+/-) in percent of revenues	0.8%	2.6%	1.7%			
<b>Total METSPs overall regulatory results (RR) for the terminal activity</b>						
Ex-post, the overall RR for the METSPs at Union-wide level corresponds to 1.7% of the terminal revenues, compared to 0.7% ex-ante.						

1. Monitoring of gate-to-gate ANS costs						
<b>Data from RP3 performance plan</b>						
	<b>2020D</b>	<b>2021D</b>	<b>2020-2021D</b>	<b>2022D</b>	<b>2023D</b>	<b>2024D</b>
Real en route costs (EUR2017)	5,985,268,296	6,049,525,461	12,034,793,758	6,243,329,495	6,377,524,301	6,423,250,862
Real terminal costs (EUR2017)	1,201,988,985	1,235,013,482	2,437,002,467	1,249,383,834	1,279,767,622	1,305,337,143
Real gate-to-gate costs (EUR2017)	7,187,257,281	7,284,538,943	14,471,796,224	7,492,713,328	7,657,291,924	7,728,588,004
En route share (%)	83.3%	83.0%	83.2%	83.3%	83.3%	83.1%
<b>Actual data from reporting tables</b>						
	<b>2020A</b>	<b>2021A</b>	<b>2020-2021A</b>	<b>2022A</b>	<b>2023A</b>	<b>2024A</b>
Real en route costs (EUR2017)	6,007,001,474	5,755,742,397	11,762,743,871			
Real terminal costs (EUR2017)	1,202,417,708	1,183,139,011	2,385,556,718			
Real gate-to-gate costs (EUR2017)	7,209,419,182	6,938,881,408	14,148,300,589			
En route share (%)	83.3%	82.9%	83.1%			
<b>Difference between actuals and planned (actuals vs. PP)</b>						
	<b>2020</b>	<b>2021</b>	<b>2020-2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Real gate-to-gate costs (EUR2017)						
	in value	22,161,900	-345,657,536	-323,495,635		
	in %	0.3%	-4.7%	-2.2%		
En route share	in p.p.	0.0 p.p.	-0.1 p.p.	-0.0 p.p.		



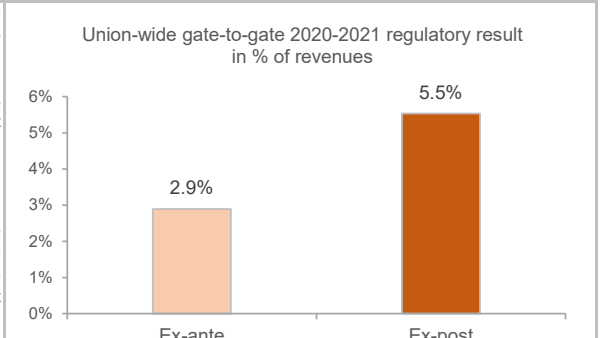
**3. Gate-to-gate regulatory result (RR) 2020-2021**

ANSP(S)	Ex-ante			Ex-post		
	RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
Main ANSPs	394,545	12,792,449	3.1%	758,274	12,932,802	5.9%
Other ANSPs	1,493	623,442	0.2%	8,728	630,787	1.4%
<b>METSP(s)</b>	<b>RR</b>	<b>Revenues</b>	<b>RR % revenues</b>	<b>RR</b>	<b>Revenues</b>	<b>RR % revenues</b>
METSPs	6,224	494,922	1.3%	11,130	496,533	2.2%
<b>Total</b>	<b>402,263</b>	<b>13,910,814</b>	<b>2.9%</b>	<b>778,133</b>	<b>14,060,121</b>	<b>5.5%</b>

For the ANSPs providing services in the en route and terminal charging zones covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +778.1M€ (+659.4M€ for en route; +118.7M€ for terminal (see boxes 10 to 13 for the detailed analysis at Union-wide level), corresponding to 5.5% of gate-to-gate ANS revenues. This is higher than the return planned for the year included in the performance plans (2.9%). This difference between the ex-ante and ex-post RR (+375.9M€) is mainly due to the net gain in cost sharing (+262.4M€), as follows:

- difference between determined and actual costs kept by the ANSPs (+238.3M€);
- inflation adjustment (+63.9M€); and,
- cost exempt from cost sharing (-39.8M€).

This difference between the ex-ante and ex-post RR is very high considering the timing of the submission of the performance plans (as explained in Box 2 above) in a period of crisis for the sector. As far as the inflation adjustment is concerned, it should be clarified whether part of the impact was not already reflected in the revised 2021 costs in nominal terms as in this case it would be charged twice to airspace users.



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# Annual Monitoring Report 2021

## Local level view

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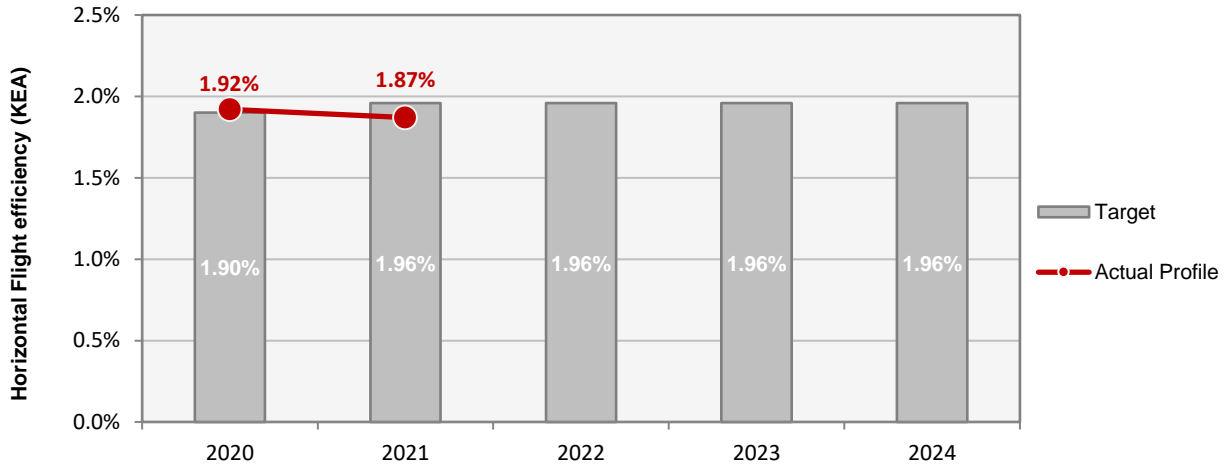


**Annual Monitoring Report 2021**  
Local level view  
Austria

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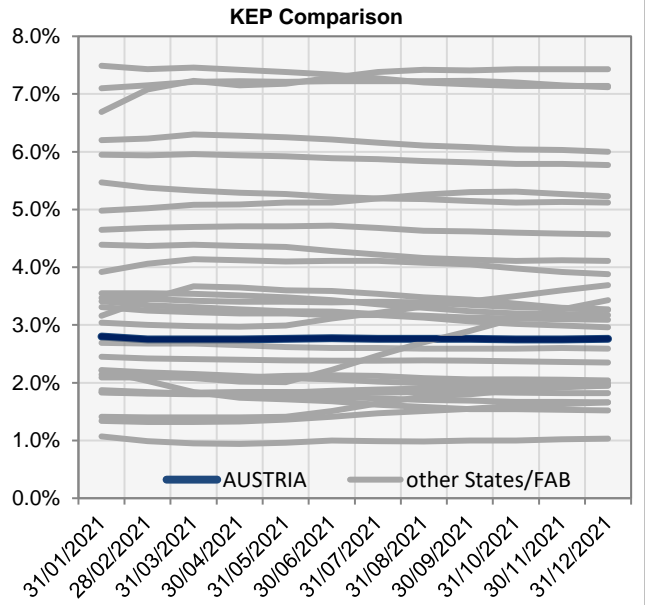
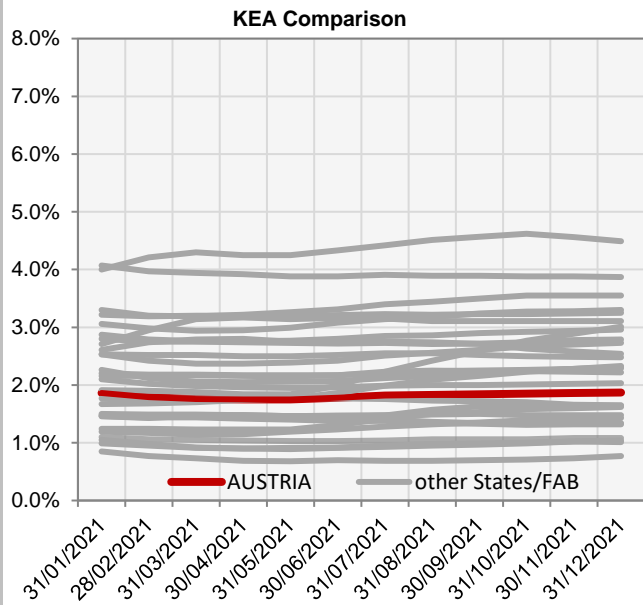
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>Austro Control</b>	66	B	B	C	B	B
Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.						
Observations						
All EoSM components are below 2024 EoSM target levels. Improvements in safety management are still expected in all components during RP3 to achieve 2024 targets.						

KEA					
	2020	2021	2022	2023	2024
Target	1.90%	1.96%	1.96%	1.96%	1.96%
Actual performance	1.92%	1.87%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	1.86%	1.79%	1.76%	1.75%	1.75%	1.78%	1.82%	1.83%	1.84%	1.85%	1.86%	1.87%
KEP	2.80%	2.75%	2.75%	2.75%	2.76%	2.77%	2.76%	2.76%	2.76%	2.75%	2.75%	2.76%
KES	2.51%	2.46%	2.45%	2.46%	2.47%	2.48%	2.48%	2.49%	2.50%	2.50%	2.51%	2.52%

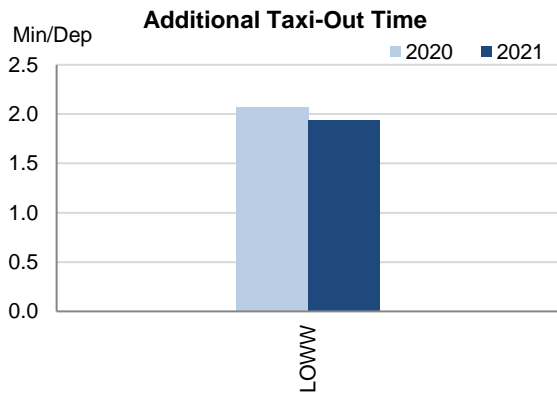


The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**1. Overview**

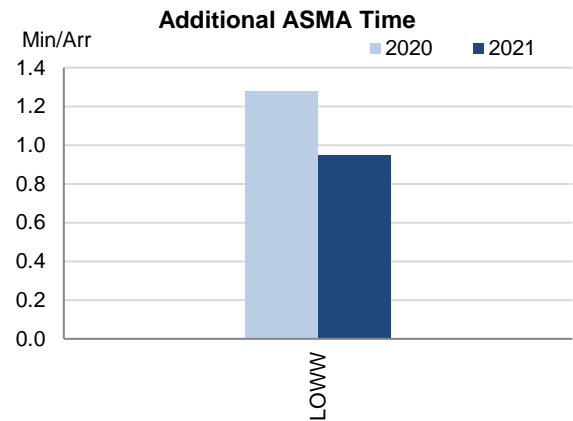
Austria identified six airports as subject to RP3 monitoring. According to the traffic figures at these 6 airports, only Vienna (LOWW) must be monitored for additional taxi-out and ASMA times. The Airport Operator Data Flow, necessary for the monitoring of the additional times, is correctly established where required and the monitoring of all environment indicators can be performed. Traffic at the ensemble of these airports in 2021 was still 53% lower than in 2019, even if 14% higher than in 2020. Observed additional times at Vienna, impacted by the traffic reduction, continued to decrease in 2021 after an already important reduction in 2020. The share of CDO flights reduced from 31.2% to 29.2% in 2021.

**2. Additional Taxi-Out Time**



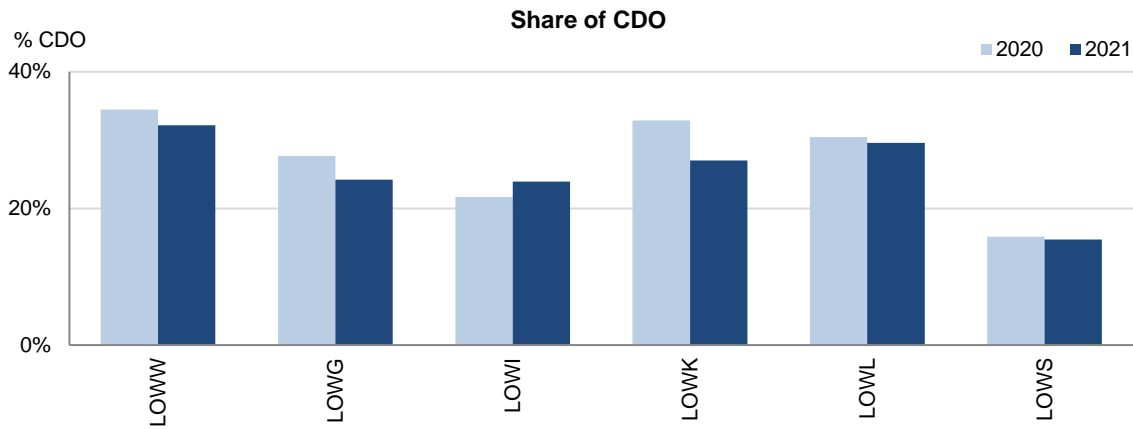
Additional taxi-out times at Vienna lowered again in 2021 (LOWW; 2019: 3.1 min/dep.; 2020: 2.07 min/dep.; 2021: 1.94 min/dep.) According to the Austrian monitoring report: *AMAN/DMAN coupling will be considered as one measure to optimize taxi-out times.*

**3. Additional ASMA Time**



In a similar way to the additional taxi-out times, the additional times in the terminal airspace around Vienna were very impacted by the reduction in traffic in 2020 and further decreased in 2021 (LOWW; 2019: 2.13 min/arr.; 2020: 1.28 min/arr.; 2021: 0.95 min/arr.) The additional ASMA times remained under 1 min/arr. for the most part of 2021 and increased to values above 1 min/arr. in the last 4 months. According to the Austrian monitoring report: *AMAN/DMAN coupling will be considered as one measure to optimize additional time in terminal airspace.*

#### 4. Share of arrivals applying CDO



Vienna (LOWW), being the major airport in Austria, has the highest share of CDO flights in Austria: 32.2% which is slightly higher than the overall RP3 value in 2020 (30.5%).

The other airports have 24-30% of CDO flights, except for Salzburg (LOWS): 15.4%.

All airports have seen a (slight) reduction of the share of CDO flights, except for Innsbruck - LOWI which had an increase of 2.2 percentage points.

According to the Austrian monitoring report: *CDO is a predominant activity for ACG to reach environmental targets. Cooperation procedures between ATS units (APP/ACC) have been improved to increase optimum descents, dependent on the actual traffic situation.*

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Vienna-LOWW	2.07	1.94				1.28	0.95				34%	32%			
Graz-LOWG	-	-				-	-				28%	24%			
Innsbruck-LOWI	-	-				-	-				22%	24%			
Klagenfurt-LOWK	-	-				-	-				33%	27%			
Linz-LOWL	-	-				-	-				30%	30%			
Salzburg-LOWS	-	-				-	-				16%	15%			

**Update on Military dimension of the plan**

Military dimension has little to no impact on the environmental KPA, due to a highly efficient and flexible use of airspace with close military coordination.

Practically no impact of MIL dimension on the capacity KPA.

The planning of airspace use at pre-tactical level is done via the civil/military joint unit Airspace Management Cell (AMC). Day-to-day co-ordination of Operational Air Traffic (OAT) and General Air Traffic (GAT) is handled at the tactical level between civil ATS Units and representatives of the Military Control Centre (MCC).

FUA Level 3 is fully applied.

**Military - related measures implemented or planned to improve capacity**

No information provided

**PI#6 Effective use of reserved or segregated airspace - national level**

Ratio PI#6	2020	2021	2022	2023	2024
Austria	66%	69%			

**PI#6 Effective use of reserved or segregated airspace (per ACC)**

Ratio PI#6	2020	2021	2022	2023	2024
Vienna ACC	66%	69%			

**Initiatives implemented or planned to improve PI#6**

No information provided

**PI#7 Rate of planning via available airspace structures - national level**

Ratio PI#7	2020	2021	2022	2023	2024
Austria					

**PI#7 Rate of planning via available airspace structures (per ACC)**

Ratio PI#7	2020	2021	2022	2023	2024
Vienna ACC					

**Initiatives implemented or planned to improve PI#7**

CDR not applied in Austria. The majority of aircraft flying and filing through reserved and segregated areas is enabled to do so, thanks to a very flexible CIV/MIL coordination for the active areas concerned.

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Austria					

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Vienna ACC					

**Initiatives implemented or planned to improve PI#8**

CDR not applied in Austria. The majority of aircraft filing and flying through reserved or segregated areas is enabled to do so, thanks to a very flexible CIV/MIL coordination for the active areas concerned.

Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.95	0.10	0.17	0.17	0.16		
<b>Actual performance</b>	0.00	0.00					
NSA's assessment of capacity performance							
All capacity targets have been achieved. No ATFM delays were incurred due to reduced COVID 19 traffic and optimum measures of arranging operational ATCO resources.							
Monitoring process for capacity performance							
Apart from permanent ATFCM processes in place, monitoring traffic during the strategic, pretactical, and tactical phase as well as post OPS analyses are regularly executed.							
Capacity Planning							
Capacity planning process considering traffic forecasts, ATCO resources, ATS procedures and ATM System evolution is in place and executed. Permanent coordination and cooperation with the network manager is ongoing.							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned monitoring report</b>			135	138	140	140	
<b>Planned (2019 Perf Plan)</b>	-	134	144	151	154	157	
<b>Planned (2021 Perf Plan)</b>			133	133	138	138	
<b>Actual</b>	131	129	136				
Application of Corrective Measures for Capacity (if applicable)							
Not applicable							
Summary of capacity performance							
Austria experienced an increase in traffic from 590k flights in 2020 to 739k flights in 2021, with practically zero ATFM delays. However, traffic levels were still substantially below the 1,365k flights in 2019.							
It is difficult to follow the number of planned FTE ATCOs since the figures vary in both monitoring reports and performance plans.							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.95	0.10	0.17	0.17	0.16		
<b>Deadband +/-</b>	-	-	[0.12-0.22]	[0.12-0.22]	[0.11-0.21]		
<b>Actual performance</b>	0.00	0.00					
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.							



**1. Overview**

Austria identified six airports as subject to RP3 monitoring. According to the traffic figures at these 4 airports, only Vienna (LOWW) must be monitored for pre-departure delays.

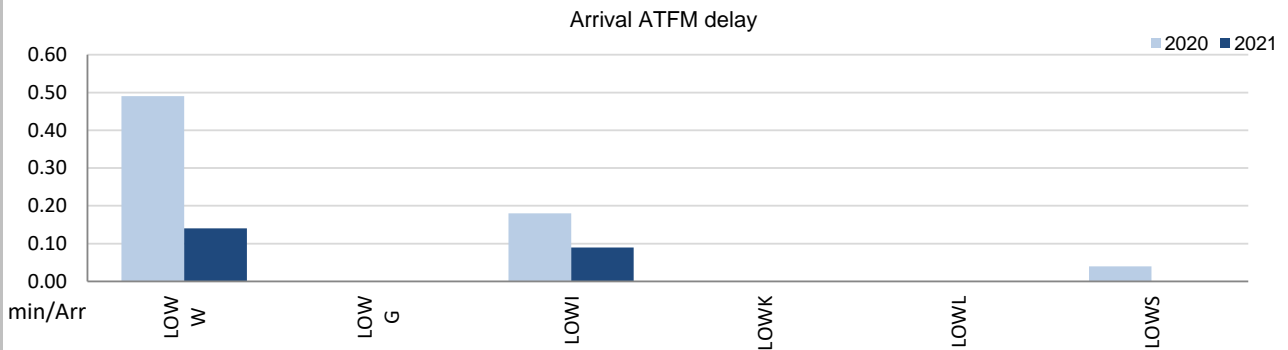
The Airport Operator Data Flow, necessary for the monitoring of these pre-departure delays, is correctly established where required and the monitoring of all capacity indicators can be performed.

Traffic at the ensemble of these airports in 2021 was still 53% lower than in 2019, even if 14% higher than in 2020.

During 2021, arrival ATFM delays in Austria have significantly decreased with respect to the previous year (2020: 0.36 min/arr, 2021: 0.11 min/arr)

ATFM slot adherence has improved (2021: 97.4%; 2020: 95.8%).

**2. Arrival ATFM Delay**

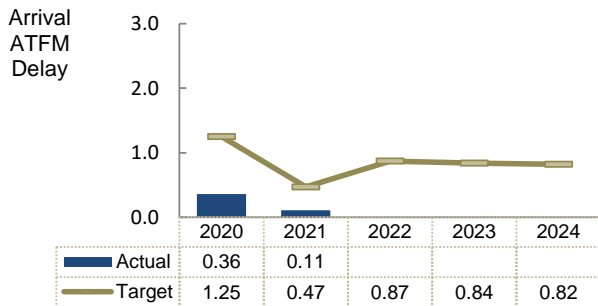


Only Vienna and Innsbruck registered delays in 2021.

At Vienna (LOWW: 2019: 0.91 min/arr.; 2020: 0.49 min/arr.; 2021: 0.14 min/arr.) 78% of these delays were attributed to weather and 22% to ATC staffing issues. The worst delays were observed in August, reaching almost 0.7 min/arr.

Innsbruck (LOWI: 2020: 0.18 min/arr.; 2021: 0.09 min/arr.) observed arrival ATFM delays only in December and were all related to weather.

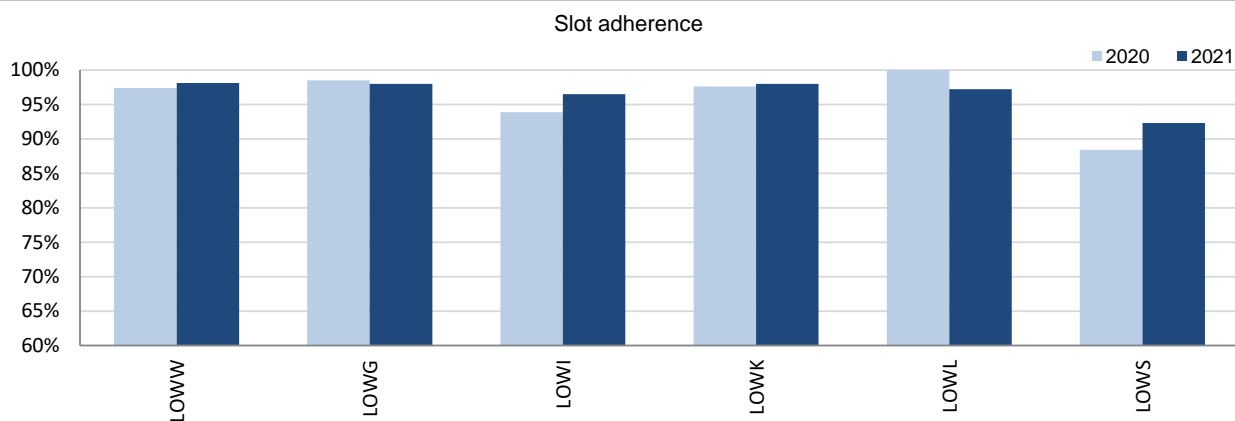
**3. Arrival ATFM Delay – National Target and Incentive Scheme**



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

#### 4. ATFM Slot Adherence



With the drastic drop in traffic, the share of regulated departures from Austrian airports virtually disappeared until July 2021. Most Austrian airports showed adherence above 95% and the national average was 97.4%, an improvement with respect to 2020 (95.8%). With regard to the 2.6% of flights that did not adhere, 2.2% was early and 0.4% was late. According to the Austrian monitoring report: *Overall performance was improved on the one hand due to reduced traffic level and on the other hand due to increased awareness on individual flights.*

#### 5. ATC Pre-departure Delay

Vienna is the only Austrian airport subject to the monitoring of this indicator. The performance has further improved (LOWW; 2019: 1.56 min/dep.; 2020: 0.75 min/dep.; 2021: 0.63 min/dep.) and even if it increased in the second half of 2021, it was still lower than the 2019 values.

According to the Austrian monitoring report: *Performance improved due to reduced traffic despite reduced airport facilities and rigid COVID measures.*

#### 6. All Causes Pre-departure Delay

Vienna is the only Austrian airport subject to the monitoring of this indicator. The total (all causes) delay in the actual off block time at Vienna in 2021 increased to 9.75 min/dep. The highest delays per flight were observed in January-February and July-August.

According to the Austrian monitoring report: *Average time of all cause departure delay did increase due to reduced airport facilities and thus reduced capacity offer during 2021 plus rigid COVID measures.*

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Vienna-LOWW	0.49	0.14				97.4%	98.1%				0.75	0.63				8.27	9.75			
Graz-LOWG	0	0				98.5%	98.0%				-	-				-	-			
Innsbruck-LOWI	0.18	0.09				93.9%	96.5%				-	-				-	-			
Klagenfurt-LOWK	0	0				97.6%	98.0%				-	-				-	-			
Linz-LOWL	0	0				100.0%	97.2%				-	-				-	-			
Salzburg-LOWS	0.04	0				88.4%	92.3%				-	-				-	-			

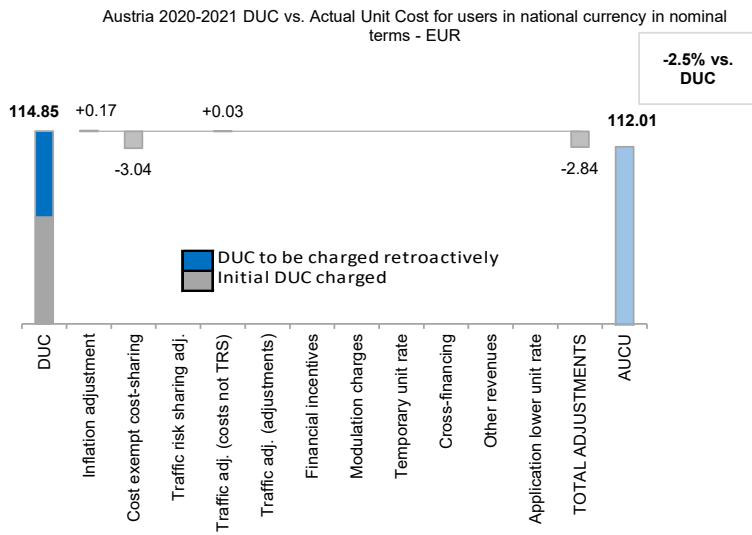
1. Contextual economic information: en route air navigation services						
· Austria ECZ represents 3.4% of the SES en route ANS actual costs in 2019			· FAB: FAB CE			
· National currency: EUR						
· Performance Plan: RP3 draft performance plan dated 17 November 2021 and found consistent as per Commission Decision (EU) 2022/774 of 13 April 2022. The final version of the plan was adopted and published on 27 June 2022, in accordance with Article 16 (a) of regulation (EU) 2019/317.						
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Austria: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)	174,545,896	206,197,475	380,743,371	201,741,388	196,174,218	195,739,912
Inflation %	1.4%	2.5%		2.5%	2.0%	2.0%
Inflation index (100 in 2017)	105.1	107.7		110.3	112.5	114.8
Real en route costs (EUR2017)	167,914,396	194,360,427	362,274,823	186,498,664	178,662,064	175,470,975
Total en route service units	1,508,629	1,806,569	3,315,198	3,003,888	3,268,998	3,504,613
<b>Real en route DUC per service unit (EUR2017)</b>	<b>111.30</b>	<b>107.59</b>	<b>109.28</b>	<b>62.09</b>	<b>54.65</b>	<b>50.07</b>
Austria: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)	174,545,896	188,909,523	363,455,419			
Inflation %	1.4%	2.8%				
Inflation index (100 in 2017)	105.1	108.0				
Real en route costs (EUR2017)	167,914,396	177,539,651	345,454,047			
Total en route service units	1,508,629	1,799,440	3,308,069			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>111.30</b>	<b>98.66</b>	<b>104.43</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)	in value	0	-17,287,952	-17,287,952		
	in %	-	-8.4%	-4.5%		
Inflation %	in p.p.	0.0 p.p.	0.4 p.p.			
	Inflation index (100 in 2017)	in p.p.	0.4 p.p.			
Real en route costs (EUR2017)	in value	0	-16,820,776	-16,820,776		
	in %	-	-8.7%	-4.6%		
Total en route service units	in value	0	-7,129	-7,129		
	in %	-	-0.4%	-0.2%		
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-8.92</b>	<b>-4.85</b>		
	<b>in %</b>	<b>-</b>	<b>-8.3%</b>	<b>-4.4%</b>		
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs. DUC</b> In the combined year 2020-2021, the AUC was -4.4% (or -4.85 €2017) lower than the planned DUC. This results from the combination of slightly lower than planned TSUs (-0.2%) and lower than planned en route costs in real terms (-4.6%, or -16.8 M€2017).			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      -0.2%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
<b>En route service units</b> The difference between actual and planned TSUs (-0.2%) falls within the ±2% dead band. Hence the resulting loss of revenue is borne by the ANSP (see items 10 to 14).						
<b>En route costs by entity at charging zone level</b> Actual real en route costs are -4.6% (-16.8 M€2017) lower than planned. This is mainly driven by the lower costs of the main ANSP - Austro Control (-4.7%, or -14.9 M€2017 for ATM/CNS/AIS and SAR services) and (-3.3%, or -0.8 M€2017 for meteorological services). NSA/EUROCONTROL costs were -4.6% lower than planned.			<p>Costs by entity at ECZ level (M€2017):</p> <p>Main ANSP -4.7%</p> <p>Other ANSP(s) -3.3%</p> <p>METSP(s) -4.6%</p> <p>NSA/EUROCONTROL -4.6%</p> <p>Total CZ -4.6%</p>			
<b>En route costs for the main ANSP (Austro Control) at charging zone level</b> The lower than planned en route costs in real terms for Austro Control (-4.7%, or -14.9 M€2017, excluding the costs for meteorological services) result from: - lower staff costs (-4.5%); "due to cost containment measures of Austria including reduction of overtime, salary and hiring freeze and one time effects such as short time"; - lower other operating costs (-7.3%); "due to cost containment measures of Austria such as reduction of travel expenses, non-operational training and much more"; - lower depreciation (-3.9%) and cost of capital (-12.2%) reflecting delayed investments due to the impact of COVID-19; and, - slightly higher than planned deduction for VFR exempted flights (+1.2%).			<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs -4.5%</p> <p>Other operating costs -7.3%</p> <p>Depreciation -3.9%</p> <p>Cost of capital -12.2%</p> <p>Exceptional costs -0.2%</p> <p>VFR exempted flights 1.2%</p> <p>Total Main ANSP -4.7%</p>			

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	63.56
DUC to be charged retroactively	51.28
<b>DUC</b>	<b>114.85</b>
Inflation adjustment	0.17
Cost exempt from cost-sharing	-3.04
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	0.03
Traffic adj. (adjustments)*	0.00
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	0.00
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-2.84
<b>AUCU</b>	<b>112.01</b>
<b>AUCU vs. DUC</b>	<b>-2.5%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

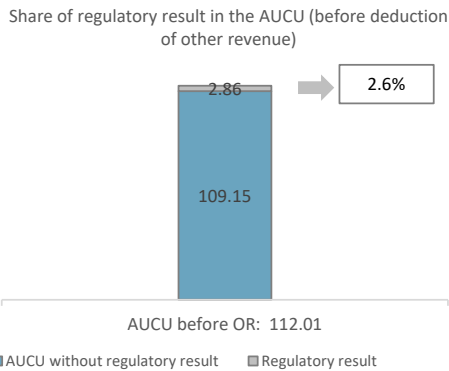
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-2,756	-0.83
Competent authorities and qualified entities costs	-247	-0.07
Eurocontrol costs	-910	-0.28
Pension costs	-6,146	-1.86
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-10,060</b>	<b>-3.04</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level



ANSP(S)	EUR '000	EUR/SU
Austro Control	8,621	2.61
METSP(s)	EUR '000	EUR/SU
Austria MET	836	0.25
<b>Total charging zone</b>	<b>9,457</b>	<b>2.86</b>
<b>Actual cost for users***</b>	<b>370,540</b>	<b>112.01</b>
<b>Regulatory result (% AUCU)</b>	<b>2.6%</b>	<b>2.6%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (112.01€) is -2.5% lower than the nominal DUC (114.85€) which includes DUC initially charged: 63.56€; and to be charged: 51.28€. The difference between these two figures (-2.84€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.17€/SU);
- the impact of adjustments resulting from the costs exempt from cost-sharing mechanism (-3.04€/SU); and,
- the positive traffic adjustment (+0.03€/SU) for the costs not subject to traffic risk sharing to be charged in future years.

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 2.6%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	15,356			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	528			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-8,808			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>7,076</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	-0.2%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	331,281			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>-712</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>6,364</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

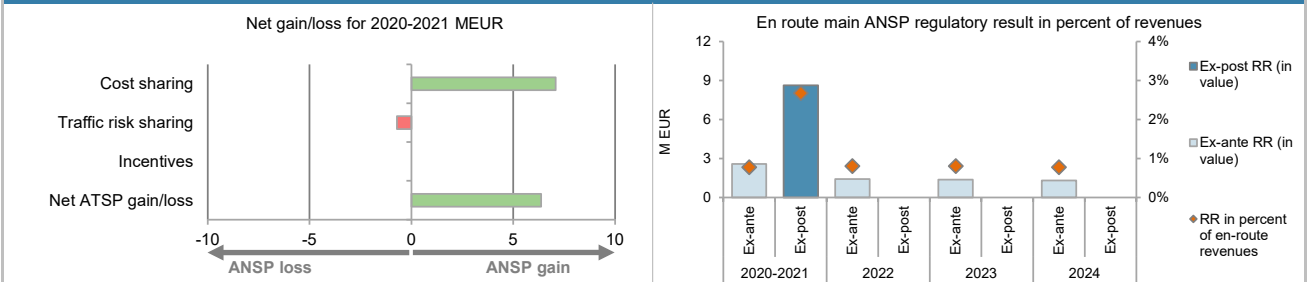
Austro Control planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	103,930	124,683	228,613	126,650	122,398	117,143
Proportion of financing through equity (in %) *see Note 1	15%	15%	15%	15%	15%	15%
RoE pre-tax rate (in %)	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%
RoE (in value)	1,168	1,402	2,570	1,424	1,376	1,317
<b>Ex-ante regulatory result (+/-) for the en route charging zone *see Note 2</b>	<b>1,168</b>	<b>1,402</b>	<b>2,570</b>	<b>1,424</b>	<b>1,376</b>	<b>1,317</b>
<b>Revenue for the en route charging zone</b>	<b>151,348</b>	<b>179,933</b>	<b>331,281</b>	<b>176,989</b>	<b>171,523</b>	<b>170,951</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>0.8%</b>	<b>0.8%</b>	<b>0.8%</b>	<b>0.8%</b>	<b>0.8%</b>	<b>0.8%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>
Austro Control actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	103,930	96,839	200,768			
Proportion of financing through equity (in %) *see Note 1	15%	15%	15%			
RoE pre-tax rate (in %)	7.3%	7.3%	7.3%			
RoE (in value)	1,168	1,089	2,257			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	6,364	6,364			
<b>Ex-post regulatory result (+/-) for the en route charging zone *see Note 2</b>	<b>1,168</b>	<b>7,452</b>	<b>8,621</b>			
<b>Revenue for the en route charging zone</b>	<b>151,348</b>	<b>170,941</b>	<b>322,289</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>0.8%</b>	<b>4.4%</b>	<b>2.7%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>7.3%</b>	<b>50.0%</b>	<b>27.9%</b>			

**Note 1:** Ex-ante and ex-post RoE are computed based on the notional gearing of 85% debt used in the Performance Plan for RP3. The actual gearing of Austro Control should be reported.

**Note 2:** The analysis presented in items 11 to 13 excludes MET services of Austro Control since MET data are disclosed separately in en route and terminal reporting tables.

The regulatory result of Austro Control's MET services is shown in item 14.

13. Focus on the main ANSP regulatory result on en route activity



**Austro Control net gain on activity in Austrian en route charging zone in the combined year 2020-2021**

Austro Control generated a net gain of +6.4 M€, resulting from a gain of +7.1 M€ arising from the cost sharing mechanism and a loss of -0.7 M€ arising from the traffic risk sharing mechanism.

**Austro Control overall regulatory results (RR) for the en route activity (see Note 2 above)**

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+6.4 M€) and the actual RoE (+2.3 M€) amounts to +8.6 M€ (2.7% of the en route revenues). The resulting ex-post rate of return on equity is 27.9%, which is significantly higher than the 7.3% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
Austria MET planned regulatory result (EUR '000)	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	60	76	135	74	75	75
Revenue for the en route charging zone	10,846	13,173	24,019	13,019	12,814	12,873
Ex-ante regulatory result (+/-) in percent of revenues	0.5%	0.6%	0.6%	0.6%	0.6%	0.6%
Ex-ante RoE pre-tax rate (in %)	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%
Austria MET actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	60	777	836			
Revenue for the en route charging zone	10,846	13,119	23,966			
Ex-post regulatory result (+/-) in percent of revenues	0.5%	5.9%	3.5%			
Ex-post RoE pre-tax rate (in %)	7.3%	100.9%	52.8%			
<b>Overall regulatory results (RR) for the en route activity for other ANSP in the charging zone</b>						
For Austro Control's meteorological services, the overall ex-post regulatory result for the combined year 2020-2021 amounted to +0.9 M€, which represents 3.5% of the en route revenues. The resulting ex-post rate of return on equity is 52.8%, which is significantly higher than the 7.3% planned in the PP.						

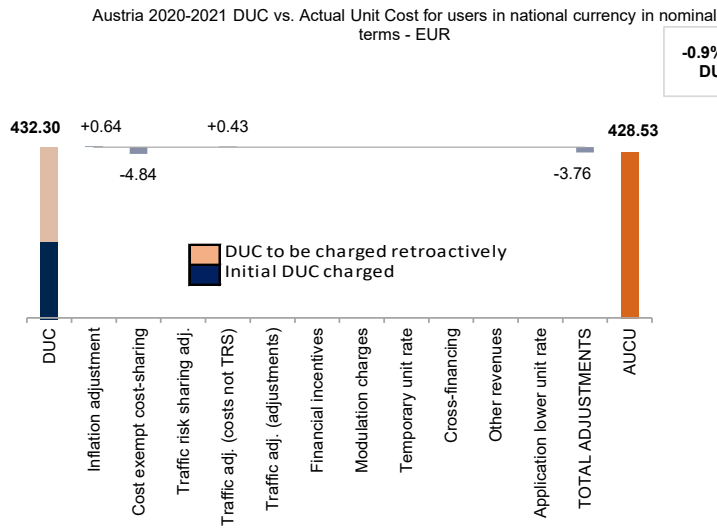
1. Contextual economic information: terminal air navigation services						
<ul style="list-style-type: none"> <li>Austria TCZ represents 3.7% of the SES terminal ANS actual costs in 2019</li> <li>Number of airports in charging zone in 2021: 6 of which:                             <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 5</li> <li>Airports with more than 80,000 IFR mvmts: 1</li> </ul> </li> <li>National currency: EUR</li> <li>Performance Plan: See item 1 for the en route charging zone(s).</li> </ul>						
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.</p>						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Austria: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal EUR)	36,466,224	41,691,065	78,157,289	44,823,694	43,225,405	43,083,154
Inflation %	1.4%	2.5%		2.5%	2.0%	2.0%
Inflation index (100 in 2017)	105.1	107.7		110.3	112.5	114.8
Real terminal costs (EUR2017)	35,061,142	39,298,049	74,359,191	41,398,122	39,302,081	38,540,503
Total terminal service units	83,866	96,929	180,795	185,206	201,458	215,289
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>418.06</b>	<b>405.43</b>	<b>411.29</b>	<b>223.52</b>	<b>195.09</b>	<b>179.02</b>
Austria: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal EUR)	36,466,224	40,309,443	76,775,667			
Inflation %	1.4%	2.8%				
Inflation index (100 in 2017)	105.1	108.0				
Real terminal costs (EUR2017)	35,061,142	37,846,285	72,907,427			
Total terminal service units	83,866	94,952	178,818			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>418.06</b>	<b>398.58</b>	<b>407.72</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal EUR)	in value	0	-1,381,622	-1,381,622		
	in %	-	-3.3%	-1.8%		
Inflation %	in p.p.	0.0 p.p.	0.4 p.p.			
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	0.4 p.p.			
Real terminal costs (EUR2017)	in value	0	-1,451,764	-1,451,764		
	in %	-	-3.7%	-2.0%		
Total terminal service units	in value	0	-1,977	-1,977		
	in %	-	-2.0%	-1.1%		
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-6.85</b>	<b>-3.57</b>		
	<b>in %</b>	<b>-</b>	<b>-1.7%</b>	<b>-0.9%</b>		
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>					
	<b>in %</b>					
4. Focus on terminal DUC monitoring at charging zone level						
<p><b>AUC vs. DUC</b> In the combined year 2020-2021, the AUC was -0.9% (or -3.57 €2017) lower than the planned DUC. This results from the combination of lower than planned TNSUs (-1.1%) and lower than planned terminal costs in real terms (-2.0%, or -1.5 M€2017).</p> <p><b>Terminal service units</b> The difference between actual and planned TNSUs (-1.1%) falls within the ±2% dead band. Hence the resulting loss of revenue is borne by the ANSP (see items 10 to 14).</p> <p><b>Terminal costs by entity at charging zone level</b> Actual real terminal costs are -2.0% (-1.5 M€2017) lower than planned. This is mainly driven by the lower costs of the main ANSP - Austro Control (-1.9%, or -1.3 M€2017 for ATM/CNS/AIS costs) and (-2.3%, or -0.1 M€2017 for MET costs). NSA costs were -13.7% lower than planned.</p> <p><b>Terminal costs for the main ANSP (Austro Control) at charging zone level</b> The lower than planned terminal costs in real terms for Austro Control (-1.9%, or -1.3 M€2017, excluding the costs for meteorological services) result from: - slightly lower staff costs (-0.2%); - lower other operating costs (-3.9%); "due to cost containment measures of Austria such as reduction of travel expenses, non-operational training and much more"; and, - lower depreciation (-4.1%) and cost of capital (-13.4%) reflecting delayed investments due to the impact of COVID-19; and, - slightly lower exceptional costs (-0.2%).</p>			<p>2020-2021 actual vs. planned TNSUs</p> <p>Costs by entity at TCZ level (M€2017):</p> <p>Costs by nature for main ANSP (M€2017):</p>			

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	210.78
DUC to be charged retroactively	221.52
<b>DUC</b>	<b>432.30</b>
Inflation adjustment	0.64
Cost exempt from cost-sharing	-4.84
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	0.43
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-3.76
<b>AUCU</b>	<b>428.53</b>
<b>AUCU vs. DUC</b>	<b>-0.9%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

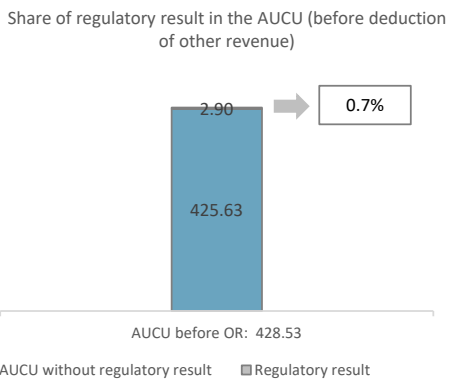
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-850	-4.75
Competent authorities and qualified entities costs	-43	-0.24
Eurocontrol costs	0	0.00
Pension costs	28	0.16
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-866</b>	<b>-4.84</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	EUR '000	EUR/SU
Austro Control	347	1.94
METSP(s)	EUR '000	EUR/SU
Austria-MET	172	0.96
<b>Total charging zone</b>	<b>519</b>	<b>2.90</b>
<b>Actual cost for users***</b>	<b>76,630</b>	<b>428.53</b>
<b>Regulatory result (% AUCU)</b>	<b>0.7%</b>	<b>0.7%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (428.53€) is -0.9% lower than the nominal DUC (432.30€) which includes DUC initially charged: 210.78€; and to be charged: 221.52€. The difference between these two figures (-3.76€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.64€/SU);
- the impact of adjustments resulting from the costs exempt from cost-sharing mechanism (-4.84€/SU); and,
- the positive traffic adjustment (+0.43€/SU) for the costs not subject to traffic risk sharing to be charged in future years.

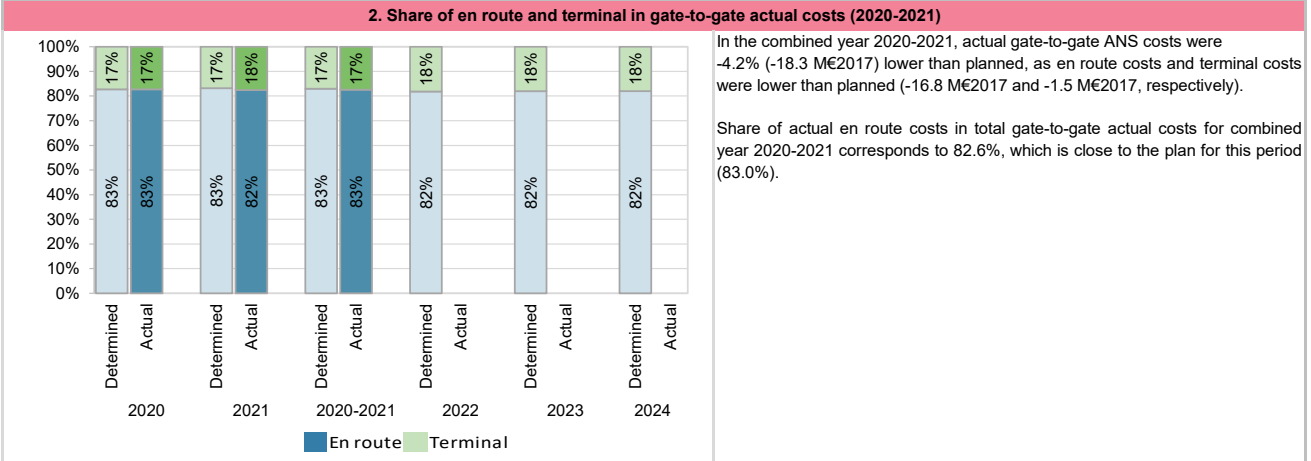
The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 0.7%.



10. Monitoring of the terminal ANSPs regulatory results (RR)																																				
<p>The <b>Regulatory Result (RR)</b> corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.</p> <p>The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.</p> <p>- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.                      - Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.</p> <p>The <b>net gain/loss</b> calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).</p> <p>The monitoring of the RR is carried out in national currency in nominal terms.</p>																																				
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level																																				
Cost sharing (EUR '000)	2020-2021	2022	2023	2024																																
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	1,190																																			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	104																																			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-792																																			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>503</b>																																			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024																																
Difference in total service units (actual vs PP) %	-1.1%																																			
Determined costs subject to traffic risk sharing for the ANSP (PP)	71,061																																			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>-777</b>																																			
Incentives (EUR '000)	2020-2021	2022	2023	2024																																
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>																																			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>-274</b>																																			
12. Regulatory result (RR) for the main ANSP at charging zone level																																				
Austro Control planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024																														
Total asset base	28,056	35,733	63,789	37,293	35,481	34,143																														
Proportion of financing through equity (in %) *see Note 1	15%	15%	15%	15%	15%	15%																														
RoE pre-tax rate (in %)	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%																														
RoE (in value)	315	402	717	419	399	384																														
<b>Ex-ante regulatory result (+/-) for the terminal charging zone *see Note 2</b>	<b>315</b>	<b>402</b>	<b>717</b>	<b>419</b>	<b>399</b>	<b>384</b>																														
<b>Revenue for the terminal charging zone</b>	<b>33,145</b>	<b>37,916</b>	<b>71,061</b>	<b>40,787</b>	<b>39,231</b>	<b>39,046</b>																														
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>1.0%</b>	<b>1.1%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>1.0%</b>																														
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>																														
Austro Control actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024																														
Total asset base	28,056	27,172	55,228																																	
Proportion of financing through equity (in %) *see Note 1	15%	15%	15%																																	
RoE pre-tax rate (in %)	7.3%	7.3%	7.3%																																	
RoE (in value)	315	305	621																																	
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	-274	-274																																	
<b>Ex-post regulatory result (+/-) for the terminal charging zone *Note 2</b>	<b>315</b>	<b>31</b>	<b>347</b>																																	
<b>Revenue for the terminal charging zone</b>	<b>33,145</b>	<b>36,451</b>	<b>69,596</b>																																	
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>1.0%</b>	<b>0.1%</b>	<b>0.5%</b>																																	
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>7.3%</b>	<b>0.7%</b>	<b>4.1%</b>																																	
<p><b>Note 1:</b> Ex-ante and ex-post RoE are computed based on the notional gearing of 85% debt used in the Performance Plan for RP3. The actual gearing of Austro Control should be reported.</p> <p><b>Note 2:</b> The analysis presented in items 11 to 13 excludes MET services of Austro Control since MET data are disclosed separately in en route and terminal reporting tables.</p> <p>Regulatory result of Austro Control's MET services is shown in item 14.</p>																																				
13. Focus on main ANSP regulatory result on terminal activity																																				
<p>Net gain/loss for 2020-2021 MEUR</p> <table border="1"> <tr><th>Category</th><th>Value (MEUR)</th></tr> <tr><td>Cost sharing</td><td>+0.5</td></tr> <tr><td>Traffic risk sharing</td><td>-0.8</td></tr> <tr><td>Incentives</td><td>0</td></tr> <tr><td>Net ATSP gain/loss</td><td>-0.3</td></tr> </table>				Category	Value (MEUR)	Cost sharing	+0.5	Traffic risk sharing	-0.8	Incentives	0	Net ATSP gain/loss	-0.3	<p>Terminal main ANSP regulatory result in percent of revenues</p> <table border="1"> <tr><th>Year</th><th>Ex-ante RR (in value) %</th><th>Ex-post RR (in value) %</th><th>RR in percent of en-route revenues %</th></tr> <tr><td>2020-2021</td><td>1.0%</td><td>0.5%</td><td>0.9%</td></tr> <tr><td>2022</td><td>1.0%</td><td>0.1%</td><td>0.6%</td></tr> <tr><td>2023</td><td>1.0%</td><td>0.5%</td><td>0.9%</td></tr> <tr><td>2024</td><td>1.0%</td><td>0.5%</td><td>0.9%</td></tr> </table>			Year	Ex-ante RR (in value) %	Ex-post RR (in value) %	RR in percent of en-route revenues %	2020-2021	1.0%	0.5%	0.9%	2022	1.0%	0.1%	0.6%	2023	1.0%	0.5%	0.9%	2024	1.0%	0.5%	0.9%
Category	Value (MEUR)																																			
Cost sharing	+0.5																																			
Traffic risk sharing	-0.8																																			
Incentives	0																																			
Net ATSP gain/loss	-0.3																																			
Year	Ex-ante RR (in value) %	Ex-post RR (in value) %	RR in percent of en-route revenues %																																	
2020-2021	1.0%	0.5%	0.9%																																	
2022	1.0%	0.1%	0.6%																																	
2023	1.0%	0.5%	0.9%																																	
2024	1.0%	0.5%	0.9%																																	
<p><b>Austro Control net loss on activity in Austrian terminal charging zone in the combined year 2020-2021</b></p> <p>Austro Control generated a net loss of -0.3 M€, resulting from a gain of +0.5 M€ arising from the cost sharing mechanism and a loss of -0.8 M€ arising from the traffic risk sharing mechanism.</p> <p><b>Austro Control overall regulatory results (RR) for the terminal activity (see Note 2 above)</b></p> <p>Ex-post, the overall RR taking into account the net loss from the terminal activity mentioned above (-0.3 M€) and the actual RoE (+0.6 M€) amounts to +0.3 M€ (0.5% of the terminal revenues). The resulting ex-post rate of return on equity is 4.1%, which is lower than the 7.3% planned in the PP.</p>																																				

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Austria-MET planned regulatory result (EUR '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	23	26	48	26	26	26
Revenue for the terminal charging zone	3,165	3,615	6,780	3,871	3,820	3,857
Ex-ante regulatory result (+/-) in percent of revenues	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
Ex-ante RoE pre-tax rate (in %)	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%
Austria-MET actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	23	149	172			
Revenue for the terminal charging zone	3,165	3,595	6,760			
Ex-post regulatory result (+/-) in percent of revenues	0.7%	4.2%	2.5%			
Ex-post RoE pre-tax rate (in %)	7.3%	51.2%	28.7%			
<b>Overall regulatory results (RR) for the terminal activity for other ANSP in the charging zone</b>						
For Austro Control's meteorological services, the overall ex-post regulatory result for the combined year 2020-2021 amounted to +0.2 M€, which represents 2.5% of the terminal revenues. The resulting ex-post rate of return on equity is 28.7%, which is significantly higher than the 7.3% planned in the PP.						

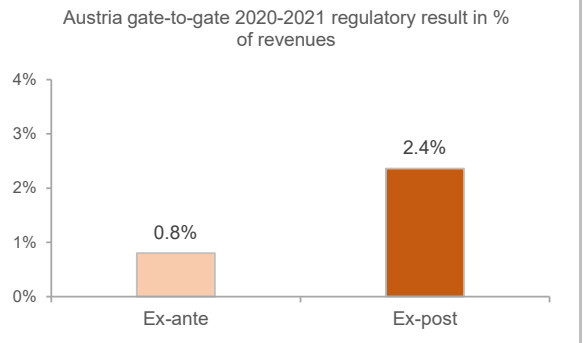
1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1: Austria		En route charging zone 2:					
Terminal charging zone 1: Austria		Terminal charging zone 2:					
Austria: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		167,914,396	194,360,427	362,274,823	186,498,664	178,662,064	175,470,975
Real terminal costs (EUR2017)		35,061,142	39,298,049	74,359,191	41,398,122	39,302,081	38,540,503
Real gate-to-gate costs (EUR2017)		202,975,538	233,658,476	436,634,014	227,896,786	217,964,145	214,011,478
En route share (%)		82.7%	83.2%	83.0%	81.8%	82.0%	82.0%
Austria: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		167,914,396	177,539,651	345,454,047			
Real terminal costs (EUR2017)		35,061,142	37,846,285	72,907,427			
Real gate-to-gate costs (EUR2017)		202,975,538	215,385,936	418,361,474			
En route share (%)		82.7%	82.4%	82.6%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017) in value		0	-18,272,540	-18,272,540			
in %		0.0%	-7.8%	-4.2%			
En route share in p.p.		0.0 p.p.	-0.8 p.p.	-0.4 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In EUR '000							
ANSP(S)	RR	Ex-ante			RR	Ex-post	
		Revenues	RR % revenues	Revenues		RR % revenues	
Austro Control	3,287	402,342	0.8%	8,967	391,885	2.3%	
METSP(s)	RR	Revenues	RR % revenues	RR	Revenues	RR % revenues	
Austria MET	184	30,799	0.6%	1,008	30,726	3.3%	
<b>Total</b>	<b>3,471</b>	<b>433,141</b>	<b>0.8%</b>	<b>9,976</b>	<b>422,611</b>	<b>2.4%</b>	

For Austro Control providing services (including MET) in the en route and terminal charging zones of Austria covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +10.0 M€ (+9.5 M€ for en route charging zone and +0.5 M€ for terminal charging zone - see boxes 10 to 14 for the detailed analysis at charging zones level), corresponding to 2.4% of gate-to-gate ANS revenues.

This is higher than the return planned for the year included in the performance plan (0.8%).



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# **Annual Monitoring Report 2021**

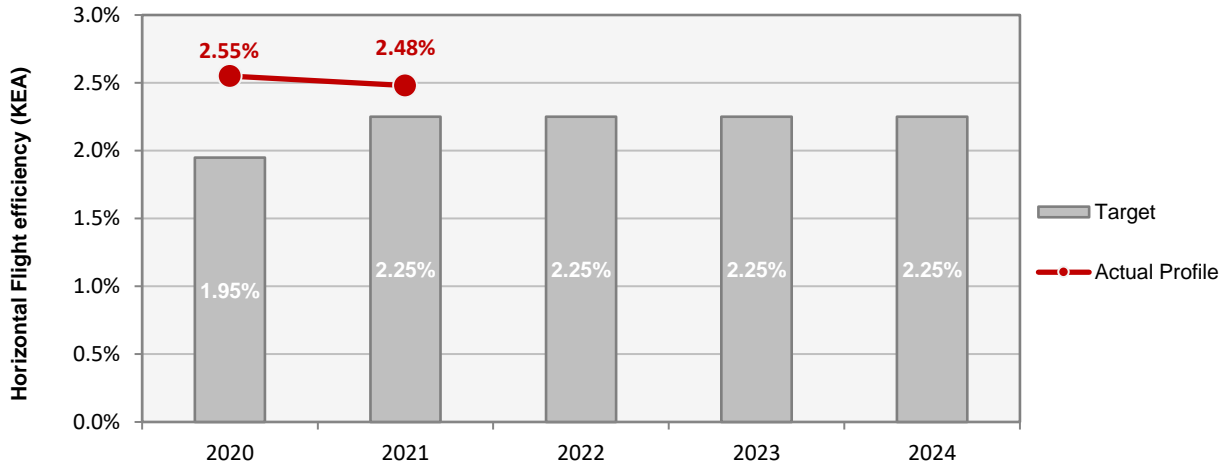
## Local level view

### Bulgaria

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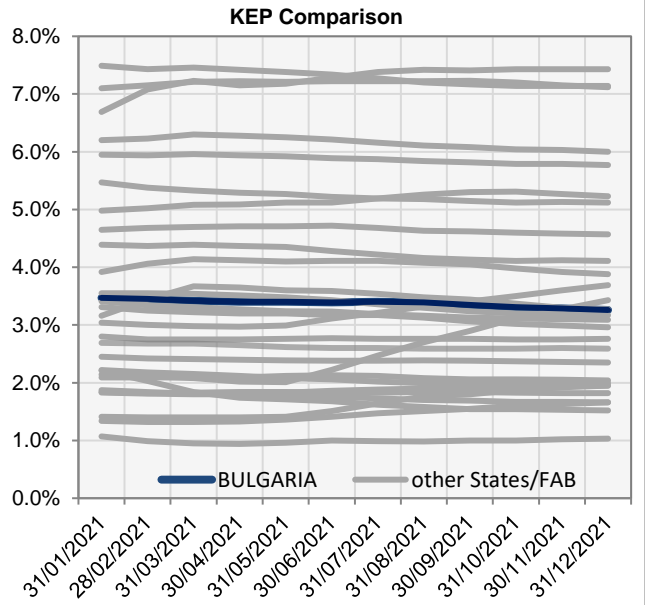
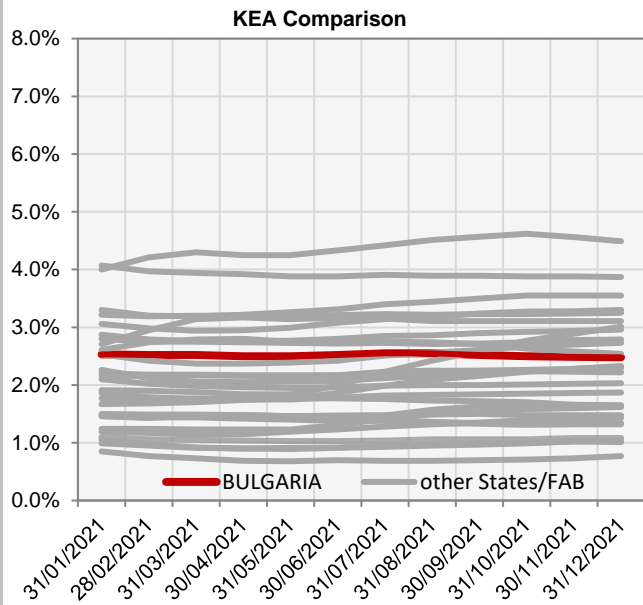
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>Bulatsa</b>	95	C	C	C	D	D
Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.						
Observations						
Four out of five EoSM components of the ANSP meet, or exceed, already the 2024 target level. Only the component "Safety Risk Management" is below 2024 target level. All in all, one question out of 28 is below the target level.						

KEA					
	2020	2021	2022	2023	2024
Target	1.95%	2.25%	2.25%	2.25%	2.25%
Actual performance	2.55%	2.48%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	2.53%	2.52%	2.52%	2.50%	2.50%	2.52%	2.55%	2.55%	2.52%	2.50%	2.49%	2.48%
KEP	3.47%	3.45%	3.42%	3.40%	3.40%	3.39%	3.40%	3.39%	3.35%	3.31%	3.29%	3.26%
KES	2.70%	2.73%	2.75%	2.75%	2.76%	2.77%	2.82%	2.85%	2.86%	2.85%	2.84%	2.83%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.



**Update on Military dimension of the plan**

An impact analysis with suggestions for improvements has been provided to National Airspace Policy Body (NAPB).

TRAs that blocked the accessibility with Gorna Oryahovitsa airport have been changed into PCAs along with relevant procedures. On-going action to improve airspace organisation in the vicinity of Plovdiv airport is to be fulfilled in present year.

**Military - related measures implemented or planned to improve capacity**

On recommendations within the the impact analysis NAPB should take particular decisions. It should be noted that military activity within Bulgarian airspace has been increased in recent years, some of exercises are of ad-hoc nature, and is really difficult to provide best judgement.

**PI#6 Effective use of reserved or segregated airspace - national level**

Ratio PI#6	2020	2021	2022	2023	2024
Bulgaria					

**PI#6 Effective use of reserved or segregated airspace (per ACC)**

Ratio PI#6	2020	2021	2022	2023	2024
Sofia ACC					

**Initiatives implemented or planned to improve PI#6**

No information provided.

**PI#7 Rate of planning via available airspace structures - national level**

Ratio PI#7	2020	2021	2022	2023	2024
Bulgaria					

**PI#7 Rate of planning via available airspace structures (per ACC)**

Ratio PI#7	2020	2021	2022	2023	2024
Sofia ACC					

**Initiatives implemented or planned to improve PI#7**

No information provided.

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Bulgaria					

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Sofia ACC					

**Initiatives implemented or planned to improve PI#8**

No information provided.

Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.17	0.04	0.08	0.07	0.08		
<b>Actual performance</b>	0.00	0.00					
NSA's assessment of capacity performance							
<p>The traffic has not recovered yet to the pre-crisis levels, however, it should duly be noted that a need for allotment of operational staff in 4-working flows is extremely demanding. The working flows have been put in place to restrict the spread of COVID 19 infection and to ensure the 24/7 service continuity. Besides, the allocation of 4-working flows came up unsatisfactory response to the match between demand and capacity in terms of available ATCOs, and therefore the number of working flows has been reduced to 3.</p> <p>As a main priority to preserve the health of people Bulatsa was forced to switch to inflexible rostering, the freedom of ATCO's movement in different shifts configurations has been restrained.</p>							
Monitoring process for capacity performance							
<p>The monitoring report contained information about health and sanitary screening in response to the COVID 19 pandemic, rather than information on the monitoring of capacity performance.</p>							
Capacity Planning							
<p>Capacity planning was on weekly basis with regard to the traffic forecast delivered by NM. The longer term forecasts were of inaccurate nature leading to over- or underestimating the number of ATCOs needed for each particular day. Relaxation in traffic volumes brought about suspension of some RAD restrictions with no significant effect on capacity.</p>							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned (Perf Plan)</b>	-	-	152	154	155	158	
<b>Actual</b>	156	147	154				
<p>The number of additional ATCOs in OPS is due to:</p> <ul style="list-style-type: none"> <li>- 6 ATCOs who completed their training and received their licences during the period;</li> <li>- the remainder represents transition of FTEs from Other duties to OPS room.</li> </ul>							
Application of Corrective Measures for Capacity (if applicable)							
Not applicable.							
Summary of capacity performance							
<p>Bulgaria experienced an increase in traffic from 376k flights in 2020 to 516k flights in 2021, with zero ATFM delay. However, traffic levels were still substantially below the 879k flights in 2019.</p>							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.17	0.04	0.08	0.07	0.08		
<b>Deadband +/-</b>	-	-	[0.03-0.13]	[0.02-0.12]	[0.03-0.13]		
<b>Actual performance</b>	0.00	0.00					
<p>In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.</p>							

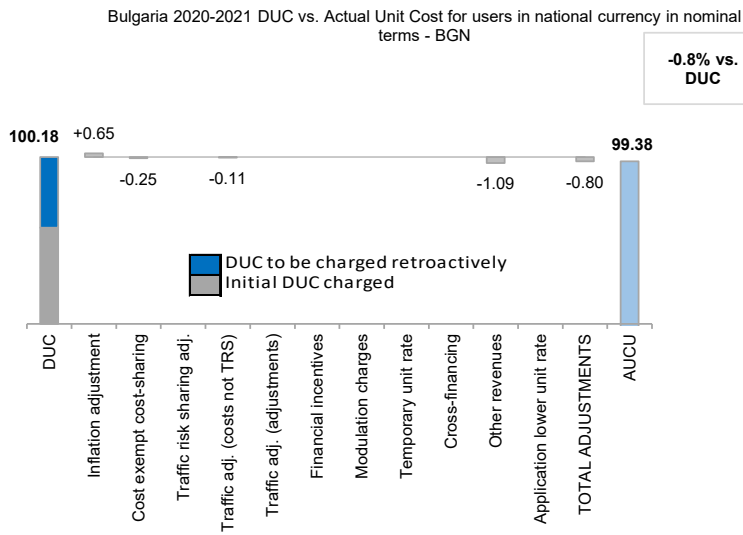
1. Contextual economic information: en route air navigation services							
Bulgaria ECZ represents 1.8% of the SES en route ANS actual costs in 2019			FAB: DANUBE FAB				
National currency:	BGN	Exchange rates (1 EUR=)	2017: 1.95543 BGN	2020: 1.95531 BGN	2021: 1.95522 BGN		
Performance Plan:	RP3 draft performance plan dated 17 November 2021 and found consistent as per Commission Decision (EU) 2022/778 of 13 April 2022 The final version of the plan was adopted and published on 14 September 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317.						
2. Monitoring of the en route determined unit cost (DUC) at charging zone level							
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.							
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.							
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)							
Bulgaria: Data from RP3 Performance Plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal BGN)		194,468,706	206,093,314	400,562,021	224,347,422	247,033,089	252,002,257
Inflation %		1.2%	1.0%		2.0%	2.0%	2.0%
Inflation index (100 in 2017)		106.4	107.5		109.6	111.8	114.0
Real en route costs (BGN2017)		186,261,520	195,988,055	382,249,574	210,065,962	227,827,874	229,524,354
Total en route service units		1,766,031	2,232,254	3,998,285	3,109,171	3,709,112	4,126,500
<b>Real en route DUC per service unit (BGN2017)</b>		<b>105.47</b>	<b>87.80</b>	<b>95.60</b>	<b>67.56</b>	<b>61.42</b>	<b>55.62</b>
<b>Real en route DUC per service unit (EUR2017)</b>		<b>53.94</b>	<b>44.90</b>	<b>48.89</b>	<b>34.55</b>	<b>31.41</b>	<b>28.44</b>
Bulgaria: Actual data from Reporting Tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal BGN)		194,468,706	195,845,084	390,313,791			
Inflation %		1.2%	2.8%				
Inflation index (100 in 2017)		106.4	109.4				
Real en route costs (BGN2017)		186,261,520	184,211,984	370,473,503			
Total en route service units		1,766,031	2,269,765	4,035,796			
<b>Real en route AUC per service unit (BGN2017)</b>		<b>105.47</b>	<b>81.16</b>	<b>91.80</b>			
<b>Real en route AUC per service unit (EUR2017)</b>		<b>53.94</b>	<b>41.50</b>	<b>46.94</b>			
Difference between Actuals and Planned		2020	2021	2020-2021	2022	2023	2024
En route costs (nominal BGN)	in value	0	-10,248,230	-10,248,230			
	in %	-	-5.0%	-2.6%			
Inflation %	in p.p.	0.0 p.p.	1.8 p.p.				
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	1.9 p.p.				
Real en route costs (BGN2017)	in value	0	-11,776,071	-11,776,071			
	in %	-	-6.0%	-3.1%			
Total en route service units	in value	0	37,511	37,511			
	in %	-	+1.7%	+0.9%			
<b>Real en route unit cost per service unit (BGN2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-6.64</b>	<b>-3.81</b>			
	<b>in %</b>	<b>-</b>	<b>-7.6%</b>	<b>-4.0%</b>			
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-3.40</b>	<b>-1.95</b>			
	<b>in %</b>	<b>-</b>	<b>-7.6%</b>	<b>-4.0%</b>			
4. Focus on en route DUC monitoring at charging zone level							
<b>AUC vs DUC</b> In the combined year 2020-2021, the AUC was lower than the planned DUC (-4.0% or -3.81 BGN2017 or -1.95 €2017). This results from the combination of slightly higher than planned TSUs (+0.9%) and lower than planned en route costs in real terms (-3.1%, or -11.8 MBGN2017).							
<b>En route service units</b> The difference between actual and planned TSUs (+0.9%) falls within of the ±2% dead band. Hence, the resulting gain of 3.3 MBGN is entirely retained by the ANSP (see items 10 to 14).							
<b>En route costs by entity at charging zone level</b> Actual real en route costs for 2020-2021 are -3.1% (-11.8 MBGN2017, or -6.0 M€2017) lower than planned. This reflects the results across all the entities in the charging zone: main ANSP - BULATSA (-2.9%, or -5.3 M€2017) and the NSA/EUROCONTROL (-4.7%, or -0.7 M€2017).							
<b>En route costs for the main ANSP (BULATSA) at charging zone level</b> The lower than planned en route costs in real terms for BULATSA in 2020-2021 reflects a combination of: - lower staff costs (-3.8%), resulting from a reduction of salaries; - lower other operating costs (-7.4%), reflecting delays and postponement of investment projects, specialised consulting services, trainings and travel; - higher depreciation costs (+2.4%), reflecting the implementation of the investment plan; and, - slightly higher cost of capital (+0.1%), resulting from slightly higher than planned asset base.							

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	BGN/SU	EUR/SU
Initial DUC charged	57.75	29.53
DUC to be charged retroactively	42.44	21.70
<b>DUC</b>	<b>100.18</b>	<b>51.24</b>
Inflation adjustment	0.65	0.33
Cost exempt from cost-sharing	-0.25	-0.13
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	-0.11	-0.06
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	-1.09	-0.56
Application of lower unit rate	0.00	0.00
Total adjustments	-0.80	-0.41
<b>AUCU</b>	<b>99.38</b>	<b>50.83</b>
<b>AUCU vs. DUC</b>	<b>-0.8%</b>	<b>-0.8%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

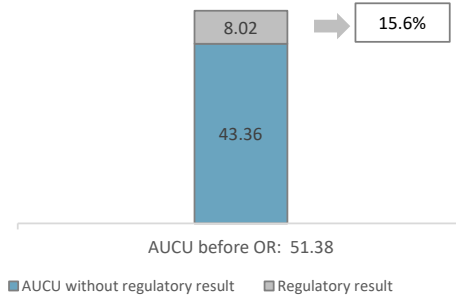
7. En route costs exempt from cost sharing

		BGN '000	EUR '000	BGN/SU	EUR/SU
by item	New and existing investments	333	171	0.08	0.04
	Competent authorities and qualified entities costs	-491	-251	-0.12	-0.06
	Eurocontrol costs	-895	-458	-0.22	-0.11
	Pension costs	50	26	0.01	0.01
	Interest on loans	0	0	0.00	0.00
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>-1,003</b>	<b>-513</b>	<b>-0.25</b>	<b>-0.13</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	BGN '000	EUR '000	BGN/SU	EUR/SU
BULATSA	63,303	32,376	15.69	8.02
<b>METSP(s)</b>				
<b>Total charging zone</b>	<b>63,303</b>	<b>32,376</b>	<b>15.69</b>	<b>8.02</b>
<b>Actual cost for users***</b>	<b>405,473</b>	<b>207,375</b>	<b>100.47</b>	<b>51.38</b>
<b>Regulatory result (% AUCU)</b>	<b>15.6%</b>	<b>15.6%</b>	<b>15.6%</b>	<b>15.6%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (99.38BGN or 50.83€) is -0.8% lower than the nominal DUC (100.18BGN or 51.24€) which includes DUC initially charged: 57.75BGN (or 29.53€); and to be charged: 42.44BGN (or 21.70€). The difference between these two figures is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.65BGN or +0.33€), to be charged to the airspace users in future years.
- the deduction of the traffic adjustment (-0.11BGN or -0.06€) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- the deduction of the other revenues (-1.09BGN or -0.56€);
- and the impact of adjustments resulting from the costs exempted from cost risk sharing mechanism (-0.25BGN or -0.13€).

The share of regulatory result (see items 10 to 14) in the AUCU is 15.6%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

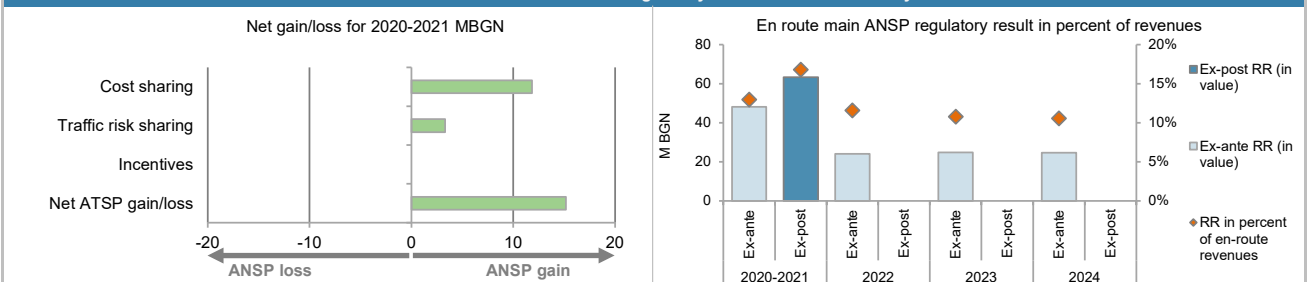
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (BGN '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	8,862			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	2,608			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	383			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>11,853</b>			
Traffic risk sharing (BGN '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.9%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	352,457			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>3,307</b>			
Incentives (BGN '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (BGN '000)</b>	<b>15,159</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>7,753</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

BULATSA planned regulatory result (BGN '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	348,232	338,623	686,856	344,872	354,469	353,508
Proportion of financing through equity (in %)	100%	100%	100%	100%	100%	100%
RoE pre-tax rate (in %)	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
RoE (in value)	24,376	23,704	48,080	24,141	24,813	24,746
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>24,376</b>	<b>23,704</b>	<b>48,080</b>	<b>24,141</b>	<b>24,813</b>	<b>24,746</b>
<b>Revenue for the en route charging zone</b>	<b>180,948</b>	<b>190,389</b>	<b>371,337</b>	<b>208,458</b>	<b>230,421</b>	<b>234,663</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>13.5%</b>	<b>12.5%</b>	<b>12.9%</b>	<b>11.6%</b>	<b>10.8%</b>	<b>10.5%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>7.0%</b>	<b>7.0%</b>	<b>7.0%</b>	<b>7.0%</b>	<b>7.0%</b>	<b>7.0%</b>
BULATSA actual regulatory result (BGN '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	348,232	339,530	687,763			
Proportion of financing through equity (in %)	100%	100%	100%			
RoE pre-tax rate (in %)	7.0%	7.0%	7.0%			
RoE (in value)	24,376	23,767	48,143			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	15,159	15,159			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>24,376</b>	<b>38,926</b>	<b>63,303</b>			
<b>Revenue for the en route charging zone</b>	<b>180,948</b>	<b>196,686</b>	<b>377,634</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>13.5%</b>	<b>19.8%</b>	<b>16.8%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>7.0%</b>	<b>11.5%</b>	<b>9.2%</b>			

13. Focus on the main ANSP regulatory result on en route activity



**BULATSA net gain on en route activity in the Bulgarian charging zone in the combined year 2020-2021**  
 BULATSA's net gain amounts to +15.2 MBGN (+7.8 M€), as a combination of a gain of +11.9 MBGN (+6.1 M€) arising from the cost sharing mechanism and a gain of +3.3 MBGN (+1.7 M€) arising from the traffic risk sharing mechanism.

**BULATSA overall regulatory results (RR) for the en route activity**

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+15.2 MBGN or +7.8 M€) and the actual RoE (+48.1 MBGN or 24.6 M€) amounts to +63.3 MBGN or +32.4 M€ (16.8% of the en route revenues). The resulting ex-post rate of return on equity is 9.2%, which is higher than the 7.0% planned in the PP.

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# **Annual Monitoring Report 2021**

Local level view

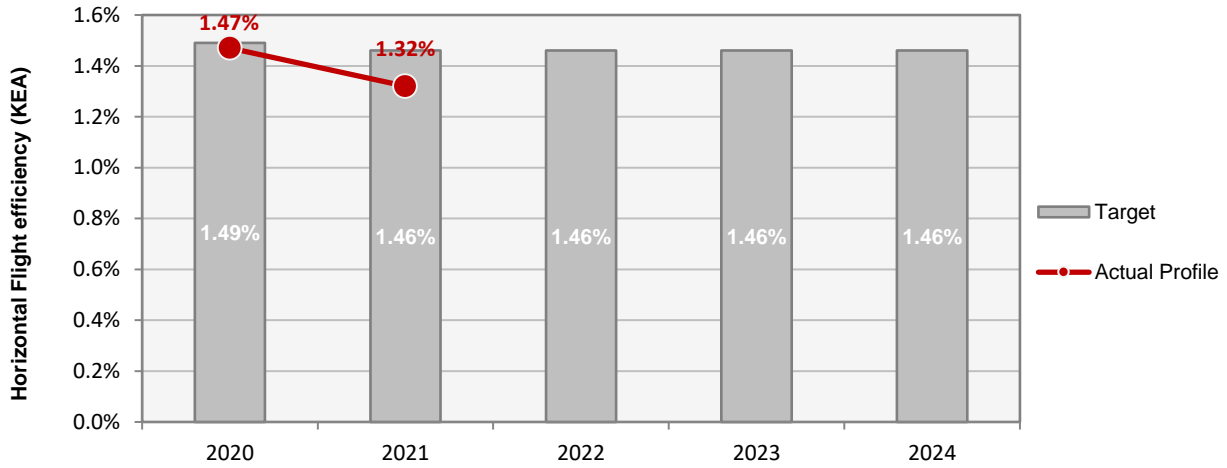
Croatia

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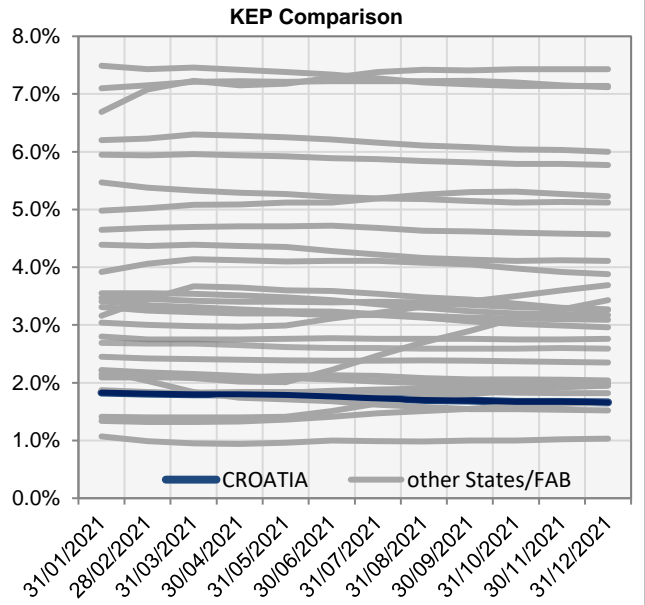
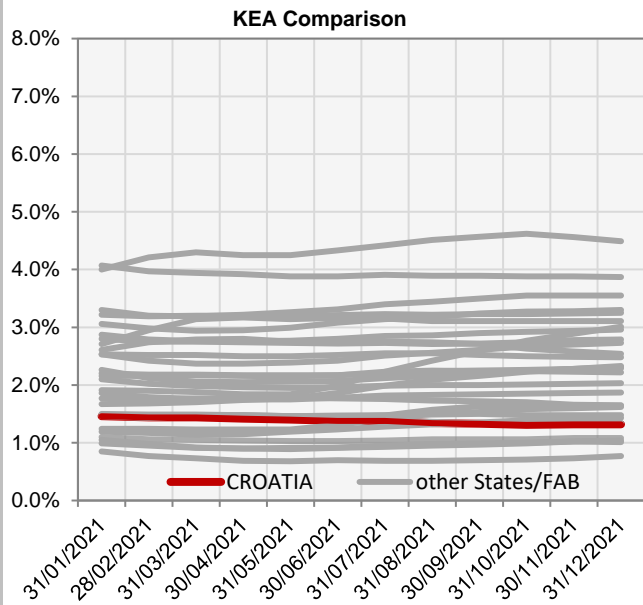
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>Croatia Control</b>	82	C	C	C	C	C
Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.						
Observations						
Four out of five EoSM components of the ANSP meet the 2024 target level. This year , it is observed improvement in one component ("Safety Policy and Objectives") that has achieved the target. Only "Safety Risk Management" is below 2024 target levels and are expected to improve in the next years of RP3. Three questions of this component are still below target.						

KEA					
	2020	2021	2022	2023	2024
Target	1.49%	1.46%	1.46%	1.46%	1.46%
Actual performance	1.47%	1.32%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	1.46%	1.44%	1.44%	1.42%	1.40%	1.38%	1.38%	1.34%	1.33%	1.31%	1.32%	1.32%
KEP	1.83%	1.81%	1.80%	1.80%	1.79%	1.76%	1.73%	1.70%	1.69%	1.67%	1.67%	1.66%
KES	1.52%	1.51%	1.51%	1.51%	1.52%	1.51%	1.51%	1.51%	1.52%	1.51%	1.51%	1.51%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

### Update on Military dimension of the plan

The analysis can not be provided due to reason that all required data for ENV PI #6, PI #7 and PI #8 are not yet available on the NM/PRU dashboards nor delivered by NM upon request.

### Military - related measures implemented or planned to improve capacity

FUA restrictions and CDRs have been implemented which are managed by AMC on ASM Level 2 and notified to NM but were sparsely used or required due to significant decrease of military activities and air traffic affected by COVID-19 crisis.

### PI#6 Effective use of reserved or segregated airspace - national level

Ratio PI#6	2020	2021	2022	2023	2024
Croatia	88%	90%			

### PI#6 Effective use of reserved or segregated airspace (per ACC)

Ratio PI#6	2020	2021	2022	2023	2024
Zagreb ACC					

### Initiatives implemented or planned to improve PI#6

The Network Manager shall provide on a monthly basis the data required for the monitoring of this indicator for monitoring referred to Regulation (EU) 2019/317 point 6 of Annex VI.

Data regarding ratio has been received from NM upon request but the data regarding hours allocated and used have not been delivered by NM nor are available on the NM/PRU dashboards.

The data per ACC are not yet available on the NM/PRU dashboards for local level nor have been delivered by NM upon request and can not be monitored at local level.

### PI#7 Rate of planning via available airspace structures - national level

Ratio PI#7	2020	2021	2022	2023	2024
Croatia	50%	50%			

### PI#7 Rate of planning via available airspace structures (per ACC)

Ratio PI#7	2020	2021	2022	2023	2024
Zagreb ACC					

### Initiatives implemented or planned to improve PI#7

The Network Manager shall provide on a monthly basis the data required for the monitoring of this indicator for monitoring referred to Regulation (EU) 2019/317 point 6 of Annex VI.

Data regarding ratio has been received from NM upon request but the data regarding hours allocated and used have not been delivered by NM nor are available on the NM/PRU dashboards.

The data per ACC are not yet available on the NM/PRU dashboards for local level nor have been delivered by NM upon request and can not be monitored at local level.

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Croatia	19%	19%			

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Zagreb ACC					

**Initiatives implemented or planned to improve PI#8**

The Network Manager shall provide on a monthly basis the data required for the monitoring of this indicator for monitoring referred to Regulation (EU) 2019/317 point 6 of Annex VI.

Data regarding ratio has been received from NM upon request but the data regarding hours allocated and used have not been delivered by NM nor are available on the NM/PRU dashboards.

The data per ACC are not yet available on the NM/PRU dashboards for local level nor have been delivered by NM upon request and can not be monitored at local level.

Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.43	0.09	0.16	0.17	0.17		
<b>Actual performance</b>	0.00	0.07					
NSA's assessment of capacity performance							
<p>The results are in line with traffic indicators and expectations. In the pandemic year 2021 there were some challenges for LDZO ACC capacities. Limitations occurred occasionally during summer season due to unplanned increase of traffic demand in peak hours.</p>							
Monitoring process for capacity performance							
<p>Monitoring of all available KPI's and PI's is done through the PRU portal which is considered as the main source of information.</p>							
Capacity Planning							
<p>Capacity planning is done in line with NM's initiative for development of a rolling NOP document in which short-term capacity and demand on the Network level is described. The expected traffic outlook is given for six weeks ahead and revised weekly, while capacity is adapted to traffic demand and reported to NM which assesses the efficiency for planned period. In the planning process on local level, several departments are involved in strategic and tactical development of the plan.</p>							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned (Perf Plan)</b>	-	-	92	107	115	121	
<b>Actual</b>	107	92	94				
<p>Increase in the ATCO in OPS FTE is mainly due to lower than planned retirement rate coupled with increased ATCO in OPS utilisation following traffic recovery during summer months.</p>							
Application of Corrective Measures for Capacity (if applicable)							
<p>Not applicable</p>							
Summary of capacity performance							
<p>Croatia experienced an increase in traffic from 301k flights in 2020 to 461k flights in 2021. However, traffic levels were still substantially below the 714k flights in 2019.</p> <p>In 2021, Croatia had 30k minutes of ATFM delay - the vast majority of which were in August (21k). There were 77k flights in August 2021. For comparison in September 2019 there were 83k minutes of delay for just over 76k flights.</p>							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.43	0.09	0.16	0.17	0.17		
<b>Deadband +/-</b>	-	-	[0.144-0.176]	[0.153-0.187]	[0.153-0.187]		
<b>Actual performance</b>	0.00	0.07					
<p>In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.</p>							

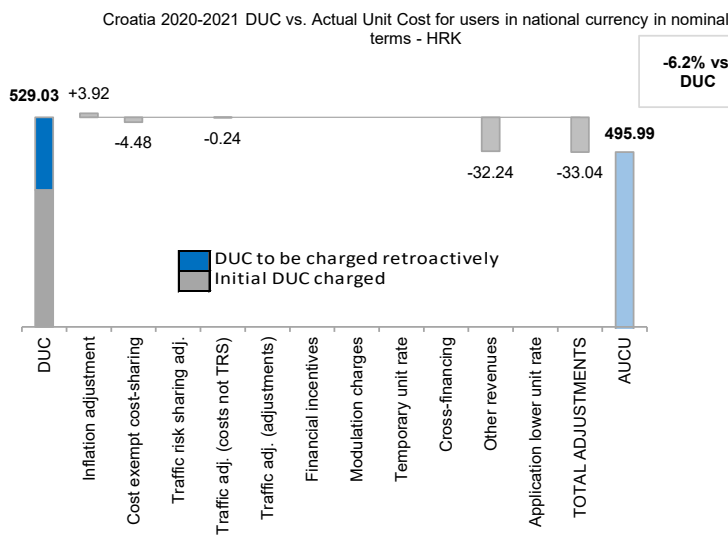
1. Contextual economic information: en route air navigation services						
Croatia ECZ represents 1.4% of the SES en route ANS actual costs in 2019			FAB: FAB CE			
National currency:	HRK	Exchange rates (1 EUR=)	2017: 7.46175 HRK	2020: 7.53617 HRK	2021: 7.52642 HRK	
Performance Plan:	RP3 draft performance plan dated 23 December 2021 and found consistent as per Commission Decision (EU) 2022/764 of 13 April 2022 The final version of the plan was adopted and published on 27 May 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317.					
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Croatia: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal HRK)	647,976,252	642,478,479	1,290,454,731	650,707,954	704,539,471	731,453,470
Inflation %	0.0%	0.7%		1.2%	1.9%	2.2%
Inflation index (100 in 2017)	102.4	103.1		104.3	106.3	108.7
Real en route costs (HRK2017)	636,674,493	627,586,017	1,264,260,510	629,789,408	672,089,322	686,518,906
Total en route service units	929,105	1,510,181	2,439,286	1,582,000	1,946,000	2,251,000
<b>Real en route DUC per service unit (HRK2017)</b>	<b>685.26</b>	<b>415.57</b>	<b>518.29</b>	<b>398.10</b>	<b>345.37</b>	<b>304.98</b>
<b>Real en route DUC per service unit (EUR2017)</b>	<b>91.84</b>	<b>55.69</b>	<b>69.46</b>	<b>53.35</b>	<b>46.29</b>	<b>40.87</b>
Croatia: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal HRK)	647,976,252	575,919,155	1,223,895,408			
Inflation %	0.0%	2.7%				
Inflation index (100 in 2017)	102.4	105.2				
Real en route costs (HRK2017)	636,674,493	554,599,866	1,191,274,359			
Total en route service units	929,105	1,518,678	2,447,782			
<b>Real en route AUC per service unit (HRK2017)</b>	<b>685.26</b>	<b>365.19</b>	<b>486.67</b>			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>91.84</b>	<b>48.94</b>	<b>65.22</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal HRK)	in value	0	-66,559,323	-66,559,323		
	in %	-	-10.4%	-5.2%		
Inflation %	in p.p.	0.0 p.p.	2.0 p.p.			
	Inflation index (100 in 2017)	in p.p.	0.0 p.p.	2.0 p.p.		
Real en route costs (HRK2017)	in value	0	-72,986,152	-72,986,152		
	in %	-	-11.6%	-5.8%		
Total en route service units	in value	0	8,497	8,497		
	in %	-	+0.6%	+0.3%		
<b>Real en route unit cost per service unit (HRK2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-50.38</b>	<b>-31.62</b>		
	<b>in %</b>	<b>-</b>	<b>-12.1%</b>	<b>-6.1%</b>		
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-6.75</b>	<b>-4.24</b>		
	<b>in %</b>	<b>-</b>	<b>-12.1%</b>	<b>-6.1%</b>		
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs. DUC</b> In the combined year 2020-2021, the en route AUC (486.67 HRK2017 or 65.22 €2017) was lower by -6.1% (-31.62 HRK2017 or -4.24 €2017) comparing with the DUC (518.29 HRK2017 or 69.46 €2017). This was mainly the effect of the lower than planned en route costs in real terms (-5.8%, -73.0 MHRK2017 or -9.8 M€2017).			<p>2020-2021 actual vs. planned TSUs</p>			
<b>En route service units</b> The actual TSUs slightly exceed the planned level (+0.3%) and is within the ±2% dead-band which result in additional gains kept by the ANSP.			<p>Costs by entity at ECZ level (M€2017):</p>			
<b>En route costs by entity</b> Actual en route costs are -5.8% lower than planned (-9.8 M€2017) which is mainly driven by the lower costs for Croatia Control (-6.1% or -9.6 M€2017). Actual 2020-2021 NSA/EUROCONTROL costs are lower by -1.7% (or 0.2 M€2017).			<p>Costs by nature for main ANSP (M€2017):</p>			
<b>En-route costs for the main ANSP (Croatia Control) at charging zone level</b> The lower than planned en route costs in real terms for Croatia Control (-6.1%, or -9.6 M€2017) result from: - lower than planned, by -5.4% (-5.5 M€2017) en route staff costs mainly resulting from the hiring freeze and salary cuts; - lower en-route other operating costs (by -10.8% or -2.7 M€2017), due to the limitation of expenses, including staff trainings, business trips and maintenance expenses; - lower, by -6.0% (-1.4 M€2017) depreciation due to redefinition of CAPEX planning; - slightly higher, by +0.5% (+0.04 M€2017) cost of capital; and, - lower deduction of costs of exempted VFR flights (-18.9%).						

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	HRK/SU	EUR/SU
Initial DUC charged	345.94	45.94
DUC to be charged retroactively	183.09	24.30
<b>DUC</b>	<b>529.03</b>	<b>70.24</b>
Inflation adjustment	3.92	0.52
Cost exempt from cost-sharing	-4.48	-0.60
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	-0.24	-0.03
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	-32.24	-4.28
Application of lower unit rate	0.00	0.00
Total adjustments	-33.04	-4.39
<b>AUCU</b>	<b>495.99</b>	<b>65.86</b>
<b>AUCU vs. DUC</b>	<b>-6.2%</b>	<b>-6.2%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

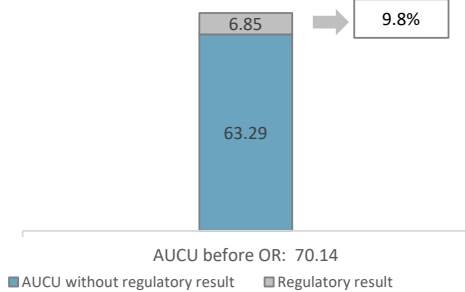
7. En route costs exempt from cost sharing

		HRK '000	EUR '000	HRK/SU	EUR/SU
by item	New and existing investments	-9,496	-1,262	-3.88	-0.52
	Competent authorities and qualified entities costs	836	111	0.34	0.05
	Eurocontrol costs	-2,306	-306	-0.94	-0.13
	Pension costs	0	0	0.00	0.00
	Interest on loans	0	0	0.00	0.00
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>-10,967</b>	<b>-1,457</b>	<b>-4.48</b>	<b>-0.60</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	HRK '000	EUR '000	HRK/SU	EUR/SU
Croatia Control	126,210	16,764	51.56	6.85
METSP(s)				
<b>Total charging zone</b>	126,210	16,764	51.56	6.85
<b>Actual cost for users***</b>	1,292,991	171,682	528.23	70.14
<b>Regulatory result (% AUCU)</b>	9.8%	9.8%	9.8%	9.8%

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (495.99HRK or 65.86€) is -6.2% lower than the nominal DUC (529.03HRK or 70.24€) which includes DUC initially charged: 345.94HRK or 45.94€, and to be charged: 183.09HRK or 24.30€. The difference between these two figures (-33.04HRK/SU or -4.39€/SU) is due to:

- the positive inflation adjustment (+3.92HRK/SU or +0.52€/SU) resulting from higher than planned inflation;
- the deduction of the adjustment for costs exempt from cost-sharing (-4.48HRK/SU or -0.60€/SU), to be reimbursed to the airspace users in future years;
- the deduction of traffic adjustment (-0.24HRK/SU or -0.03€/SU), for the costs not subject to traffic risk sharing to be reimbursed in future years; and
- the deduction of the other revenues (-32.24HRK/SU or -4.28€/SU), which also represent the costs associated with the provision of services by CCL in the airspace of Bosnia and Herzegovina, and are excluded from the CUR to avoid double charging (these costs are the part of BHANSA chargeable cost base).

The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 9.8%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

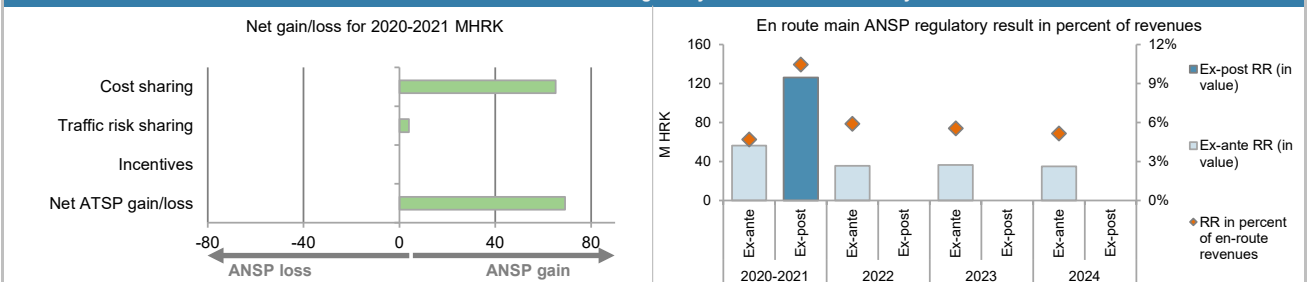
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (HRK '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	65,089			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	9,594			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-9,496			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>65,187</b>			
Traffic risk sharing (HRK '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.3%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	1,122,156			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>3,909</b>			
Incentives (HRK '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (HRK '000)</b>	<b>69,095</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>9,180</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

Croatia Control planned regulatory result (HRK '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	469,927	617,076	1,087,004	739,625	780,782	774,738
Proportion of financing through equity (in %)	85%	84%	85%	76%	66%	61%
RoE pre-tax rate (in %)	6.5%	5.9%	6.1%	6.3%	7.0%	7.5%
RoE (in value)	25,825	30,568	56,393	35,657	36,397	35,082
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>25,825</b>	<b>30,568</b>	<b>56,393</b>	<b>35,657</b>	<b>36,397</b>	<b>35,082</b>
<b>Revenue for the en route charging zone</b>	<b>607,314</b>	<b>596,985</b>	<b>1,204,299</b>	<b>604,243</b>	<b>657,227</b>	<b>683,210</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>4.3%</b>	<b>5.1%</b>	<b>4.7%</b>	<b>5.9%</b>	<b>5.5%</b>	<b>5.1%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>6.5%</b>	<b>5.9%</b>	<b>6.1%</b>	<b>6.3%</b>	<b>7.0%</b>	<b>7.5%</b>
Croatia Control actual regulatory result (HRK '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	469,927	600,799	1,070,726			
Proportion of financing through equity (in %)	85%	89%	87%			
RoE pre-tax rate (in %)	6.5%	5.9%	6.1%			
RoE (in value)	25,825	31,289	57,115			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	69,095	69,095			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>25,825</b>	<b>100,384</b>	<b>126,210</b>			
<b>Revenue for the en route charging zone</b>	<b>607,314</b>	<b>600,992</b>	<b>1,208,306</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>4.3%</b>	<b>16.7%</b>	<b>10.4%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>6.5%</b>	<b>18.8%</b>	<b>13.5%</b>			

13. Focus on the main ANSP regulatory result on en route activity



Croatia Control net gain on activity in the en route charging zone in the combined year 2020-2021

Croatia Control's net gain amounts to +69.1 MHRK or +9.2 ME, mainly due to the gains of +65.2 MHRK from the cost sharing mechanism, and gains of +3.9 MHRK from the traffic risk sharing mechanism.

Croatia Control overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+9.2ME) and the actual RoE (+57.1 MHRK or +7.6 ME) amounts to +126.2 MHRK or + 16.8 ME (10.4% of the en route revenues). The resulting ex-post rate of return on equity is 13.5% which is higher than the 6.1% planned in the PP.



# **Annual Monitoring Report 2021**

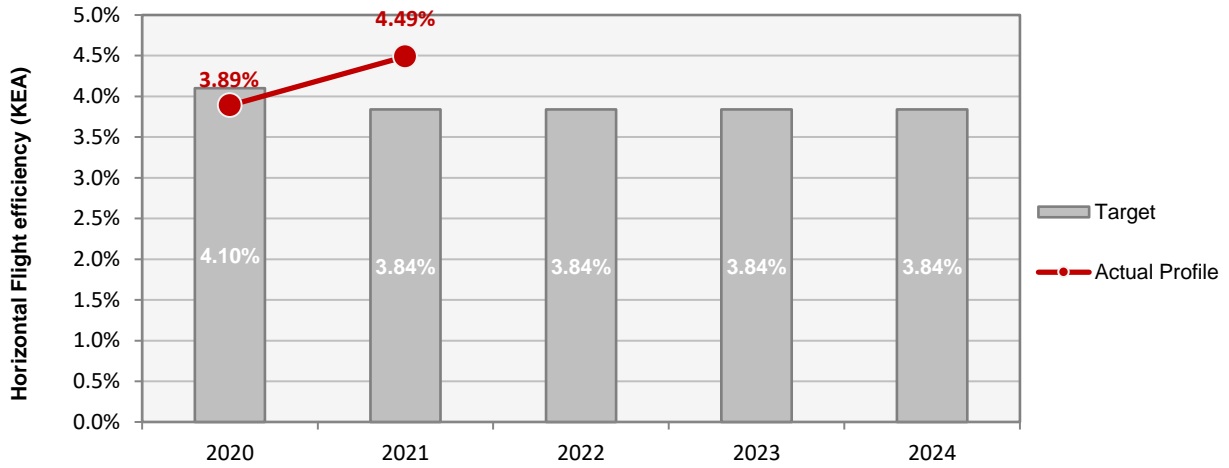
## Local level view

### Cyprus

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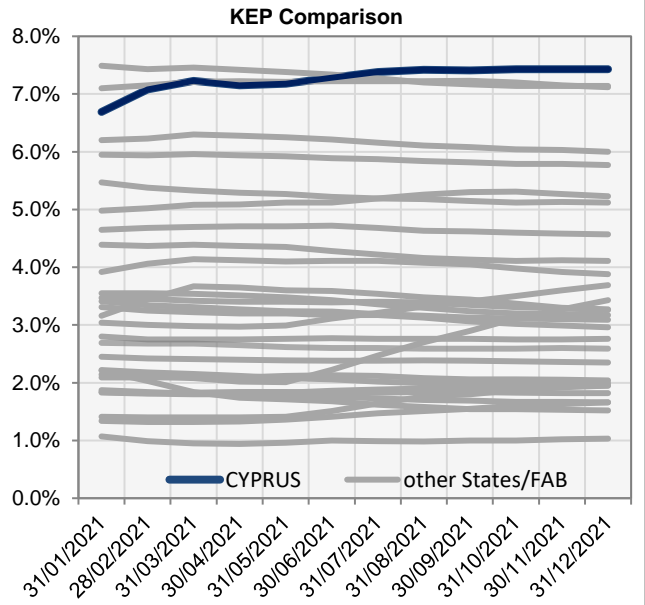
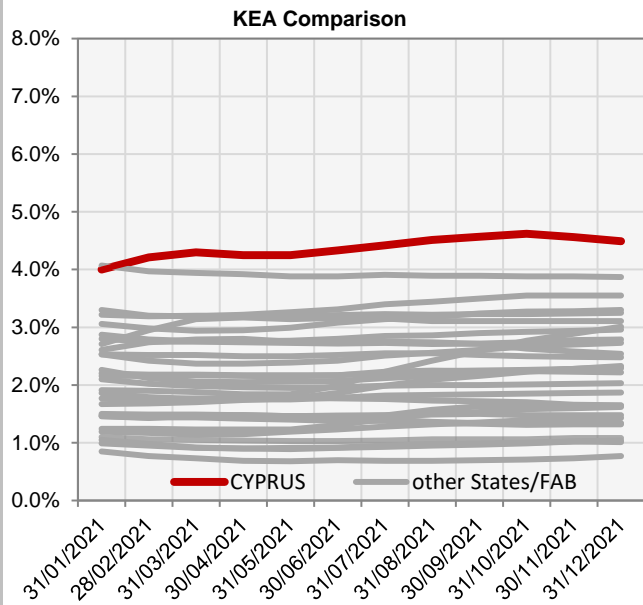
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>CYATS</b>	72	B	B	C	B	B
<p>Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.</p>						
Observations						
<p>All EoSM components are still below 2024 EoSM target levels. Small progress is observed from the results of 2020. Improvements in safety management are still expected in all components during RP3 to achieve 2024 targets.</p>						

KEA					
	2020	2021	2022	2023	2024
Target	4.10%	3.84%	3.84%	3.84%	3.84%
Actual performance	3.89%	4.49%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	4.00%	4.21%	4.30%	4.25%	4.25%	4.33%	4.42%	4.51%	4.57%	4.62%	4.56%	4.49%
KEP	6.69%	7.08%	7.23%	7.15%	7.18%	7.28%	7.38%	7.42%	7.41%	7.43%	7.43%	7.43%
KES	5.86%	6.14%	6.26%	6.20%	6.26%	6.37%	6.46%	6.51%	6.53%	6.59%	6.65%	6.71%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

### Update on Military dimension of the plan

The air navigation services in Nicosia FIR are provided with reference to the arrangements which have been established through the implementation of regulation (EC) 2150/2005 “laying down common rules for the flexible use of airspace”. (see section 5, Application of FUA).

The implementation of the said Regulation has been achieved through the adoption of the “National Plan for the Implementation of FUA”, signed on the 2nd of July 2009. The implementation of the National FUA plan ensures to the maximum possible extent, the most efficient use of airspace, both by civil and military users.

The activities of the National Military Authorities are predominately executed over the National airspace. The cooperation between the national Civil and Military Authorities is excellent and the effect on civil aviation is minimal.

Over the high seas however, which constitute the majority of the Nicosia FIR, a number of foreign Military authorities, most commonly the Russian Navy, USA Navy, French Navy, Israeli Air Force, British Air Force and Turkish military forces, regularly performed operational flights and exercises throughout 2021. Additionally, air carrier operations in Nicosia FIR combined with the different military authorities made it necessary to implement and upgrade the coordination among the willing authorities.

The activities of the British and Israeli forces were coordinated fairly well with the national authorities (AMC) keeping the adverse effect on ATS to minimal effect.

The most significant impact on ATS is caused by the refusal of the Turkish authorities to coordinate or cooperate with Cyprus on the conduct of any military activities in Nicosia FIR. Turkish activity NOTAMS are issued by non-authorised entities relevant to these activities thus imposing a significant level of uncertainty on ATM management in Nicosia FIR adversely affecting capacity. A regular phenomenon is the penetration of Nicosia FIR or Cyprus National airspace in violation to ICAO procedures thus increasing the workload on ATC staff and hence having a detrimental effect on airspace capacity.

The political unrest in the South East Mediterranean region gave rise to the number of USA and Russian operational flights (OAT). These flights were rarely coordinated with the ATS authorities thus causing additional workload to ACC staff. Nevertheless, the situation in 2021 was better than previous years, as a consequence of the COVID-19 pandemic, better coordination with British and Israeli military authorities, enhanced cooperation among AMC/ATC units and aircraft carriers operating in the area and fewer operations of aircraft carriers south of Cyprus.

### Military - related measures implemented or planned to improve capacity

At the moment, no measures are foreseen until the pandemic situation is more stable and the air traffic demand becomes more predictable.

### PI#6 Effective use of reserved or segregated airspace - national level

Ratio PI#6	2020	2021	2022	2023	2024
Cyprus	100%	100%			

### PI#6 Effective use of reserved or segregated airspace (per ACC)

Ratio PI#6	2020	2021	2022	2023	2024
Nicosia ACC	100%	100%			

### Initiatives implemented or planned to improve PI#6

The NSA verifies through audits and inspections that the entity responsible for the tactical management of the airspace (AMC), monitors the planned Vs the actual times of airspace reservations so as to promote the most effective use of reserved or segregated airspace. In the context of its oversight inspections it has raised findings in order to drive positive change and to optimise the application of FUA and, as a result, improvements have been noted. For example, real time activation / de-activation of reserved areas is now implemented through the establishment of real time communications between the ATC Units and Military authorities.

**PI#7 Rate of planning via available airspace structures - national level**

Ratio PI#7	2020	2021	2022	2023	2024
Cyprus					

**PI#7 Rate of planning via available airspace structures (per ACC)**

Ratio PI#7	2020	2021	2022	2023	2024
Nicosia ACC					

**Initiatives implemented or planned to improve PI#7**

PRISMIL CURA is planned to be deployed during 2022. The data above is expected to be available after its implementation.

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Cyprus					

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Nicosia ACC					

**Initiatives implemented or planned to improve PI#8**

PRISMIL CURA is planned to be deployed during 2022. The data above is expected to be available after its implementation.

Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	1.00	0.10	0.16	0.15	0.15		
<b>Actual performance</b>	0.20	0.00					
<b>NSA's assessment of capacity performance</b>							
A historical drop of air traffic demand has been recorded due to the COVID-19 virus outbreak and the severe air travel restrictions imposed by the State in an effort to contain the pandemic (mid-March 2020). As a result, the average en-route delay per flight in 2021 was zero (0.0min), even though the air traffic demand increased significantly compared to the previous year (2020).							
<b>Monitoring process for capacity performance</b>							
The NSA has in place the "NSA procedure for the monitoring of ANS Performance". According to this procedure, the NSA monitors at quarterly intervals the average minutes of enroute ATFM (Air Traffic Flow Management) delay per flight. Based on this, the NSA analyzes the trends and takes the necessary measures, if needed.							
<b>Capacity Planning</b>							
Capacity planning is done with the Network Manager and is consistent with the required performance.							
<b>ATCO in OPS (FTE)</b>							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned 2021 Perf Plan</b>	-	-	79	85	92	100	
<b>Planned 2022 Perf Plan</b>			78	87	94	100	
<b>Actual</b>	78	73	78				
One ATCO was transferred to Brussels, to the Permanent Representation of Cyprus to the EU.							

### Application of Corrective Measures for Capacity (if applicable)

The monitoring report contains the following information about the new air traffic control centre:

The transfer to the new ACC which is planned in late 2022 to mid 2023 is expected to be the source of air traffic delays, which however will be of temporary nature. As the transfer will be done during a low traffic period the effect on the European Network is not expected to be significant. Efforts will be made so that any operation related to the transfer i.e. shadowing operations will be kept to the absolute minimum level so not to absorb HR from the actual ops at the new ACC.

The ATSp has recently implemented a new ATC sector at Larnaca Airport (an extension of the ACC main ATM system) with the prospect of providing Approach Control Service with surveillance (APS) by the end of RP3. This new ATC sector will absorb some human resources from the "core" en-route services, which will average between 5-8 FTE towards the end of RP3. To mitigate this, the ATSp has recently (in December 2021) agreed with the Unions some new working arrangements which will allow current ATC Tower ATCOs to continue their career by staying at Larnaca Airport and operating this new service. An effort to modify the ATCO employment contract (the, so called, "scheme of services") is ongoing. The aim of the modification will be to significantly reduce the period between recruitment and assuming operational duties. In any case, the recruitment plan for new ATCOs will continue to be implemented so that the en-route service will continue to be provided without significant capacity constraints.

In conclusion, some air traffic delays may be attributed to these restructuring developments and the operation of the new ATC sector. The precise impact cannot be estimated at the moment since the service will begin in mid-2023 and will be provided in a limited manner. Nevertheless, the NM has confirmed that this new service will have significant net capacity benefits in the longer term.

### Summary of capacity performance

Cyprus experienced an increase in traffic from 164k flights in 2020 to 252k flights in 2021, with practically zero ATFM delay. However, traffic levels were still substantially below the 411k flights in 2019.

### En route Capacity Incentive Scheme

	2020	2021	2022	2023	2024	Observations
<b>National Capacity target</b>	1.00	0.10	0.16	0.15	0.15	
<b>Deadband +/-</b>	-	-	[0.25-0.35]	[0.35-0.45]	[0.25-0.35]	
<b>Actual performance</b>	0.20	0.00				

In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.



1. Contextual economic information: en route air navigation services						
Cyprus ECZ represents 0.9% of the SES en route ANS actual costs in 2019			FAB: BLUE MED FAB			
National currency: EUR						
Performance Plan: RP3 draft performance plan dated 17 November 2021 and found inconsistent as per Commission Decision (EU) 2022/728 of 13 April 2022						
Cyprus has submitted a revised RP3 draft performance plan in July 2022, currently under assessment.						
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Cyprus: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)	50,193,829	54,658,604	104,852,432	60,180,628	67,188,233	70,838,487
Inflation %	0.0%	0.5%		5.3%	2.3%	2.0%
Inflation index (100 in 2017)	101.3	101.8		109.1	111.6	113.9
Real en route costs (EUR2017)	49,782,212	54,033,965	103,816,177	56,802,749	62,482,520	65,059,225
Total en route service units	852,579	1,229,858	2,082,437	1,837,000	2,129,000	2,235,000
<b>Real en route DUC per service unit (EUR2017)</b>	<b>58.39</b>	<b>43.94</b>	<b>49.85</b>	<b>30.92</b>	<b>29.35</b>	<b>29.11</b>
Cyprus: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)	49,274,508	52,158,821	101,433,328			
Inflation %	0.0%	2.3%				
Inflation index (100 in 2017)	101.3	103.6				
Real en route costs (EUR2017)	48,862,891	50,930,635	99,793,526			
Total en route service units	852,579	1,266,300	2,118,878			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>57.31</b>	<b>40.22</b>	<b>47.10</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)						
in value	-919,321	-2,499,783	-3,419,104			
in %	-1.83%	-4.6%	-3.3%			
Inflation %						
in p.p.	0.0 p.p.	1.8 p.p.				
Inflation index (100 in 2017)						
in p.p.	0.0 p.p.	1.8 p.p.				
Real en route costs (EUR2017)						
in value	-919,321	-3,103,329	-4,022,651			
in %	-1.85%	-5.7%	-3.9%			
Total en route service units						
in value	0	36,442	36,442			
in %	-	+3.0%	+1.7%			
<b>Real en route unit cost per service unit (EUR2017)</b>						
in value	<b>-1.08</b>	<b>-3.72</b>	<b>-2.76</b>			
in %	<b>-1.85%</b>	<b>-8.5%</b>	<b>-5.5%</b>			
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs DUC</b>						
In the combined year 2020-2021, the AUC was lower than the planned DUC (-5.5%, or -2.76€2017). This results from the combination of higher than planned TSUs (+1.7%) and lower than planned en route costs in real terms (-3.9%, or -4.0 M€2017).						
<b>En route service units</b>						
The difference between actual and planned TSUs (+1.7%) falls within of the ±2% dead band. Hence, the resulting gain of 1.1 M€ is entirely retained by the ANSP (see items 10 to 14).						
<b>En route costs by entity at charging zone level</b>						
Actual real en route costs for 2020-2021 are -3.9% (-4.0 M€2017) lower than planned. This reflects the fact that while the costs for main ANSP – DCAC Cyprus remained mostly in line with the plan (+0.05%), the costs were much lower than planned for the MET service provider (-13.6%, or -1.1 M€2017) and the NSA/EUROCONTROL (-9.3%, or -3.0 M€2017).						
<b>En route costs for the main ANSP (DCAC Cyprus) at charging zone level</b>						
The stable en route costs in real terms for DCAC Cyprus in 2020-2021 reflects a combination of: <ul style="list-style-type: none"> <li>- mostly stable staff costs (-0.1%) in real terms, however, it should be noted that staff costs in nominal terms were slightly above the plan (+0.8%) which is explained by higher overtime costs and changes to the ATCO salary scales;</li> <li>- slightly higher other operating costs (+0.9%), which are understood to reflect higher subcontracted CNS as well as maintenance costs;</li> <li>- depreciation costs in line with the plan; and,</li> <li>- lower cost of capital (-7.4%), reflecting lower than planned actual asset base resulting from delays in the investment programme.</li> </ul>						
			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      +1.7%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
			<p>Costs by entity at ECZ level (M€2017):</p> <p>Main ANSP 0.05%</p> <p>Other ANSP(s) 0.05%</p> <p>METSP(s) -13.6%</p> <p>NSA/EUROCONTROL -9.3%</p> <p>Total CZ -3.9%</p>			
			<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs -0.1%</p> <p>Other operating costs 0.9%</p> <p>Depreciation 0.0%</p> <p>Cost of capital -7.4%</p> <p>Exceptional costs 0.0%</p> <p>VFR exempted flights 0.05%</p> <p>Total Main ANSP 0.05%</p>			

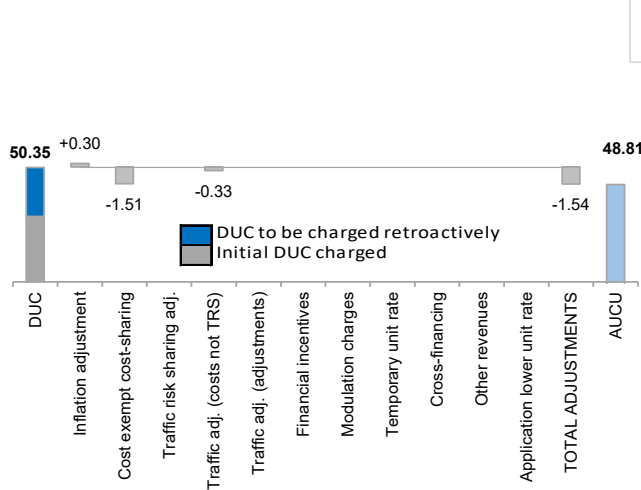
5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level

Cyprus 2020-2021 DUC vs. Actual Unit Cost for users in national currency in nominal terms - EUR



Components of the AUCU	EUR/SU
Initial DUC charged	28.78
DUC to be charged retroactively	21.57
<b>DUC</b>	<b>50.35</b>
Inflation adjustment	0.30
Cost exempt from cost-sharing	-1.51
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.33
Traffic adj. (adjustments)*	-0.33
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	0.00
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-1.54
<b>AUCU</b>	<b>48.81</b>
<b>AUCU vs. DUC</b>	<b>-3.1%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

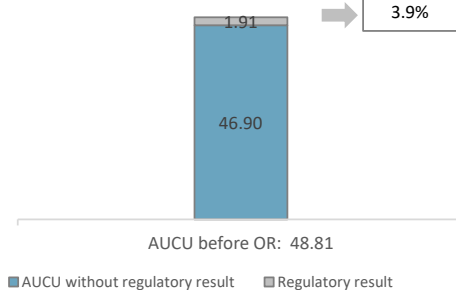
7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-238	-0.11
Competent authorities and qualified entities costs	-2,778	-1.31
Eurocontrol costs	-183	-0.09
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-3,199</b>	<b>-1.51</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	EUR '000	EUR/SU
DCAC Cyprus	2,892	1.36
METSP(s)	EUR '000	EUR/SU
Cyprus MET	1,160	0.55
<b>Total charging zone</b>	<b>4,051</b>	<b>1.91</b>
<b>Actual cost for users***</b>	<b>103,422</b>	<b>48.81</b>
<b>Regulatory result (% AUCU)</b>	<b>3.9%</b>	<b>3.9%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (48.81€) is -3.1% lower than the nominal DUC (50.35€) which includes DUC initially charged: 28.78€; and to be charged: 21.57€. The difference between these two figures is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.30€).
- the deduction of the traffic adjustment (-0.33€) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-1.51€).

The share of regulatory result (see items 10 to 14) in the AUCU is 3.9%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

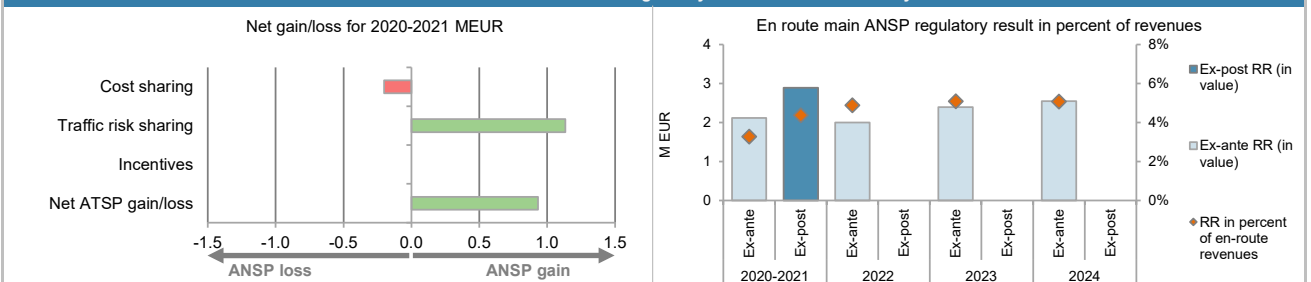
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	-594			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	556			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-164			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>-201</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	1.7%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	64,796			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>1,134</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>933</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

DCAC Cyprus planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	15,785	28,643	44,428	39,970	45,195	44,713
Proportion of financing through equity (in %)	100%	100%	100%	100%	100%	100%
RoE pre-tax rate (in %)	4.7%	4.8%	4.8%	5.0%	5.3%	5.7%
RoE (in value)	742	1,375	2,117	1,999	2,395	2,549
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>742</b>	<b>1,375</b>	<b>2,117</b>	<b>1,999</b>	<b>2,395</b>	<b>2,549</b>
<b>Revenue for the en route charging zone</b>	<b>31,208</b>	<b>33,588</b>	<b>64,796</b>	<b>41,042</b>	<b>47,138</b>	<b>50,245</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>2.4%</b>	<b>4.1%</b>	<b>3.3%</b>	<b>4.9%</b>	<b>5.1%</b>	<b>5.1%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>4.7%</b>	<b>4.8%</b>	<b>4.8%</b>	<b>5.0%</b>	<b>5.3%</b>	<b>5.7%</b>
DCAC Cyprus actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	15,785	25,362	41,148			
Proportion of financing through equity (in %)	100%	100%	100%			
RoE pre-tax rate (in %)	4.7%	4.8%	4.8%			
RoE (in value)	742	1,217	1,959			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	933	933			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>742</b>	<b>2,150</b>	<b>2,892</b>			
<b>Revenue for the en route charging zone</b>	<b>31,208</b>	<b>35,114</b>	<b>66,322</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>2.4%</b>	<b>6.1%</b>	<b>4.4%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>4.7%</b>	<b>8.5%</b>	<b>7.0%</b>			

13. Focus on the main ANSP regulatory result on en route activity



DCAC Cyprus net gain on en route activity in the Cypriot charging zone in the combined year 2020-2021

DCAC Cyprus's net gain amounts to +0.9 ME, as a combination of a loss of -0.2 ME arising from the cost sharing mechanism and a gain of +1.1 ME arising from the traffic risk sharing mechanism.

DCAC Cyprus overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+0.9 ME) and the actual RoE (+2.0 ME) amounts to +2.9 ME (4.4% of the en route revenues). The resulting ex-post rate of return on equity is 7.0%, which is higher than the 4.8% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
Cyprus MET planned regulatory result (EUR '000)	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	39	112	151	121	181	183
Revenue for the en route charging zone	3,512	4,609	8,121	4,120	4,484	4,383
Ex-ante regulatory result (+/-) in percent of revenues	1.1%	2.4%	1.9%	2.9%	4.0%	4.2%
Ex-ante RoE pre-tax rate (in %)	4.7%	4.8%	4.8%	5.0%	5.3%	5.7%
Cyprus MET actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	39	1,121	1,160			
Revenue for the en route charging zone	3,512	4,614	8,126			
Ex-post regulatory result (+/-) in percent of revenues	1.1%	24.3%	14.3%			
Ex-post RoE pre-tax rate (in %)	4.7%	83.0%	53.3%			

**Overall regulatory result (RR) for the en route activity for the METSP in the charging zone**  
 For the MET service provider (Meteorological Service of Cyprus) the overall ex-post regulatory result for the combined year 2020-2021 amounted to +1.2 M€, which represents 14.3% of the en route revenues. It should be noted that the actual ex-post RoE pre-tax rate for 2021 (83.0%) reflects the fact that the actual asset base was significantly lower than planned.

# **Annual Monitoring Report 2021**

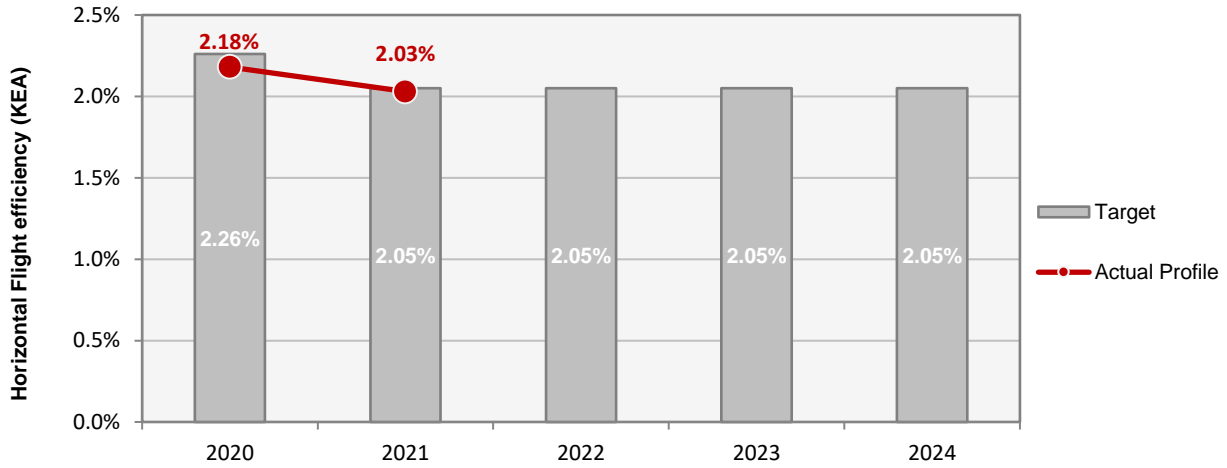
## Local level view

### Czech Republic

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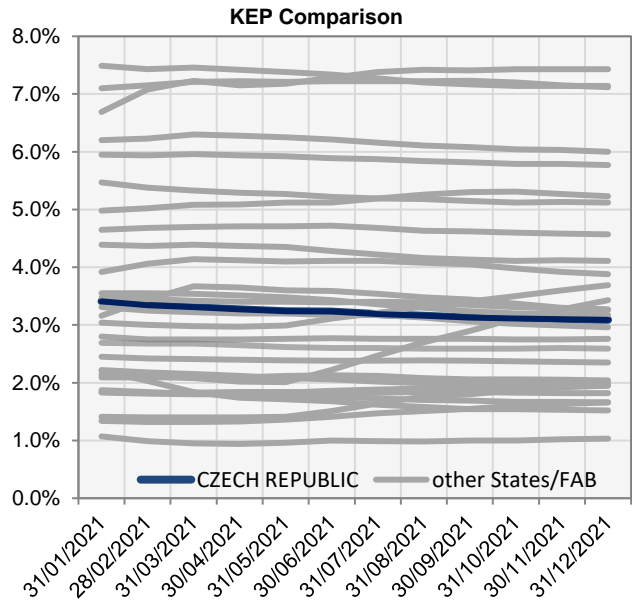
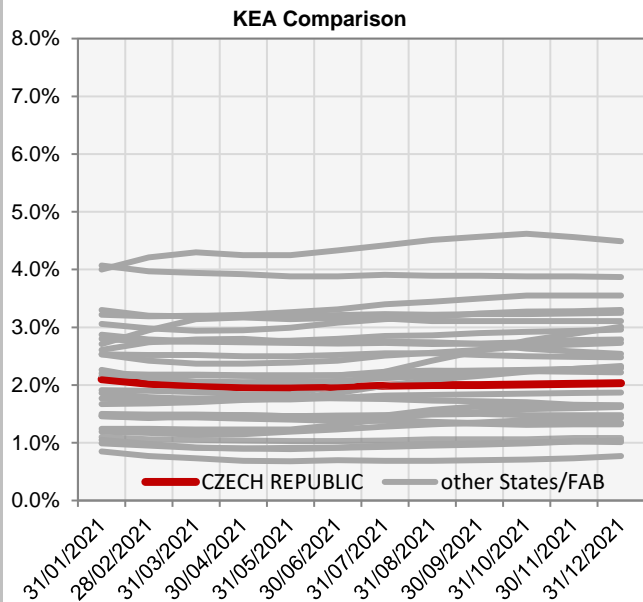
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>ANS CR</b>	99	D	C	D	D	D
Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.						
Observations						
All five EoSM components of the ANSP meet, or exceed, already the 2024 target level, with only one question below maximum maturity.						

KEA					
	2020	2021	2022	2023	2024
Target	2.26%	2.05%	2.05%	2.05%	2.05%
Actual performance	2.18%	2.03%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	2.10%	2.02%	1.98%	1.96%	1.95%	1.96%	1.99%	2.00%	2.00%	2.01%	2.02%	2.03%
KEP	3.41%	3.34%	3.31%	3.27%	3.24%	3.23%	3.19%	3.16%	3.13%	3.11%	3.10%	3.09%
KES	3.16%	3.09%	3.05%	3.02%	3.01%	3.02%	2.99%	2.98%	2.97%	2.96%	2.95%	2.94%



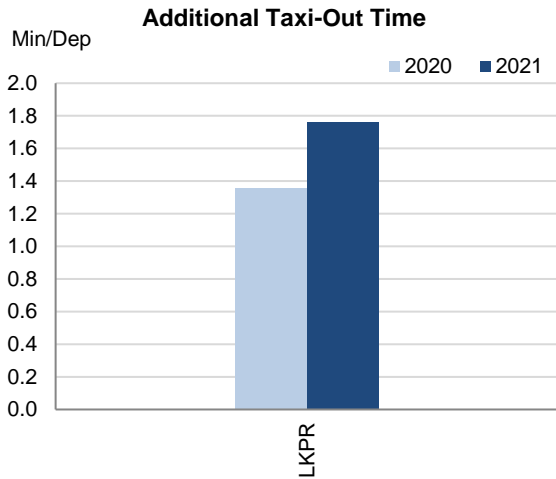
The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.



**1. Overview**

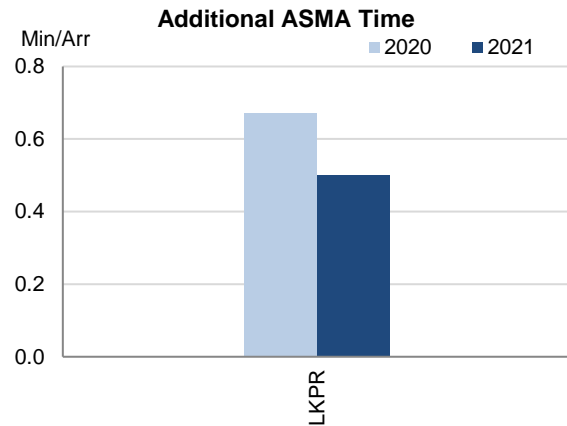
Czech Republic has included only Prague in their last Performance Plan for RP3 monitoring. The Airport Operator Data Flow, necessary for the monitoring of the additional times, is correctly established at Prague and the monitoring of all environment indicators can be performed. Traffic this airport in 2021 was still 62% lower than in 2019, even if 13% higher than in 2020. Additional taxi-out times increased with respect to 2020, while additional ASMA times decreased further. The share of CDO flights decreased at Prague from 27.8% to 25.9%.

**2. Additional Taxi-Out Time**



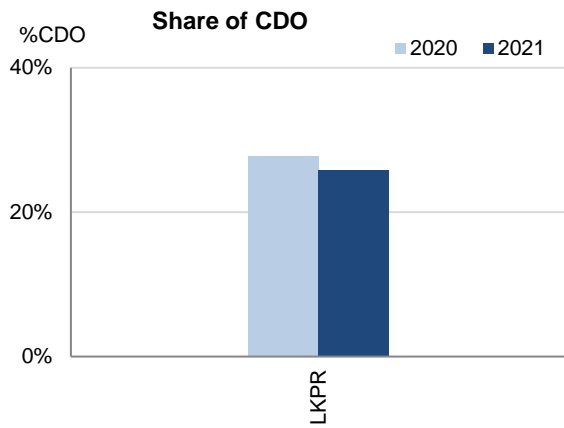
Additional taxi-out times at Prague increased in 2021 (LKPR; 2020: 1.36 min/dep.; 2021: 1.76 min/dep.), but they were still 37% lower than in 2019. These additional times are always much higher in the winter months (probably related to de-icing procedures) According to the Czech Republic's monitoring report: *The development of PI #3 is mainly influenced by the volume of traffic and its structure (gradual return of traffic after the COVID-19 pandemic). Another factor influencing its development is the volume of days when it is necessary to de-icing aircraft that are in remote staging (i.e. within taxi-out phase) at LKPR.* The PI monitoring is part of annual monitoring of the ANSP performance (on quarterly basis) to the CAA.

**3. Additional ASMA Time**



The yearly average of the additional times in the terminal airspace decreased in 2021 (LKPR; 2019: 1.47 min/arr.; 2020: 0.67 min/arr.; 2021: 0.5 min/arr.). However the performance has slightly deteriorated with respect to the period April-December 2020, in line with the traffic recovery. According to the Czech Republic's monitoring report: *No formal initiatives were implemented, but if traffic permits the aircrafts are allowed for direct routing.* The PI monitoring is part of annual monitoring of the ANSP performance (on quarterly basis) to the CAA.

#### 4. Share of arrivals applying CDO



The share of CDO flights decreased at Prague to 25.9% which is lower than the overall RP3 value in 2021 (30.5%).

The monthly values dropped significantly as from May with values staying below 27%.

According to the Czech Republic's monitoring report: *There is no CDO officialy published procedure in FIR Prague, but if traffic permits clearance are issued in order to allow CDO.*

*The PI monitoring is part of annual monitoring of the ANSP performance (on quaterly basis) to the CAA.*

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Prague/Ruzyne-LKPR	1.36	1.76				0.67	0.5				28%	26%			

**Update on Military dimension of the plan**

There is a significant impact of MIL activities on the ENV indicators. The military has the lead role in the AMC, the ANSPs has no power to evaluate the airspace reservation by the military. In any case, the implementation of FUA is regularly evaluated through monitoring organized by the CAA. The administrators of the individual TRA / TSA (mostly represented by MAA) submit the evaluation of the plans and the activation of these airspaces on a monthly basis to CAA, and any deficiencies are addressed within the ASMCG meetings or individually with specific administrators, if needed.

Airspace Charter of the Czech Republic describes the competent authorities (CIV and MIL), their responsibilities and principles by which a joint civilian-military body (ASM Committee - ASMC) carries out strategic planning for the use of the Czech Republic airspace. The Charter incorporates as annexes the descriptions of processes used to provide high quality services to airspace users and ATS providers through safe, accurate and timely planning, approval and promulgation of national airspace management measures and international cooperation. The Airspace Charter was updated at the end of 2021.

The airspace of the Czech Republic is open to flights and it is divided in accordance with the rules contained in Sections 44 - 44c) of Act No. 49/1997. Pursuant to Section 44(2) of the Act, the CAA issues, in agreement with the Ministry of Defence and after consulting the Person authorized to exercise state administration in the matters related to sport flying devices, measures of general nature under the Administrative Procedure Code on division of the airspace of the Czech Republic to ensure safe conduct of flights and efficient provision of air services. In fulfilment of that mandate, the CAA takes into account, where possible, the FUA specifications described in "EUROCONTROL Specifications for the Application of the Flexible Use of Airspace (FUA)". Consultation with airspace users, service providers and other relevant bodies is conducted with the aim of obtaining consensus, wherever possible, before making changes in the planning or design of airspace management. The consultations are performed in a transparent way following a predefined procedure. The ASMC ensures effective cooperation at all levels through the ASM Consultation Group (ASMCG). In application of Regulation (EC) No 2150/2005, the ASMC cooperates very closely with CAA and takes into account the findings and relevant corrective measures resulting from control activities (e.g. CAA, MAA, EASA). In accordance with ICAO requirements, the CAA publishes the airspace management policy and implementation of new airspace structures and follow-up procedures or their changes so that all airspace users and ATS providers have sufficient time to comply with the new requirements.

Dynamic Airspace Management is realized at ASM Level 2 and/or ASM Level 3. Areas published in AIP CR / MIL AIP or other pre-arranged areas can be used under FUA rules as AUP manageable with UUP function updates.

The ATM systems of the Czech Airforces are directly connected to the ANS CR systems in order to present current status of reserved areas to the ATCOs. The AIM/AIS provider promulgates the planning status of the airspaces concerned in AISVIEW web tool, which serves for airspace users as an information source.

On the local level the FUA is addressed within the AMC activities, on the FAB CE level the DAM/STAM projects are in progress. The AMC is newly certificated under the EU 2017/373. The regulation 2150/2005 is fully implemented within the Czech Republic.

**Military - related measures implemented or planned to improve capacity**

The traffic complexity manager (a tool developed with the SESAR support) was put into full operational use in 2020. The tool is predicting traffic load in particular sectors (including military activities) and thus allowing for better ATCOs usage and improvement in capacity area.

The establishment of Airspace designer function was preparing during the year 2021 to be ready at the beginning of 2022 and serves as a government service for professional preparation of requests and supporting documentation for all changes in the airspace structures in future.

**PI#6 Effective use of reserved or segregated airspace - national level**

Ratio PI#6	2020	2021	2022	2023	2024
Czech Republic	40%	35%			

**PI#6 Effective use of reserved or segregated airspace (per ACC)**

Ratio PI#6	2020	2021	2022	2023	2024
Prague	40%	35%			

**Initiatives implemented or planned to improve PI#6**

[As previously documented in update of military dimension of the plan plus..]

The performance monitoring and the assessment and review of FUA operational performance are organised by CAA and MAA.

Dynamic Airspace Management is realized at ASM Level 2 and/or ASM Level 3. Areas published in AIP CR / MIL AIP or other pre-arranged areas can be used under FUA rules as AUP manageable with UUP function updates. FUA evaluation is performed monthly by individual TRA / TSA administrators and reported to the CAA. Deficiencies are addressed both within the ASMCG meetings and individually with individual administrators, if needed.

The MAA was informed about the negative trend in proportion of planned and subsequently used airspace in 2021 with aim to asked MIL for implementation of appropriate remedy actions.

**PI#7 Rate of planning via available airspace structures - national level**

Ratio PI#7	2020	2021	2022	2023	2024
Czech Republic					

**PI#7 Rate of planning via available airspace structures (per ACC)**

Ratio PI#7	2020	2021	2022	2023	2024
Prague ACC					

**Initiatives implemented or planned to improve PI#7**

There is no data available for either Czech Republic or Prague ACC.

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Czech Republic					

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Prague ACC					

**Initiatives implemented or planned to improve PI#8**

There is no data available for either Czech Republic or Prague ACC.

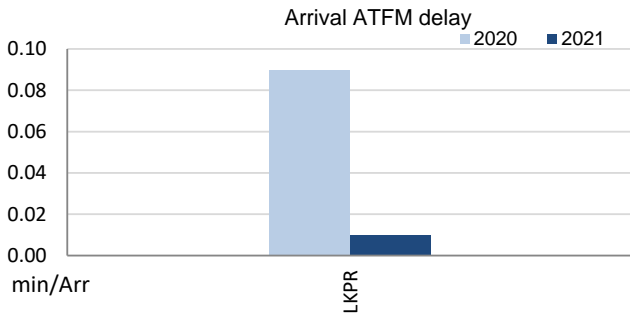
Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.20	0.06	0.11	0.11	0.11		
<b>Actual performance</b>	0.00	0.01					
<b>NSA's assessment of capacity performance</b>							
There were no material delay recorded in the Czech Republic due to significantly lower traffic caused by the COVID crisis.							
<b>Monitoring process for capacity performance</b>							
The monitoring process is based on quarterly monitoring reports prepared by ANS CR. These are based on the company Annual plan and cover all KPA. Quarterly reports are submitted to the CAA.							
<b>Capacity Planning</b>							
There was enough capacity in the Czech Republic to cover actual demand in 2021. The spare capacity due to lower than originally predicted traffic was use to prepare the whole transition proces (testing, training, etc.) to new main ATM System - TopSky. The other main measures (ATS optimisation, FRA introduction, etc.) were deployed. Additional training was carried out to maintain ATCO skills.							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned (Perf Plan)</b>	-	-	146	154	153	160	
<b>Actual</b>	116	136	143				
<b>Application of Corrective Measures for Capacity (if applicable)</b>							
Following the OPS introduction of the New ATM system TopSky, capacities were reduced. Since 25 FEB 2022 gradual increase of capacities is taking place, but at the time of issuing this monitoring report the capacities do not achieve 100% of available planned capacity. This process is significantly hampered by consequences of war in Ukraine and disruptions of operations in PANSa organisation (ANSP Poland).							
<b>Summary of capacity performance</b>							
The Czech Republic experienced an increase in traffic from 340k flights in 2020 to 404k flights in 2021, with practically zero ATFM delays. However, traffic levels were still substantially below the 867k flights in 2019.							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.20	0.06	0.11	0.11	0.11		
<b>Deadband +/-</b>	-	-	[0.1-0.12]	[0.1-0.12]	[0.1-0.12]		
<b>Actual performance</b>	0.00	0.01					
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.							

**1. Overview**

Czech Republic has included only Prague in their last Performance Plan for RP3 monitoring. The Airport Operator Data Flow, necessary for the monitoring of the additional times, is correctly established at Prague and the monitoring of all environment indicators can be performed. Traffic this airport in 2021 was still 62% lower than in 2019, even if 13% higher than in 2020.

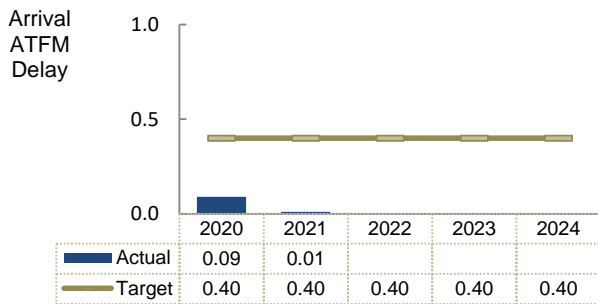
Average arrival ATFM delays at Prague in 2021 was 0.01 min/arr, compared to 0.09 min/arr in 2020. ATFM slot adherence has improved (2021: 95.3%; 2020: 94.7%).

**2. Arrival ATFM Delay**



Delays at Prague (LKPR: 2019: 0.18 min/arr.; 2020: 0.09 min/arr.; 2021: 0.01 min/arr.) averaged nearly zero, and were only registered in December. 100% of these regulations were attributed to ATC capacity

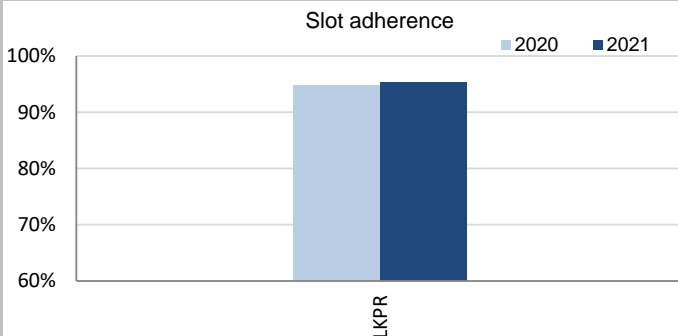
**3. Arrival ATFM Delay – National Target and Incentive Scheme**



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

**4. ATFM Slot Adherence**



With the drastic drop in traffic, the share of regulated departures from Prague virtually disappeared until July 2021. The slot adherence in 2021 was 95.3%, a slight improvement with respect to 2020 (94.9%). With regard to the 4.7% of flights that did not adhere, 4.2% was early and 0.5% was late.

## 5. ATC Pre-departure Delay

The quality of the airport data reported by Prague (the only Czech airport subject to monitoring of this indicator) is too low, preventing the calculation of this indicator.

The calculation of the ATC pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF) which is properly implemented at Prague.

However, there are several quality checks before EUROCONTROL can produce the final value which is established as the average minutes of pre-departure delay (delay in the actual off block time) associated to the IATA delay code 89 (through the APDF, for each delayed flight, the reasons for that delay have to be transmitted and coded according to IATA delay codes.

However, sometimes the airport operator has no information concerning the reasons for the delay in the off block, or they cannot convert the reasons to the IATA delay codes. In those cases, the airport operator might:

- Not report any information about the reasons for the delay for that flight (unreported delay)
- Report a special code to indicate they do not have the information (code ZZZ)
- Report a special code to indicate they do not have the means to collect and/or translate the information (code 999)

To be able to calculate with a minimum of accuracy the PI for a given month, the minutes of delay that are not attributed to any IATA code reason should not exceed 40% of the total minutes of pre-departure delay observed at the airport.

Finally, to be able to produce the annual figure, at least 10 months of valid data is requested by EUROCONTROL.

The share of unidentified delay reported by Prague was well above 40% since April 2020, preventing the calculation of this indicator. Prague had proper reporting before the pandemic, but now even with the traffic recovery, unidentified delays still account for more than 50% of the total delays.

## 6. All Causes Pre-departure Delay

Prague is the only Czech airport subject to the monitoring of this indicator.

The total (all causes) delay in the actual off block time at Prague in 2021 was nearly the same as in 2020 (LKPR: 2020: 8.30 min/dep.; 2021: 8.32 min/dep.). The highest delays per flight were observed in January-February and in April.

## 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Prague/Ruzyne-LKPR	0.09	0.01				94.7%	95.3%				n/a	n/a				8.30	8.32			

1. Contextual economic information: en route air navigation services							
Czech Republic ECZ represents 2.0% of the SES en route ANS actual costs in 2019			FAB: FAB CE				
National currency:	CZK	Exchange rates (1 EUR=)	2017: 26.3115 CZK	2020: 26.435 CZK	2021: 25.6216 CZK		
Performance Plan:	RP3 draft performance plan dated 4 February 2022 and found consistent as per Commission Decision (EU) 2022/772 of 13 April 2022 The final version of the plan was adopted and published on 31 May 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317.						
2. Monitoring of the en route determined unit cost (DUC) at charging zone level							
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.							
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.							
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)							
Czech Republic: Data from RP3 Performance Plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal CZK)		2,801,150,791	2,540,127,380	5,341,278,171	3,093,207,552	3,313,232,021	3,375,276,257
Inflation %		3.3%	2.3%		2.0%	2.0%	2.0%
Inflation index (100 in 2017)		108.1	110.6		112.8	115.0	117.3
Real en route costs (CZK2017)		2,663,873,711	2,392,525,450	5,056,399,161	2,866,536,564	3,033,769,012	3,047,424,812
Total en route service units		1,138,417	1,280,175	2,418,592	1,840,802	2,195,628	2,514,308
<b>Real en route DUC per service unit (CZK2017)</b>		<b>2,339.98</b>	<b>1,868.90</b>	<b>2,090.64</b>	<b>1,557.22</b>	<b>1,381.73</b>	<b>1,212.03</b>
<b>Real en route DUC per service unit (EUR2017)</b>		<b>88.93</b>	<b>71.03</b>	<b>79.46</b>	<b>59.18</b>	<b>52.51</b>	<b>46.06</b>
Czech Republic: Actual data from Reporting Tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal CZK)		2,801,150,791	2,360,900,756	5,162,051,547			
Inflation %		3.3%	3.3%				
Inflation index (100 in 2017)		108.1	111.7				
Real en route costs (CZK2017)		2,663,873,711	2,213,371,381	4,877,245,092			
Total en route service units		1,138,417	1,280,175	2,418,592			
<b>Real en route AUC per service unit (CZK2017)</b>		<b>2,339.98</b>	<b>1,728.96</b>	<b>2,016.56</b>			
<b>Real en route AUC per service unit (EUR2017)</b>		<b>88.93</b>	<b>65.71</b>	<b>76.64</b>			
Difference between Actuals and Planned		2020	2021	2020-2021	2022	2023	2024
En route costs (nominal CZK)		in value 0	-179,226,624	-179,226,624			
		in % -	-7.1%	-3.4%			
Inflation %		in p.p. 0.0 p.p.	1.0 p.p.				
Inflation index (100 in 2017)		in p.p. 0.0 p.p.	1.1 p.p.				
Real en route costs (CZK2017)		in value 0	-179,154,069	-179,154,069			
		in % -	-7.5%	-3.5%			
Total en route service units		in value 0	0	0			
		in % -	-	-			
<b>Real en route unit cost per service unit (CZK2017)</b>		<b>in value 0.00</b>	<b>-139.94</b>	<b>-74.07</b>			
		<b>in % -</b>	<b>-7.5%</b>	<b>-3.5%</b>			
<b>Real en route unit cost per service unit (EUR2017)</b>		<b>in value 0.00</b>	<b>-5.32</b>	<b>-2.82</b>			
		<b>in % -</b>	<b>-7.5%</b>	<b>-3.5%</b>			
4. Focus on en route DUC monitoring at charging zone level							
<b>AUC vs. DUC</b> In the combined year 2020-2021, the en route AUC (2,016.56 CZK2017 or 76.64 €2017) was lower by -3.5% (-74.07 CZK2017 or -2.82 €2017) comparing to the DUC (2,090.64 CZK2017 or 79.46 €2017). This was the sole effect of the lower than planned en route costs in real terms (-3.5%, -179.2 MCZK2017 or -6.8 M€2017).							
<b>En route service units</b> There is no difference in the number of TSU, as the figures used in the final version of the RP3 PP for the forecasted traffic for years 2020 and 2021 were in line with actuals.							
<b>En route costs by entity</b> Actual en route costs are -3.5% lower than planned (-6.8 M€2017) which is mainly driven by the lower by -3.6% (or -5.8 M€2017) costs for the main ANSP (ANS Czech Republic) and for the NSA/EUROCONTROL, -4.4% (or -1.1 M€2017). Actual 2020-2021 costs for METSP were slightly above plan (+2.1%).							
<b>En-route costs for the main ANSP (ANS CR) at charging zone level</b> The lower than planned en route costs in real terms for ANS CR (-3.6%, or -5.8 M€2017) result from: - lower than planned staff costs by -1.4% (or -1.3 M€2017); - lower other operating costs by -15.9% (or -3.8 M€2017); - lower depreciation by -0.3% (or -0.1 M€2017); and - lower cost of capital by -3.5% (or -0.5 M€2017); - slightly higher deduction for VFR exempted flights (+3.0%). The lower execution of costs in 2020-2021 were the effect of measures implemented by ANS CR, and in particular: cancelation of benefits, limitation of the contribution to supplementary pension savings, reduction of basic salary and reduction in the number of staff. In the area of other operating costs the travel, maintenance and training costs were reduced.							

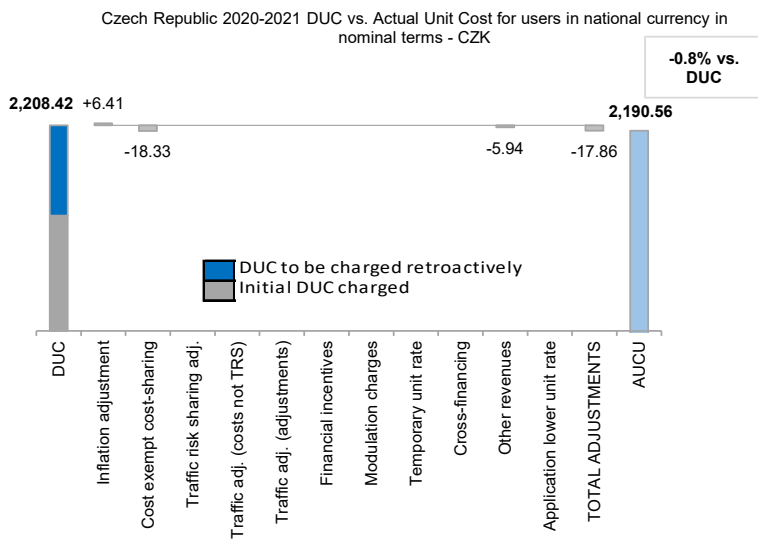


5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	CZK/SU	EUR/SU
Initial DUC charged	1,237.66	47.60
DUC to be charged retroactively	970.76	37.20
<b>DUC</b>	<b>2,208.42</b>	<b>84.80</b>
Inflation adjustment	6.41	0.25
Cost exempt from cost-sharing	-18.33	-0.72
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	0.00	0.00
Traffic adj. (adjustments)*	-	-
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**	-	-
Cross-financing	0.00	0.00
Other revenues	-5.94	-0.23
Application of lower unit rate	0.00	0.00
Total adjustments	-17.86	-0.69
<b>AUCU</b>	<b>2,190.56</b>	<b>84.11</b>
<b>AUCU vs. DUC</b>	<b>-0.8%</b>	<b>-0.8%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

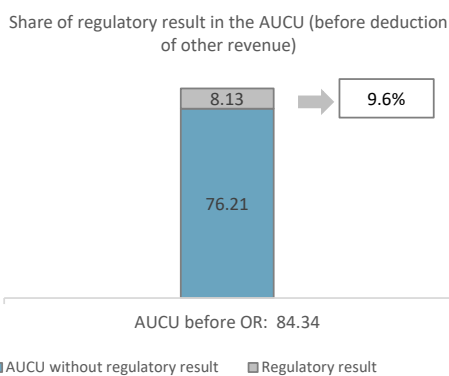
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. En route costs exempt from cost sharing

		CZK '000	EUR '000	CZK/SU	EUR/SU
by item	New and existing investments	-15,637	-610	-6.47	-0.25
	Competent authorities and qualified entities costs	290	11	0.12	0.00
	Eurocontrol costs	-30,458	-1,189	-12.59	-0.49
	Pension costs	1,468	57	0.61	0.02
	Interest on loans	0	0	0.00	0.00
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>-44,337</b>	<b>-1,730</b>	<b>-18.33</b>	<b>-0.72</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level



ANSP(S)	CZK '000	EUR '000	CZK/SU	EUR/SU
ANS CR	505,766	19,529	209.12	8.07
METSP(s)	CZK '000	EUR '000	CZK/SU	EUR/SU
Czech Republic MET	3,523	134	1.46	0.06
<b>Total charging zone</b>	<b>509,289</b>	<b>19,663</b>	<b>210.57</b>	<b>8.13</b>
<b>Actual cost for users***</b>	<b>5,312,439</b>	<b>203,978</b>	<b>2,196.50</b>	<b>84.34</b>
<b>Regulatory result (% AUCU)</b>	<b>9.6%</b>	<b>9.6%</b>	<b>9.6%</b>	<b>9.6%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (2,190.56 CZK or 84.11€) is -0.8% lower than the nominal DUC (2,208.42 CZK or 84.80€) which includes DUC initially charged: 1 237.66 CZK (or 47.60€); and to be charged: 970.76 CZK (or 37.20€). The difference between these two figures (-17.86 CZK/SU or -0.69€/SU) results from:

- the positive inflation adjustment (+6.41 CZK/SU or +0.25€/SU) resulting from higher than planned inflation;
- the deduction of the adjustment for costs exempt from cost-sharing (-18.33 CZK/SU or -0.72€/SU), to be reimbursed in future years; and
- the deduction of other revenues (-5.94 CZK/SU or -0.23€/SU).

The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 9.6%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

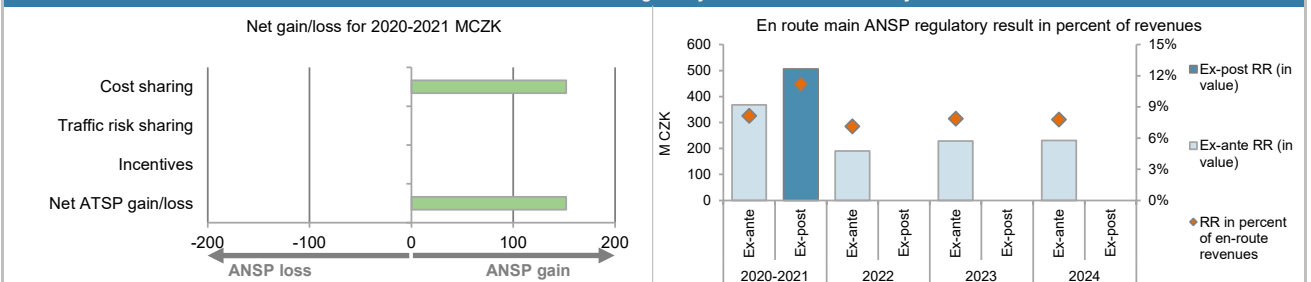
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (CZK '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	152,492			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	14,933			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-15,369			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>152,057</b>			
Traffic risk sharing (CZK '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.0%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	4,525,536			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>0</b>			
Incentives (CZK '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (CZK '000)</b>	<b>152,057</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>5,935</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

ANS CR planned regulatory result (CZK '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	3,865,827	3,861,480	7,727,308	4,022,141	4,549,321	4,405,165
Proportion of financing through equity (in %)	82%	54%	68%	47%	56%	62%
RoE pre-tax rate (in %)	5.6%	9.2%	7.0%	10.0%	9.0%	8.4%
RoE (in value)	175,793	191,853	367,646	190,620	229,041	230,983
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>175,793</b>	<b>191,853</b>	<b>367,646</b>	<b>190,620</b>	<b>229,041</b>	<b>230,983</b>
<b>Revenue for the en route charging zone</b>	<b>2,392,069</b>	<b>2,133,467</b>	<b>4,525,536</b>	<b>2,678,129</b>	<b>2,918,540</b>	<b>2,976,320</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>7.3%</b>	<b>9.0%</b>	<b>8.1%</b>	<b>7.1%</b>	<b>7.8%</b>	<b>7.8%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>5.6%</b>	<b>9.2%</b>	<b>7.0%</b>	<b>10.0%</b>	<b>9.0%</b>	<b>8.4%</b>
ANS CR actual regulatory result (CZK '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	3,865,827	3,904,165	7,769,992			
Proportion of financing through equity (in %)	82%	50%	66%			
RoE pre-tax rate (in %)	5.6%	9.2%	6.9%			
RoE (in value)	175,793	177,917	353,709			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	152,057	152,057			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>175,793</b>	<b>329,973</b>	<b>505,766</b>			
<b>Revenue for the en route charging zone</b>	<b>2,392,069</b>	<b>2,133,032</b>	<b>4,525,101</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>7.3%</b>	<b>15.5%</b>	<b>11.2%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>5.6%</b>	<b>17.0%</b>	<b>9.9%</b>			

13. Focus on the main ANSP regulatory result on en route activity



**ANS CR's net gain on activity in the en route charging zone in the combined year 2020-2021**

ANS CR's net gain amounts to +152.1 MCZK (or +5.9 M€) and fully resulting from the gains from the cost sharing mechanism.

**ANS CR's overall regulatory results (RR) for the en route activity**

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+152.1 MCZK) and the actual RoE (+353.7 MCZK or +13.6 M€) amounts to +505.8 MCZK or +19.5 M€ (11.2% of the en route revenues). The resulting ex-post rate of return on equity is 9.9%, which is higher than the 7.0% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
Czech Republic MET planned regulatory result (CZK '000)	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	2,865	2,327	5,192	2,267	2,101	1,935
Revenue for the en route charging zone	67,258	65,132	132,390	70,149	71,836	73,594
Ex-ante regulatory result (+/-) in percent of revenues	4.3%	3.6%	3.9%	3.2%	2.9%	2.6%
Ex-ante RoE pre-tax rate (in %)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Czech Republic MET actual regulatory result (CZK '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	2,865	658	3,523			
Revenue for the en route charging zone	67,258	66,896	134,155			
Ex-post regulatory result (+/-) in percent of revenues	4.3%	1.0%	2.6%			
Ex-post RoE pre-tax rate (in %)	5.0%	1.4%	3.4%			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
For the MET service provider (CHMI) operating in the en route charging zone the overall ex-post regulatory result amounted to +3.5 MCZK (+0.1 M€) which represents 2.6% of their actual en route revenues for the combined 2020-2021. This results in ex-post rate of return on equity of 3.4%, which is lower than 5.0% included in the PP.						

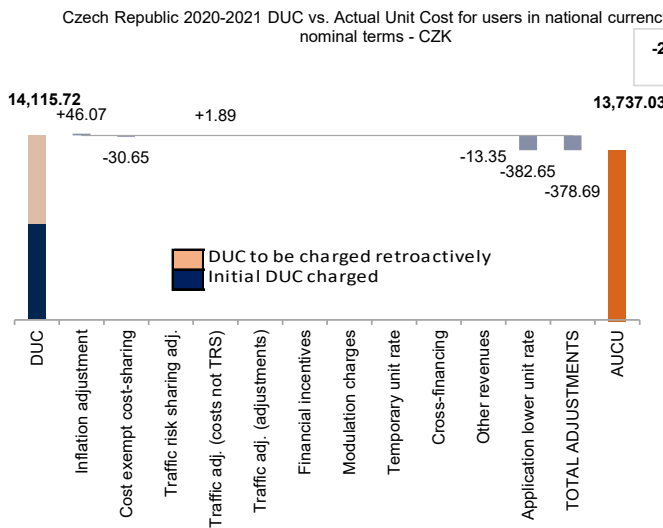
1. Contextual economic information: terminal air navigation services						
· Czech Republic TCZ represents 2.1% of the SES terminal ANS actual costs in 2019 · Number of airports in charging zone in 2021: 1 of which: <ul style="list-style-type: none"> <li>· Airports with fewer than 80,000 IFR mvmts: 0</li> <li>· Airports with more than 80,000 IFR mvmts: 1</li> </ul>						
· National currency: CZK Exchange rates (1 EUR=) 2017: 26.3115 CZK 2020: 26.435 CZK 2021: 25.6216 CZK · Performance Plan: See item 1 for the en route charging zone(s).						
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.  The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Czech Republic: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal CZK)	491,381,600	358,521,360	849,902,960	452,412,380	535,350,786	543,432,271
Inflation %	3.3%	2.3%		2.0%	2.0%	2.0%
Inflation index (100 in 2017)	108.1	110.6		112.8	115.0	117.3
Real terminal costs (CZK2017)	462,397,169	332,186,162	794,583,331	416,392,320	485,619,488	485,843,805
Total terminal service units	28,247	31,963	60,210	60,440	77,210	91,320
<b>Real terminal DUC per service unit (CZK2017)</b>	<b>16,369.96</b>	<b>10,392.83</b>	<b>13,196.93</b>	<b>6,889.35</b>	<b>6,289.59</b>	<b>5,320.23</b>
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>622.16</b>	<b>394.99</b>	<b>501.57</b>	<b>261.84</b>	<b>239.04</b>	<b>202.20</b>
Czech Republic: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal CZK)	491,381,600	330,035,000	821,416,600			
Inflation %	3.3%	3.3%				
Inflation index (100 in 2017)	108.1	111.7				
Real terminal costs (CZK2017)	462,397,169	303,994,471	766,391,640			
Total terminal service units	28,247	31,773	60,020			
<b>Real terminal AUC per service unit (CZK2017)</b>	<b>16,369.96</b>	<b>9,567.72</b>	<b>12,769.02</b>			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>622.16</b>	<b>363.63</b>	<b>485.30</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal CZK)	in value 0	-28,486,360	-28,486,360			
	in % -	-7.9%	-3.4%			
Inflation %	in p.p. 0.0 p.p.	1.0 p.p.				
Inflation index (100 in 2017)	in p.p. 0.0 p.p.	1.1 p.p.				
Real terminal costs (CZK2017)	in value 0	-28,191,691	-28,191,691			
	in % -	-8.5%	-3.5%			
Total terminal service units	in value 0	-190	-190			
	in % -	-0.6%	-0.3%			
<b>Real terminal unit cost per service unit (CZK2017)</b>	<b>in value 0.00</b>	<b>-825.11</b>	<b>-427.91</b>			
	<b>in % -</b>	<b>-7.9%</b>	<b>-3.2%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value 0.00</b>	<b>-31.36</b>	<b>-16.26</b>			
	<b>in % -</b>	<b>-7.9%</b>	<b>-3.2%</b>			
4. Focus on terminal DUC monitoring at charging zone level						
<b>AUC vs. DUC</b> In the combined year 2020-2021, the terminal AUC (12,769.02 CZK2017 or 485.30 €2017) was lower by -3.2% (or -427.91 CZK2017 or -16.26 €2017) comparing to the DUC (13,196.93 CZK2017 or 501.57 €2017). This was in particular, the effect of the lower than planned terminal costs in real terms (-3.5%, -28.2 MCZK2017 or -1.1 M€2017).						
<b>Terminal service units</b> The difference between planned and actual TNSUs (-0.3%) falls within the ±2% dead band. Hence, the resulting loss is borne by the main ANSP (see item 11).						
<b>Terminal costs by entity</b> Actual terminal costs are -3.5% lower than planned (-1.1 M€2017) which is mainly driven by the lower costs for ANS CR (-3.7% or -1.1 M€2017). The differences in the actual costs for NSA and METSP are not significant, and correspond to -1.5% and -0.7% respectively.						
<b>Terminal costs for the main ANSP (ANS CR) at charging zone level</b> The lower than planned terminal costs in real terms for ANS CR (-3.7%, or -1.1 M€2017) result from: <ul style="list-style-type: none"> <li>- lower than planned staff costs by -1.2% (or -0.2 M€2017);</li> <li>- lower other operating costs by -15.8% (or -0.7 M€2017);</li> <li>- lower depreciation by -0.8% (or -0.1 M€2017);</li> <li>- deduction of the VFR exempted flights (-0.1 M€2017), while no deduction was foreseen in the PP.</li> </ul> The lower execution of costs in 2020-2021 were the effect of measures implemented by ANS CR, and in particular: cancellation of benefits, limitation of the contribution to supplementary pension savings, reduction of basic salary and reduction in the number of staff. In the area of other operating costs the travel, maintenance and training costs were reduced. Cost of capital was not charged to the airspace users in 2020-2021.						

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	CZK/SU	EUR/SU
Initial DUC charged	7,387.84	284.25
DUC to be charged retroactively	6,727.88	256.88
<b>DUC</b>	<b>14,115.72</b>	<b>541.13</b>
Inflation adjustment	46.07	1.80
Cost exempt from cost-sharing	-30.65	-1.20
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	1.89	0.07
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	-13.35	-0.51
Application of lower unit rate	-382.65	-14.83
Total adjustments	-378.69	-14.67
<b>AUCU</b>	<b>13,737.03</b>	<b>526.46</b>
<b>AUCU vs. DUC</b>	<b>-2.7%</b>	<b>-2.7%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

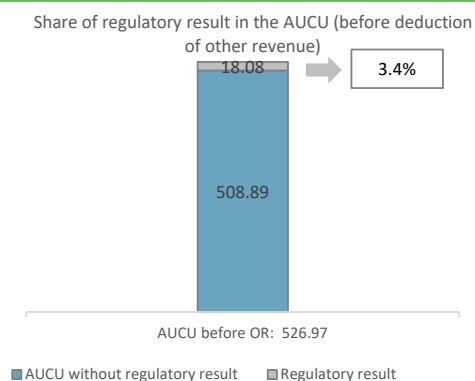
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

		CZK '000	EUR '000	CZK/SU	EUR/SU
by item	New and existing investments	-1772	-69	-29.52	-1.15
	Competent authorities and qualified entities costs	-207	-8	-3.45	-0.13
	Eurocontrol costs	0	0	0.00	0.00
	Pension costs	140	5	2.33	0.09
	Interest on loans	0	0	0.00	0.00
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>-1839</b>	<b>-72</b>	<b>-30.65</b>	<b>-1.20</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	CZK '000	EUR '000	CZK/SU	EUR/SU
ANS CR	27,013	1,054	450.07	17.57
METSP(s)				
Czech Republic-MET	816	31	13.60	0.52
<b>Total charging zone</b>	<b>27,829</b>	<b>1,085</b>	<b>463.67</b>	<b>18.08</b>
<b>Actual cost for users***</b>	<b>825,292</b>	<b>31,629</b>	<b>13,750.38</b>	<b>526.97</b>
<b>Regulatory result (% AUCU)</b>	<b>3.4%</b>	<b>3.4%</b>	<b>3.4%</b>	<b>3.4%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (13,737.03 CZK or 526.46€) is -2.7% lower than the nominal DUC (14,115.72 CZK or 541.13€), includes DUC initially charged: 7,387.84 CZK (or 284.25); and to be charged: 6,727.88 CZK (or 256.88€). The difference between these two figures (-378.69 CZK/SU or -14.67 €/SU) results from:

- the positive inflation adjustment resulting from higher than planned inflation (+46.07 CZK/SU or +1.80€/SU);
- the deduction of the adjustment for costs exempt from cost-sharing (-30.65 CZK/SU or -1.20€/SU);
- the positive traffic adjustment (+1.89 CZK/SU or +0.07€/SU), for the costs not subject to traffic risk sharing;
- the deduction of other revenues (-13.35 CZK/SU or -0.51€/SU); and
- the deduction of -382.65 CZK/SU (-14.83€/SU) resulting from the application of the lower unit rate arising from the declared policy not to increase the level of terminal navigation unit rate above 6,800 CZK.

The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 3.4% .

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

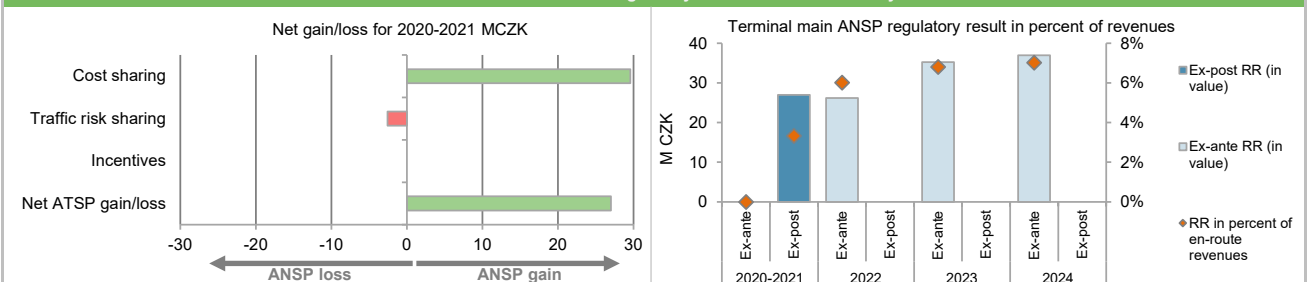
Cost sharing (CZK '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP see Note 1	28,254			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	2,677			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-1,348			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>29,583</b>			
Traffic risk sharing (CZK '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	-0.3%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	813,948			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>-2,570</b>			
Incentives (CZK '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (CZK '000)</b>	<b>27,013</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>1,054</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

ANS CR planned regulatory result (CZK '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	543,103	568,160	1,111,263	552,181	699,504	704,616
Proportion of financing through equity (in %)	82%	54%	68%	47%	56%	62%
RoE pre-tax rate (in %)	0.0%	0.0%	0.0%	10.0%	9.0%	8.4%
RoE (in value)	0	0	0	26,169	35,217	36,946
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26,169</b>	<b>35,217</b>	<b>36,946</b>
<b>Revenue for the terminal charging zone</b>	<b>471,938</b>	<b>342,010</b>	<b>813,948</b>	<b>435,527</b>	<b>518,114</b>	<b>525,833</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>6.0%</b>	<b>6.8%</b>	<b>7.0%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>10.0%</b>	<b>9.0%</b>	<b>8.4%</b>
ANS CR actual regulatory result (CZK '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	543,103	550,660	1,093,764			
Proportion of financing through equity (in %)	82%	50%	66%			
RoE pre-tax rate (in %)	0.0%	0.0%	0.0%			
RoE (in value)	0	0	0			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	27,013	27,013			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>0</b>	<b>27,013</b>	<b>27,013</b>			
<b>Revenue for the terminal charging zone</b>	<b>471,938</b>	<b>340,769</b>	<b>812,707</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues see Note 1</b>	<b>0.0%</b>	<b>7.9%</b>	<b>3.3%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>0.0%</b>	<b>9.9%</b>	<b>3.8%</b>			

**Note 1:** It should be noted that, since the Czech Republic caps the terminal UR, the ex-post RR is partially offset by the loss of revenues due to the application of the lower unit rate as per Art. 29.6 (loss of revenue as per Art. 29.6 corresponds to -23.00 MCZK).

13. Focus on main ANSP regulatory result on terminal activity

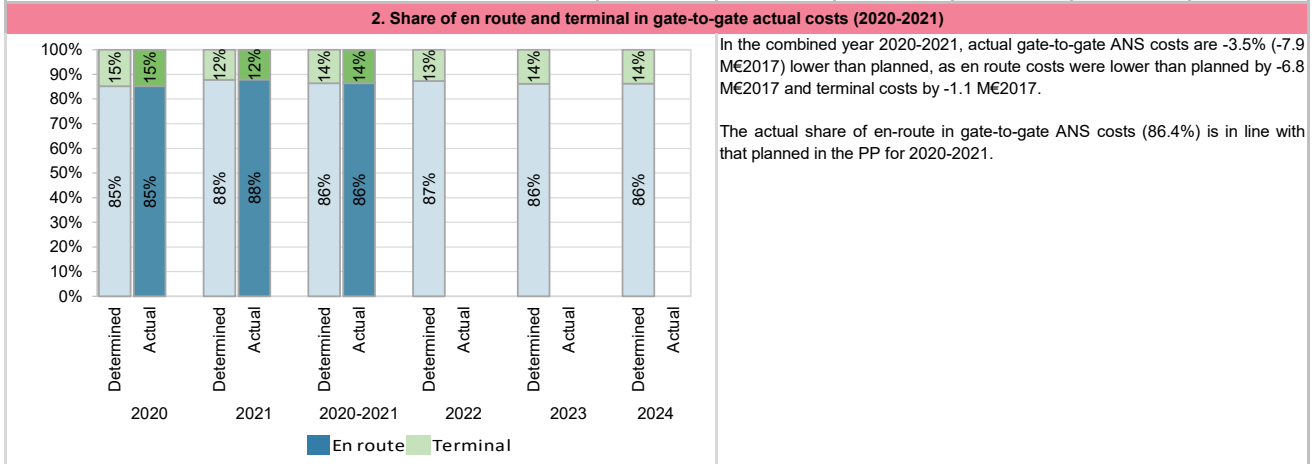


ANS CR's net gain and overall regulatory result (RR) on activity in the terminal charging zone in the combined year 2020-2021

ANS CR's net gain amounts to +27.0 MCZK (or +1.1 M€) and is the result of the gain from the cost sharing mechanism (+29.6 MCZK), and a loss from the traffic risk sharing mechanism (-2.6 MCZK). As ANS CR did not charge the cost of capital to the airspace users in 2020 and 2021, the overall RR for terminal activity in 2020-2021 corresponds to the net gain as mentioned above (+27.0 MCZK or +1.1 M€).

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Czech Republic-MET planned regulatory result (CZK '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	653	334	987	345	320	295
Revenue for the terminal charging zone	11,060	10,607	21,667	10,884	11,137	11,399
Ex-ante regulatory result (+/-) in percent of revenues	5.9%	3.1%	4.6%	3.2%	2.9%	2.6%
Ex-ante RoE pre-tax rate (in %)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Czech Republic-MET actual regulatory result (CZK '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	653	163	816			
Revenue for the terminal charging zone	11,060	10,411	21,471			
Ex-post regulatory result (+/-) in percent of revenues	5.9%	1.6%	3.8%			
Ex-post RoE pre-tax rate (in %)	5.0%	2.4%	4.1%			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity</b>						
For the MET service provider (CHMI) operating in the terminal charging zone the overall ex-post regulatory results amounted to +0.8 MCZK (+0.03 M€) which represents 3.8% of their actual terminal revenues for the combined 2020-2021. This results in ex-post rate of return on equity of 4.1%, which is lower than 5.0% included in the PP.						

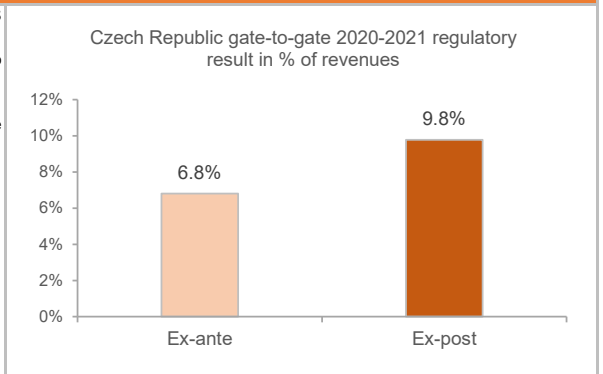
1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1: Czech Republic		En route charging zone 2: N/A					
Terminal charging zone 1: Czech Republic		Terminal charging zone 2:					
Czech Republic: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		101,243,704	90,930,789	192,174,493	108,946,148	115,302,017	115,821,022
Real terminal costs (EUR2017)		17,573,957	12,625,132	30,199,089	15,825,488	18,456,549	18,465,074
Real gate-to-gate costs (EUR2017)		118,817,661	103,555,921	222,373,582	124,771,635	133,758,566	134,286,096
En route share (%)		85.2%	87.8%	86.4%	87.3%	86.2%	86.2%
Czech Republic: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		101,243,704	84,121,824	185,365,528			
Real terminal costs (EUR2017)		17,573,957	11,553,673	29,127,630			
Real gate-to-gate costs (EUR2017)		118,817,661	95,675,497	214,493,158			
En route share (%)		85.2%	87.9%	86.4%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017) in value		0	-7,880,423	-7,880,423			
in %		0.0%	-7.6%	-3.5%			
En route share in p.p.		0.0 p.p.	0.1 p.p.	0.0 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In CZK '000	ANSP(S)	Ex-ante			Ex-post		
		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	ANS CR	367,646	5,339,484	6.9%	532,779	5,337,808	10.0%
METSP(s)		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	Czech Republic MET	6,179	154,057	4.0%	4,340	155,626	2.8%
<b>Total</b>		<b>373,825</b>	<b>5,493,541</b>	<b>6.8%</b>	<b>537,118</b>	<b>5,493,434</b>	<b>9.8%</b>

For the ANSPs providing services in the charging zones of Czech Republic covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +537.1 MCZK (see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 9.8% of gate-to-gate ANS revenues.

This is higher than the planned RR for the combined year 2020-2021 included in the performance plan (6.8%).





# **Annual Monitoring Report 2021**

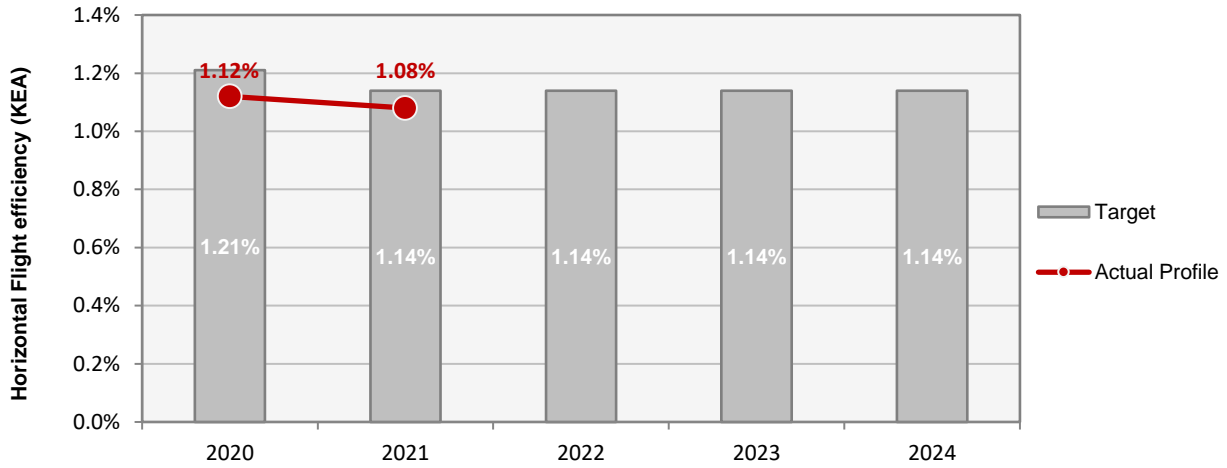
## Local level view

### Denmark

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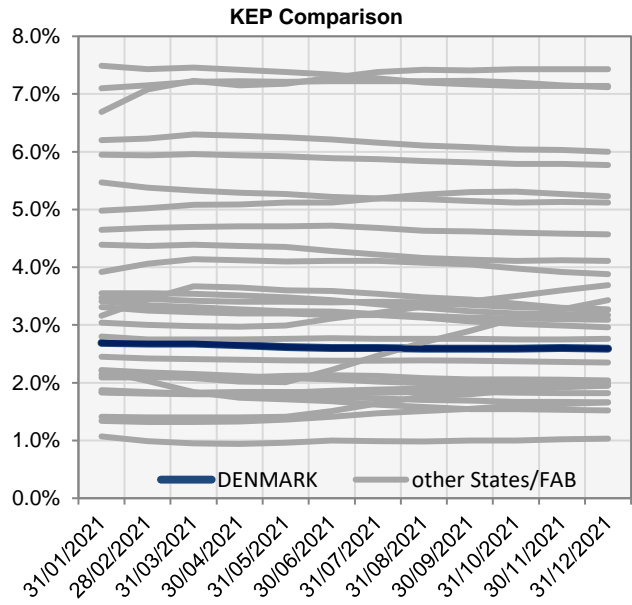
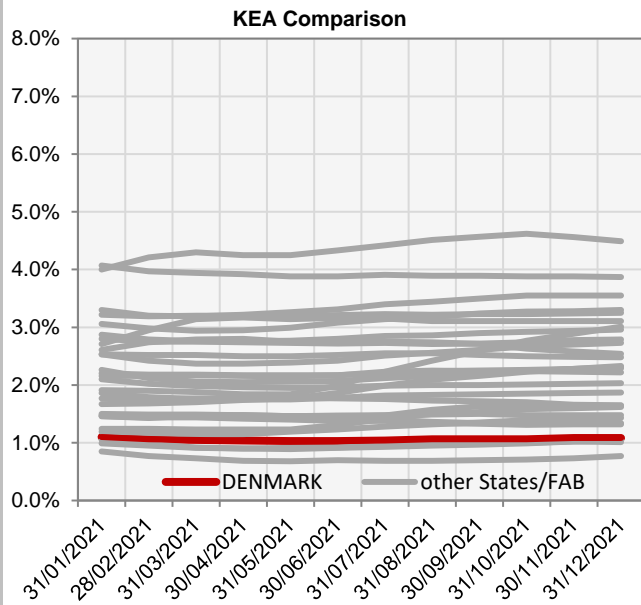
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>NAVIAIR</b>	76	C	C	B	B	B
<p>Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.</p>						
Observations						
<p>Three out of five EoSM components of the ANSP meet the 2024 target level. This year, it is observed improvement in two components ("Safety Culture" and "Safety Policy and Objectives") that have achieved the target. Improvements in safety management are still expected in the other three components during RP3 to achieve 2024 targets.</p>						

KEA					
	2020	2021	2022	2023	2024
Target	1.21%	1.14%	1.14%	1.14%	1.14%
Actual performance	1.12%	1.08%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	1.10%	1.06%	1.05%	1.04%	1.03%	1.03%	1.04%	1.06%	1.06%	1.06%	1.08%	1.08%
KEP	2.69%	2.68%	2.68%	2.65%	2.62%	2.60%	2.60%	2.59%	2.59%	2.59%	2.60%	2.59%
KES	2.24%	2.22%	2.23%	2.23%	2.24%	2.26%	2.26%	2.26%	2.27%	2.28%	2.31%	2.31%

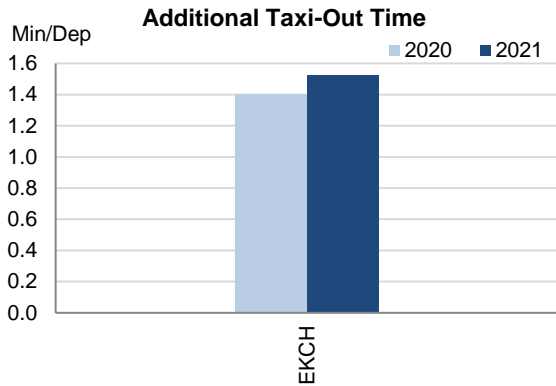


The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**1. Overview**

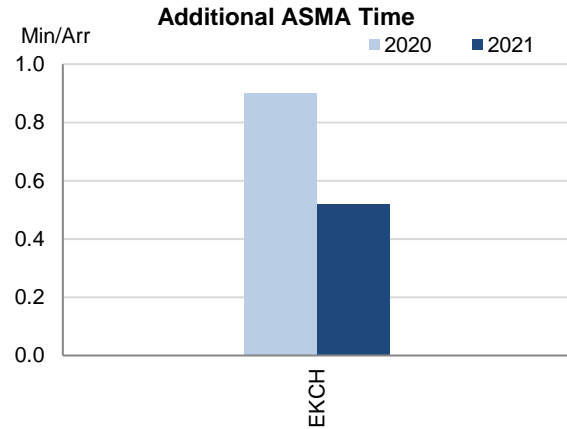
Denmark only has Copenhagen/Kastrup (EKCH) airport subject to RP3 monitoring for which the APDF is successfully established and the monitoring of the environmental indicators can be performed. Traffic at this airport in 2021 is still 58% lower than in 2019, even if 12% higher than in 2020.. Copenhagen showed excellent performance in terms of additional times during RP2, and this performance has improved in RP3 so far with the reduction of traffic. The share of CDO flights is 51.1% which is in the higher range of all observed values in 2021.

**2. Additional Taxi-Out Time**



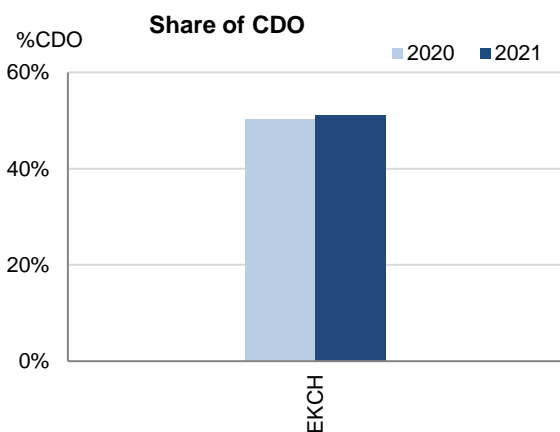
Additional taxi-out times at Copenhagen in 2021 were still 41% lower than in 2019 (EKCH; 2019: 2.59 min/dep.; 2020: 1.4 min/dep.; 2021: 1.52 min/dep.)

**3. Additional ASMA Time**



Additional ASMA times at Copenhagen in 2021 decreased further and were 51% lower than in 2019 (EKCH; 2019: 1.07 min/arr.; 2020: 0.9 min/arr.; 2021: 0.52 min/arr.)

**4. Share of arrivals applying CDO**



The share of CDO flights is 51.1% which is well above the overall RP3 value in 2021 (30.5%) and in the higher range of all observed values in 2021. It is also an increase of 0.9 percentage points with respect to 2020. From January to December, the monthly values show a decreasing trend.

**5. Appendix**

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Copenhagen/Kastrup-EKCH	1.4	1.52				0.9	0.52				50%	51%			

Update on Military dimension of the plan					
<b>Military - related measures implemented or planned to improve capacity</b>					
FUA is fully implemented in Denmark, thus it is very hard to increase capacity any further. Denmark fulfils the capacity targets. Denmark already fulfils the environmental targets. The airspace design and procedures used are created in order to minimise the negative effects on the environmental performance.					
<b>PI#6 Effective use of reserved or segregated airspace - national level</b>					
<b>Ratio PI#6</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Denmark	30%	22%			
<b>PI#6 Effective use of reserved or segregated airspace (per ACC)</b>					
<b>Ratio PI#6</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Copenhagen ACC	30%	22%			
<b>Initiatives implemented or planned to improve PI#6</b>					
None: The NSA monitors the performance via regularly reporting. ANSP and Military evaluates the performance with the scope of further improvement if possible. NSA will based on the development adress the issue with ANSP and Military.					
<b>PI#7 Rate of planning via available airspace structures - national level</b>					
<b>Ratio PI#7</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Denmark					
<b>PI#7 Rate of planning via available airspace structures (per ACC)</b>					
<b>Ratio PI#7</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Copenhagen ACC					
<b>Initiatives implemented or planned to improve PI#7</b>					
Neither Naviair or the NSA have this data available and have no plans to monitor this at local level but is using Eurocontrol numbers when available. Free route airspace is implemented which is expected to decrease the use of CDR's.					
<b>PI#8 Rate of using available airspace structures - national level</b>					
<b>Ratio PI#8</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Denmark					
<b>PI#8 Rate of using available airspace structures (per ACC)</b>					
<b>Ratio PI#8</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Copenhagen ACC					
<b>Initiatives implemented or planned to improve PI#8</b>					
Naviair does not have this data available and have no plans to monitor this at local level but is using Eurocontrol numbers when available,					

Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.07	0.03	0.06	0.06	0.05		
<b>Actual performance</b>	0.00	0.00					
NSA's assessment of capacity performance							
No assessment provided							
Monitoring process for capacity performance							
No information provided							
Capacity Planning							
No information provided							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned (Perf Plan)</b>	-	-	100	104	104	99	
<b>Actual</b>	113	113	100				
Application of Corrective Measures for Capacity (if applicable)							
Not applicable							
Summary of capacity performance							
Denmark experienced an increase in traffic from 275k flights in 2020 to 300k flights in 2021, with zero ATFM delay. However, traffic levels were still substantially below the 669k flights in 2019.							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.07	0.03	0.06	0.06	0.05		
<b>Deadband +/-</b>	-	-	[0.01-0.11]	[0.01-0.11]	[0-0.1]		
<b>Actual performance</b>	0.00	0.00					
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.							

**1. Overview**

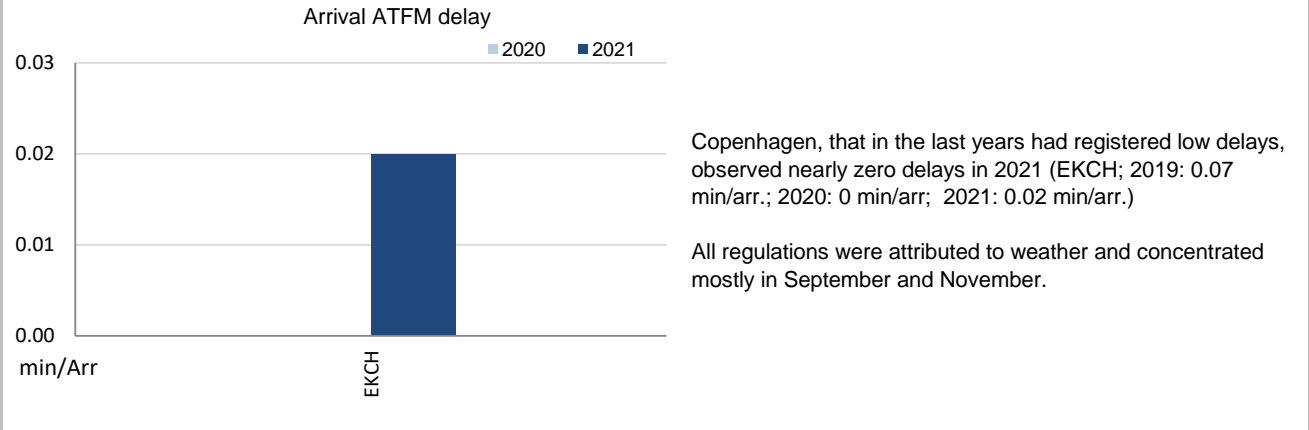
Denmark only has Copenhagen/Kastrup (EKCH) airport subject to RP3 monitoring for which the APDF is successfully established and the monitoring of the capacity indicators can be performed.

Traffic at this airport in 2021 is still 58% lower than in 2019, even if 12% higher than in 2020.

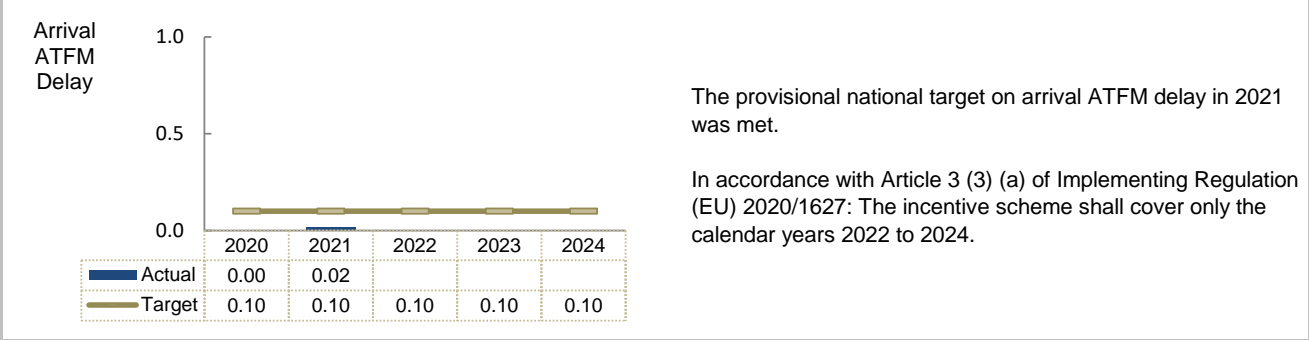
Average arrival ATFM delays in 2021 was 0.02 min/arr, compared to 0 min/arr in 2020.

ATFM slot adherence has slightly improved (2021: 99.2%; 2020: 98.7%).

**2. Arrival ATFM Delay**

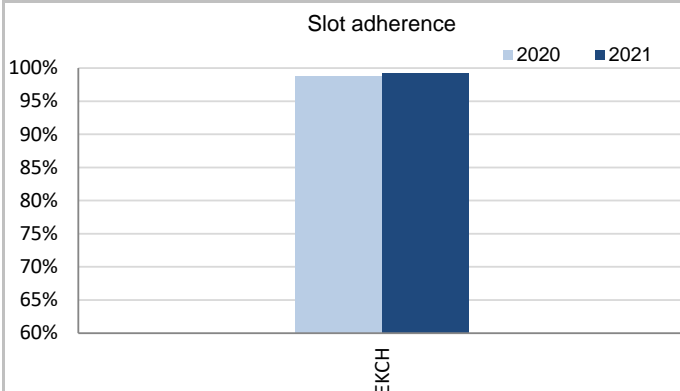


**3. Arrival ATFM Delay – National Target and Incentive Scheme**





#### 4. ATFM Slot Adherence



With the drastic drop in traffic, regulated departures from Copenhagen virtually disappeared until July 2021. Copenhagen's ATFM slot compliance in 2021 was 99.2%, a slight improvement with respect to the already good value in 2020 (98.7%). Only 26 flights in total in 2021 departed out of the STW, 24 of them early and 2 late.

#### 5. ATC Pre-departure Delay

The calculation of the ATC pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF) which is properly implemented at Copenhagen. The quality of the airport data reported by Copenhagen has improved after the COVID crisis and it is possible again to calculate this indicator.

The annual value has increased with respect to 2019 (EKCH: 2019: 0.09 min/dep; 2021: 0.13 min/dep) In fact the figures stayed below the 2019 values throughout the entire year except for December, when the average ATC pre-departure delay spiked to 0.87 min/dep. The Danish monitoring report does not provide any information about the possible reason(s).

#### 6. All Causes Pre-departure Delay

The total (all causes) delay in the actual off block time at Copenhagen increased in 2021 (EKCH: 2020: 6.79 min/dep.; 2021: 9.63 min/dep.). The highest delays per flight were observed in February and December, averaging more than 14 min/dep.

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Copenhagen/Kastrup-EKCH	0	0.02				98.7%	99.2%				n/a	0.13				6.79	9.63			

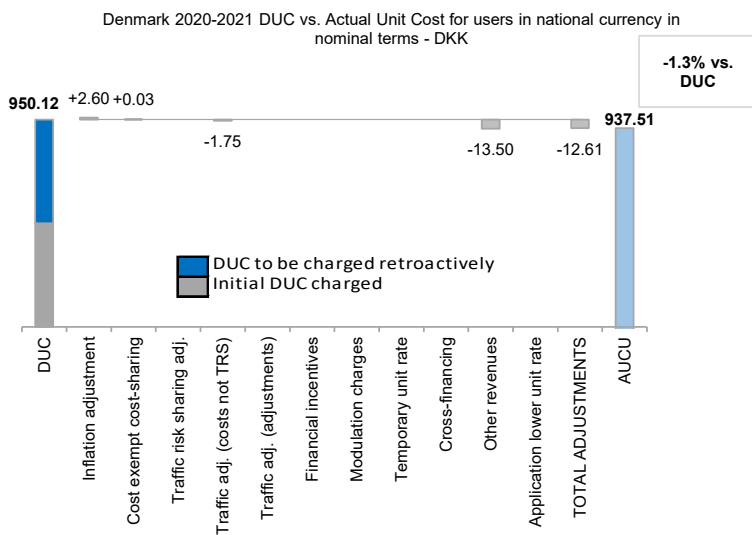
1. Contextual economic information: en route air navigation services						
Denmark ECZ represents 1.5% of the SES en route ANS actual costs in 2019			FAB: DK-SE FAB			
National currency:	DKK	Exchange rates (1 EUR=)	2017: 7.43692 DKK	2020: 7.45255 DKK	2021: 7.43514 DKK	
Performance Plan:	RP3 draft performance plan dated 17 November 2021 and found consistent as per Commission Decision (EU) 2022/770 of 13 April 2022 The final version of the plan was adopted and published on 9 August 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317.					
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Denmark: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal DKK)	702,105,967	707,830,585	1,409,936,552	717,666,270	730,355,628	738,450,305
Inflation %	0.3%	1.1%		1.4%	1.5%	1.6%
Inflation index (100 in 2017)	101.7	102.8		104.2	105.7	107.4
Real en route costs (DKK2017)	693,889,076	694,247,776	1,388,136,852	697,646,794	702,906,009	702,788,808
Total en route service units	716,778	767,182	1,483,960	1,455,159	1,660,614	1,784,164
<b>Real en route DUC per service unit (DKK2017)</b>	<b>968.07</b>	<b>904.93</b>	<b>935.43</b>	<b>479.43</b>	<b>423.28</b>	<b>393.90</b>
<b>Real en route DUC per service unit (EUR2017)</b>	<b>130.17</b>	<b>121.68</b>	<b>125.78</b>	<b>64.47</b>	<b>56.92</b>	<b>52.97</b>
Denmark: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal DKK)	702,105,967	709,225,021	1,411,330,988			
Inflation %	0.3%	1.9%				
Inflation index (100 in 2017)	101.7	103.6				
Real en route costs (DKK2017)	693,889,076	691,649,606	1,385,538,681			
Total en route service units	716,778	784,993	1,501,771			
<b>Real en route AUC per service unit (DKK2017)</b>	<b>968.07</b>	<b>881.09</b>	<b>922.60</b>			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>130.17</b>	<b>118.48</b>	<b>124.06</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal DKK)	in value	0	1,394,436	1,394,436		
	in %	-	+0.2%	+0.1%		
Inflation %	in p.p.	0.0 p.p.	0.8 p.p.			
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	0.8 p.p.			
Real en route costs (DKK2017)	in value	0	-2,598,170	-2,598,170		
	in %	-	-0.4%	-0.2%		
Total en route service units	in value	0	17,811	17,811		
	in %	-	+2.3%	+1.2%		
<b>Real en route unit cost per service unit (DKK2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-23.84</b>	<b>-12.82</b>		
	<b>in %</b>	<b>-</b>	<b>-2.6%</b>	<b>-1.4%</b>		
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-3.21</b>	<b>-1.72</b>		
	<b>in %</b>	<b>-</b>	<b>-2.6%</b>	<b>-1.4%</b>		
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs DUC</b>			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      +1.2%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
<p>In the combined year 2020-2021, the AUC was lower than the planned DUC (by -1.4%, or -12.82DKK2017, or -1.72€2017). This results from the combination of higher than planned TSUs (+1.2%) and lower than planned en route costs in real terms (by -0.2%, or -2.6 MDKK2017, or -0.3 M€2017).</p> <p><b>En route service units</b></p> <p>The difference between actual and planned TSUs (+1.2%) falls within the ±2% dead band. Hence the resulting additional revenue is kept by the ANSPs (see items 10 to 14).</p> <p><b>En route costs by entity at charging zone level</b></p> <p>Actual real en route costs for 2020-2021 are -0.2% (-2.6 MDKK2017, or -0.3 M€2017) lower than planned. This result is driven by the MET service provider (-5.0%, or -0.5 M€2017) while the main ANSP, NAVIAIR costs are +0.1% (+0.1 M€2017) higher than planned.</p> <p><b>En route costs for the main ANSP (NAVIAIR) at charging zone level</b></p> <p>Slightly higher than planned en route costs in real terms for NAVIAIR in 2020-2021 (+0.1%, or +0.1 M€2017 higher) results from:</p> <ul style="list-style-type: none"> <li>- higher staff costs (+0.9%), "mainly driven by costs for extra shifts primarily COVID-related absence;"</li> <li>- lower other operating costs (-4.3%), "driven by low travel expenses, lower costs on administrative IT, and on fewer costs for training, e.g. COVID-related delays;"</li> <li>- slightly lower depreciation (-0.1%);</li> <li>- lower cost of capital (-4.9%), due to "fewer costs of debt related to lower renegotiated interest on subordinated loan;"</li> <li>- lower deduction as exceptional costs (-11.4%, as amounts are negative it reflects an increase of total costs), due to no deduction in 2021 actuals;</li> <li>- lower deduction for VFR exempted flights (-0.4%).</li> </ul>			<p><b>Costs by entity at ECZ level (M€2017):</b></p> <p>Main ANSP: 0.1%</p> <p>Other ANSP(s): -5.0%</p> <p>METSP(s): 0.0%</p> <p>NSA/EUROCONTROL: -0.2%</p> <p>Total CZ: 0.0%</p>			
			<p><b>Costs by nature for main ANSP (M€2017):</b></p> <p>Staff costs: 0.9%</p> <p>Other operating costs: -4.3%</p> <p>Depreciation: -0.1%</p> <p>Cost of capital: -4.9%</p> <p>Exceptional costs: -11.4%</p> <p>VFR exempted flights: -0.4%</p> <p>Total Main ANSP: 0.1%</p>			

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The Actual Unit Cost for Users (AUCU) reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	DKK/SU	EUR/SU
Initial DUC charged	475.09	63.83
DUC to be charged retroactively	475.03	63.81
<b>DUC</b>	<b>950.12</b>	<b>127.64</b>
Inflation adjustment	2.60	0.35
Cost exempt from cost-sharing	0.03	0.00
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	-1.75	-0.23
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	-13.50	-1.81
Application of lower unit rate	0.00	0.00
Total adjustments	-12.61	-1.69
<b>AUCU</b>	<b>937.51</b>	<b>125.95</b>
<b>AUCU vs. DUC</b>	<b>-1.3%</b>	<b>-1.3%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

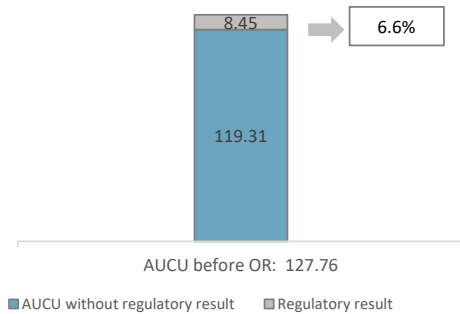
7. En route costs exempt from cost sharing

by item	DKK '000	EUR '000	DKK/SU	EUR/SU
New and existing investments	0	0	0.00	0.00
Competent authorities and qualified entities costs	3,614	486	2.41	0.32
Eurocontrol costs	-3,562	-479	-2.37	-0.32
Pension costs	0	0	0.00	0.00
Interest on loans	0	0	0.00	0.00
Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>	<b>52</b>	<b>7</b>	<b>0.03</b>	<b>0.00</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	DKK '000	EUR '000	DKK/SU	EUR/SU
NAVIAIR	90,906	12,213	60.53	8.13
METSP(s)	DKK '000	EUR '000	DKK/SU	EUR/SU
Denmark MET	3,551	478	2.36	0.32
<b>Total charging zone</b>	<b>94,456</b>	<b>12,690</b>	<b>62.90</b>	<b>8.45</b>
<b>Actual cost for users***</b>	<b>1,428,198</b>	<b>191,864</b>	<b>951.01</b>	<b>127.76</b>
<b>Regulatory result (% AUCU)</b>	<b>6.6%</b>	<b>6.6%</b>	<b>6.6%</b>	<b>6.6%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Denmark en route charging zone (937.51DKK or 125.95€) is -1.3% lower than the nominal DUC (950.12DKK or 127.64€) which includes DUC initially charged: 475.09DKK (or 63.83€); and to be charged: 475.03DKK (or 63.81€). The difference between these two figures (-12.61DKK/SU or -1.69€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+2.60DKK/SU or +0.35€/SU);
- the deduction of the traffic adjustment (-1.75DKK/SU or -0.23€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- the deduction of the other revenues (-13.50DKK/SU or -1.81€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU is 6.6%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

11. Net gain/loss for the main ANSP for the en route activity at charging zone level

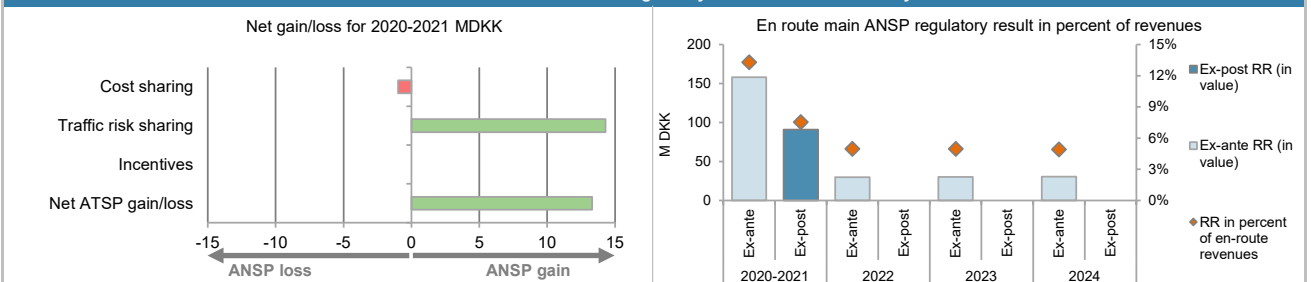
Cost sharing (DKK '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	-4,637			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	3,652			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	0			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>-985</b>			
Traffic risk sharing (DKK '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	1.2%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	1,191,512			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>14,301</b>			
Incentives (DKK '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (DKK '000)</b>	<b>13,316</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>1,791</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

NAVIAIR planned regulatory result (DKK '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	930,724	1,003,896	1,934,620	1,286,800	1,331,989	1,270,368
Proportion of financing through equity (in %), see note	95%	227%	164%	46%	46%	48%
RoE pre-tax rate (in %)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
RoE (in value)	44,276	113,907	158,183	29,783	30,397	30,587
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>44,276</b>	<b>113,907</b>	<b>158,183</b>	<b>29,783</b>	<b>30,397</b>	<b>30,587</b>
<b>Revenue for the en route charging zone</b>	<b>593,250</b>	<b>598,262</b>	<b>1,191,512</b>	<b>600,793</b>	<b>615,516</b>	<b>623,714</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>7.5%</b>	<b>19.0%</b>	<b>13.3%</b>	<b>5.0%</b>	<b>4.9%</b>	<b>4.9%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>
NAVIAIR actual regulatory result (DKK '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	930,724	1,003,896	1,934,620			
Proportion of financing through equity (in %)	95%	66%	80%			
RoE pre-tax rate (in %)	5.0%	5.0%	5.0%			
RoE (in value)	44,276	33,314	77,590			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	13,316	13,316			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>44,276</b>	<b>46,629</b>	<b>90,906</b>			
<b>Revenue for the en route charging zone</b>	<b>593,250</b>	<b>616,215</b>	<b>1,209,465</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>7.5%</b>	<b>7.6%</b>	<b>7.5%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>5.0%</b>	<b>7.0%</b>	<b>5.9%</b>			

**Note:** The components of the determined cost of capital should be corrected to reflect Naviair's determined proportion of financing through equity. This will require adjusting the RoE in order to keep the determined cost of capital as submitted in the performance plan.

13. Focus on the main ANSP regulatory result on en route activity



NAVIAIR net gain on en route activity in the Denmark charging zone in the combined year 2020-2021

NAVIAIR's net gain amounts to +1.8 M€, as a combination of a loss of -0.1 M€ arising from the cost sharing mechanism and a gain of +1.9 M€ arising from the traffic risk sharing mechanism.

NAVIAIR overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+1.8 M€) and the actual RoE (+10.4 M€) amounts to +12.2 M€ (7.5% of the en route revenues). The resulting ex-post rate of return on equity is 5.9%.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
Denmark MET planned regulatory result (DKK '000)	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	34,408	35,115	69,523	39,220	39,843	40,447
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Denmark MET actual regulatory result (DKK '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	3,551	3,551			
Revenue for the en route charging zone	34,408	35,372	69,780			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	10.0%	5.1%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for METSP in Denmark en route charging zone corresponds to 5.1% of the en route revenues.						
The ex-post RoE cannot be calculated as it reports no equity.						

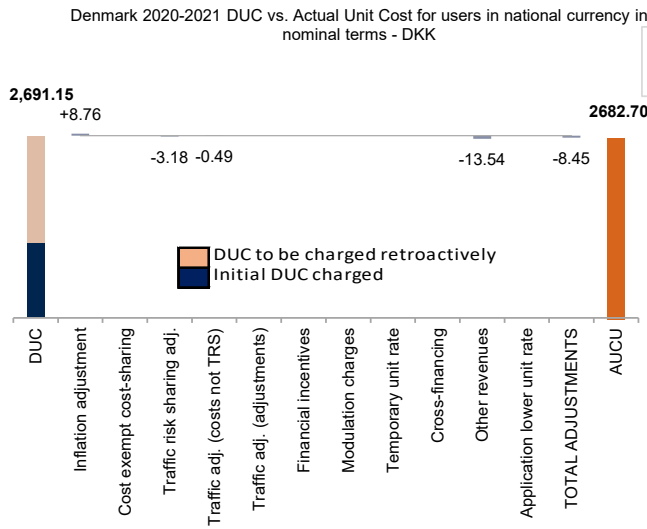
1. Contextual economic information: terminal air navigation services						
Denmark TCZ represents 2.0% of the SES terminal ANS actual costs in 2019						
Number of airports in charging zone in 2021: 1 of which: <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 0</li> <li>Airports with more than 80,000 IFR mvmts: 1</li> </ul>						
National currency: DKK Exchange rates (1 EUR=) 2017: 7.43692 DKK 2020: 7.45255 DKK 2021: 7.43514 DKK						
Performance Plan: See item 1 for the en route charging zone(s).						
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Denmark: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal DKK)	178,500,910	180,151,180	358,652,091	178,997,731	184,217,288	187,621,588
Inflation %	0.3%	1.1%		1.4%	1.5%	1.6%
Inflation index (100 in 2017)	101.7	102.8		104.2	105.7	107.4
Real terminal costs (DKK2017)	175,999,174	176,004,712	352,003,886	172,957,837	175,845,968	176,726,394
Total terminal service units	63,465	69,806	133,271	142,617	159,502	170,803
<b>Real terminal DUC per service unit (DKK2017)</b>	<b>2,773.16</b>	<b>2,521.34</b>	<b>2,641.26</b>	<b>1,212.74</b>	<b>1,102.47</b>	<b>1,034.68</b>
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>372.89</b>	<b>339.03</b>	<b>355.16</b>	<b>163.07</b>	<b>148.24</b>	<b>139.13</b>
Denmark: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal DKK)	178,500,910	180,475,630	358,976,540			
Inflation %	0.3%	1.9%				
Inflation index (100 in 2017)	101.7	103.6				
Real terminal costs (DKK2017)	175,999,174	175,112,794	351,111,968			
Total terminal service units	63,465	72,703	136,168			
<b>Real terminal AUC per service unit (DKK2017)</b>	<b>2,773.16</b>	<b>2,408.61</b>	<b>2,578.52</b>			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>372.89</b>	<b>323.87</b>	<b>346.72</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal DKK)	in value 0	324,450	324,450			
	in % -	+0.2%	+0.1%			
Inflation %	in p.p. 0.0 p.p.	0.8 p.p.				
Inflation index (100 in 2017)	in p.p. 0.0 p.p.	0.8 p.p.				
Real terminal costs (DKK2017)	in value 0	-891,918	-891,918			
	in % -	-0.5%	-0.3%			
Total terminal service units	in value 0	2,897	2,897			
	in % -0.00%	+4.2%	+2.2%			
<b>Real terminal unit cost per service unit (DKK2017)</b>	<b>in value 0.00</b>	<b>-112.74</b>	<b>-62.74</b>			
	<b>in % +0.00%</b>	<b>-4.5%</b>	<b>-2.4%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value 0.00</b>	<b>-15.16</b>	<b>-8.44</b>			
	<b>in % +0.00%</b>	<b>-4.5%</b>	<b>-2.4%</b>			
4. Focus on terminal DUC monitoring at charging zone level						
<b>AUC vs. DUC</b>			<p>2020-2021 actual vs. planned TNSUs</p> <p>Threshold -10%      +2.2%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
<p>In the combined year 2020-2021, the terminal AUC was -2.4% (or -62.74DKK2017, or -8.44€2017) lower than the planned DUC. This results from the combination of higher than planned TNSUs (+2.2%) and lower than planned terminal costs in real terms (-0.3%, or -0.9 MDKK2017, or -0.1 M€2017).</p>						
<b>Terminal service units</b>			<p>Costs by entity at TCZ level (M€2017):</p> <p>Main ANSP -0.2%</p> <p>Other ANSP(s) -4.6%</p> <p>NSA -0.3%</p> <p>Total CZ -0.3%</p>			
<p>The difference between actual and planned TNSUs (+2.2%) falls outside the ±2% dead band, but does not exceed the ±10% threshold foreseen in the traffic risk sharing mechanism. The resulting gain of additional terminal revenues is therefore shared between the ATSP and the airspace users, with the ATSP (NAVIAIR) retaining an amount of +7.0 MDKK2017 (see items 10 to 14 for details).</p>						
<b>Terminal costs by entity</b>			<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs 1.1%</p> <p>Other operating costs -4.0%</p> <p>Depreciation 0.2%</p> <p>Cost of capital -5.7%</p> <p>Exceptional costs -5.7%</p> <p>VFR exempted flights -0.2%</p> <p>Total Main ANSP -0.2%</p>			
<p>Actual real terminal costs are -0.3% (-0.9 MDKK2017, or -0.1 M€2017) lower than planned. This is driven by the main ANSP, NAVIAIR (-0.2%, or -0.1 M€2017) and the MET service provider (-4.6%, or -0.02 M€2017).</p>						
<b>Terminal costs for the main ANSP (NAVIAIR) at charging zone level</b>						
<p>The lower than planned terminal costs in real terms for NAVIAIR (-0.2%, or -0.1 M€2017) result from:</p> <ul style="list-style-type: none"> <li>- higher staff costs (+1.1%), "mainly driven by costs for extra shifts primarily driven by COVID-related absence;"</li> <li>- lower other operating costs (-4.0%), "driven by low travel expenses, lower costs on administrative IT, and on fewer costs for training, e.g. COVID-related delays;"</li> <li>- slightly higher depreciation (+0.2%);</li> <li>- lower cost of capital (-5.7%), due to "fewer costs of debt related to lower renegotiated interest on subordinated loan;"</li> <li>- lower deduction as exceptional costs (-5.7%, as amounts are negative it reflects an increase of total costs), due to no deduction in 2021 actuals.</li> </ul>						

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	DKK/SU	EUR/SU
Initial DUC charged	1,113.77	149.63
DUC to be charged retroactively	1,577.38	211.90
<b>DUC</b>	<b>2,691.15</b>	<b>361.53</b>
Inflation adjustment	8.76	1.18
Cost exempt from cost-sharing	0.00	0.00
Traffic risk sharing adjustment	-3.18	-0.43
Traffic adj. (costs not TRS)	-0.49	-0.07
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	-13.54	-1.82
Application of lower unit rate	0.00	0.00
Total adjustments	-8.45	-1.13
<b>AUCU</b>	<b>2,682.70</b>	<b>360.39</b>
<b>AUCU vs. DUC</b>	<b>-0.3%</b>	<b>-0.3%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

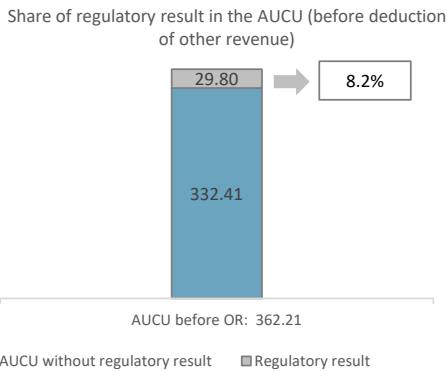
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	DKK '000	EUR '000	DKK/SU	EUR/SU
New and existing investments	0	0	0.00	0.00
Competent authorities and qualified entities costs	0	0	0.00	0.00
Eurocontrol costs	0	0	0.00	0.00
Pension costs	0	0	0.00	0.00
Interest on loans	0	0	0.00	0.00
Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	DKK '000	EUR '000	DKK/SU	EUR/SU
NAVIAIR	30,051	4,038	220.69	29.65
METSP(s)	DKK '000	EUR '000	DKK/SU	EUR/SU
Denmark-MET	144	19	1.06	0.14
<b>Total charging zone</b>	<b>30,194</b>	<b>4,057</b>	<b>221.74</b>	<b>29.80</b>
<b>Actual cost for users***</b>	<b>367,142</b>	<b>49,322</b>	<b>2,696.24</b>	<b>362.21</b>
<b>Regulatory result (% AUCU)</b>	<b>8.2%</b>	<b>8.2%</b>	<b>8.2%</b>	<b>8.2%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Denmark terminal charging zone (2,682.70DKK or 360.39€) is -0.3% lower than the nominal DUC (2,691.15DKK or 361.53€) which includes DUC initially charged: 1,113.77DKK (or 149.63€); and to be charged: 1,577.38DKK (or 211.90€). The difference between these two figures (-8.45DKK/SU or -1.13€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+8.76DKK/SU or +1.18€/SU);
- the deduction of the traffic risk sharing adjustments (-3.18DKK/SU or -0.43€/SU) and the traffic adjustment (-0.49DKK/SU or -0.07€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- the deduction of the other revenues (-13.54DKK/SU or -1.82€/SU).

The share of regulatory result (see items 10 to 14) in the terminal AUCU is 8.2%.

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

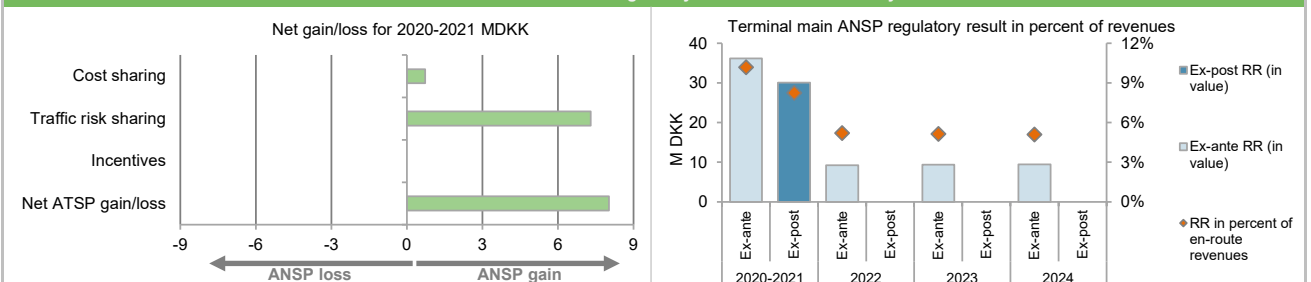
Cost sharing (DKK '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	-456			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	1,181			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	0			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>725</b>			
Traffic risk sharing (DKK '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	2.2%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	355,567			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>7,297</b>			
Incentives (DKK '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (DKK '000)</b>	<b>8,021</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>1,079</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

NAVIAIR planned regulatory result (DKK '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	265,921	286,827	552,748	367,657	380,568	362,962
Proportion of financing through equity (in %), see note	91%	168%	131%	50%	49%	52%
RoE pre-tax rate (in %)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
RoE (in value)	12,096	24,110	36,206	9,229	9,393	9,473
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>12,096</b>	<b>24,110</b>	<b>36,206</b>	<b>9,229</b>	<b>9,393</b>	<b>9,473</b>
<b>Revenue for the terminal charging zone</b>	<b>176,970</b>	<b>178,597</b>	<b>355,567</b>	<b>177,522</b>	<b>182,717</b>	<b>186,100</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>6.8%</b>	<b>13.5%</b>	<b>10.2%</b>	<b>5.2%</b>	<b>5.1%</b>	<b>5.1%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>
NAVIAIR actual regulatory result (DKK '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	265,921	286,827	552,748			
Proportion of financing through equity (in %)	91%	69%	80%			
RoE pre-tax rate (in %)	5.0%	5.0%	5.0%			
RoE (in value)	12,096	9,933	22,029			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	8,021	8,021			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>12,096</b>	<b>17,955</b>	<b>30,051</b>			
<b>Revenue for the terminal charging zone</b>	<b>176,970</b>	<b>187,075</b>	<b>364,045</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>6.8%</b>	<b>9.6%</b>	<b>8.3%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>5.0%</b>	<b>9.0%</b>	<b>6.8%</b>			

**Note:** The components of the determined cost of capital should be corrected to reflect Naviair's determined proportion of financing through equity. This will require adjusting the RoE in order to keep the determined cost of capital as submitted in the performance plan.

13. Focus on main ANSP regulatory result on terminal activity



NAVIAIR net gain on terminal activity in the Denmark charging zone in the combined year 2020-2021

NAVIAIR reported a net gain of +1.1 M€, as a combination of a gain of +0.1 M€ arising from the cost sharing mechanism and a loss of -1.0 M€ arising from the traffic risk sharing mechanism.

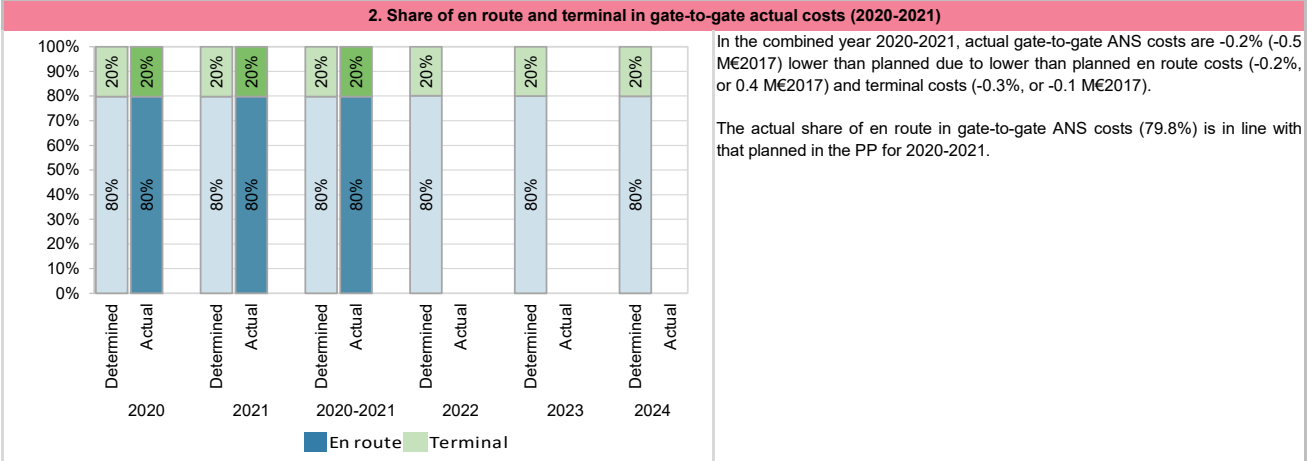
NAVIAIR overall regulatory results (RR) for the terminal activity

Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+1.1 M€) and the actual RoE (+3.0 M€) amounts to 4.0 M€ (8.3% of the terminal revenues). The resulting ex-post rate of return on equity is 6.8%.



14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Denmark-MET planned regulatory result (DKK '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	0	0	0	0	0	0
Revenue for the terminal charging zone	1,531	1,554	3,085	1,476	1,500	1,522
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Denmark-MET actual regulatory result (DKK '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	0	144	144			
Revenue for the terminal charging zone	1,531	1,566	3,097			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	9.2%	4.6%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity</b>						
Ex-post, the overall RR for METSP in Denmark terminal charging zone corresponds to 4.6% of the terminal revenues.						
The ex-post RoE cannot be calculated as it reports no equity.						

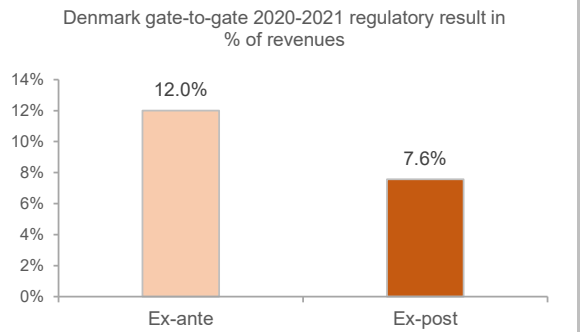
1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1: Denmark		En route charging zone 2:					
Terminal charging zone 1: Denmark		Terminal charging zone 2:					
Denmark: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		93,303,286	93,351,519	186,654,805	93,808,565	94,515,742	94,499,982
Real terminal costs (EUR2017)		23,665,600	23,666,345	47,331,945	23,256,649	23,644,999	23,763,385
Real gate-to-gate costs (EUR2017)		116,968,886	117,017,863	233,986,750	117,065,214	118,160,741	118,263,367
En route share (%)		79.8%	79.8%	79.8%	80.1%	80.0%	79.9%
Denmark: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		93,303,286	93,002,158	186,305,444			
Real terminal costs (EUR2017)		23,665,600	23,546,414	47,212,014			
Real gate-to-gate costs (EUR2017)		116,968,886	116,548,571	233,517,457			
En route share (%)		79.8%	79.8%	79.8%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017) in value		0	-469,292	-469,292			
in %		0.0%	-0.4%	-0.2%			
En route share in p.p.		0.0 p.p.	0.0 p.p.	0.0 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In DKK '000	ANSP(S)	Ex-ante			Ex-post		
		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	NAVAIR	194,390	1,547,079	12.6%	120,956	1,573,510	7.7%
	<b>METSP(s)</b>						
	Denmark MET	0	72,608	0.0%	3,695	72,877	5.1%
	<b>Total</b>	<b>194,390</b>	<b>1,619,687</b>	<b>12.0%</b>	<b>124,651</b>	<b>1,646,387</b>	<b>7.6%</b>

For the ANSPs providing services in the en route and terminal charging zones of Denmark covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +16.7 M€ (+12.7 M€ for en route and +4.1 M€ for terminal - see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 7.6% of gate-to-gate ANS revenues.

This is lower than the return planned for the year (12.0%).



# **Annual Monitoring Report 2021**

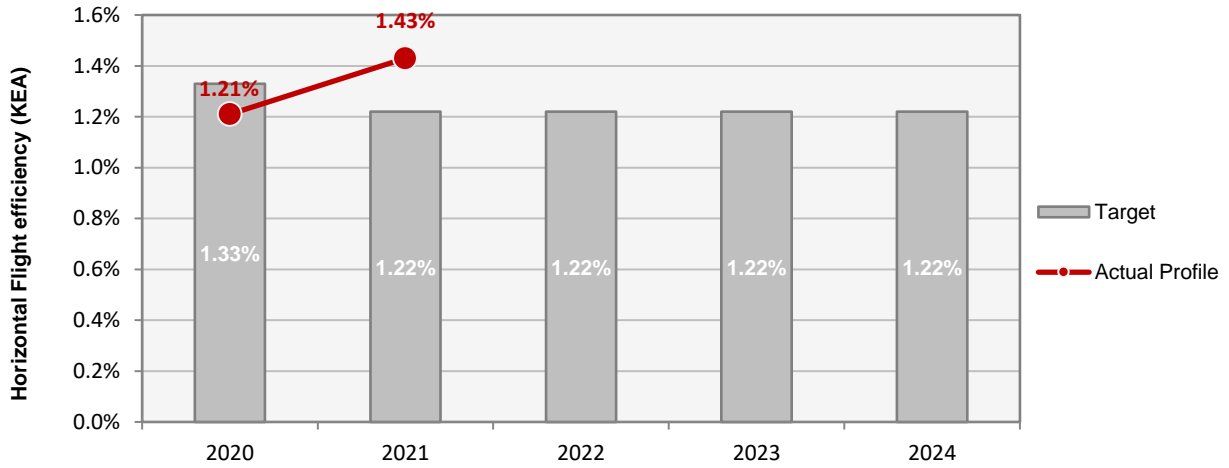
## Local level view

### Estonia

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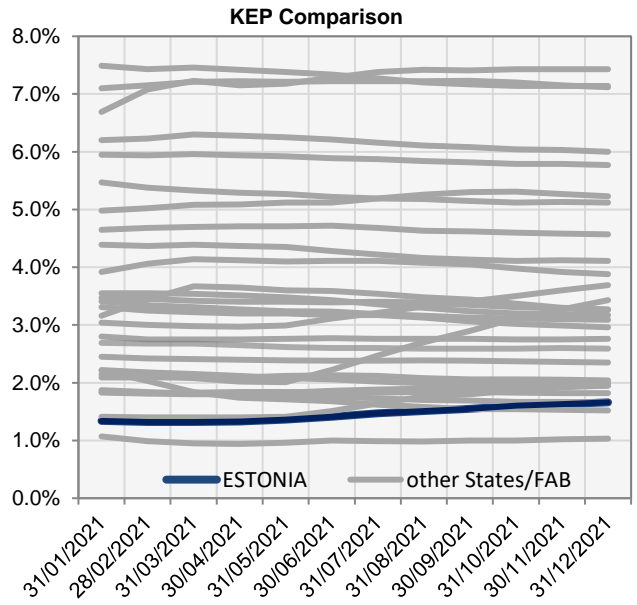
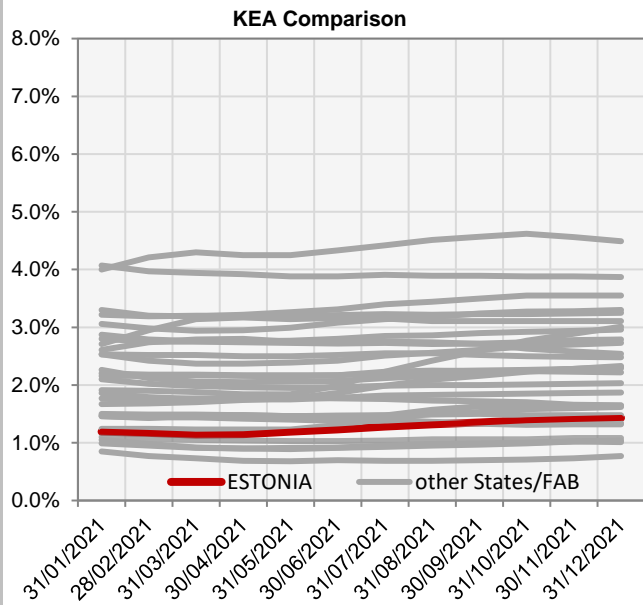
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>EANS</b>	98	D	C	D	D	C
Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.						
Observations						
All five EoSM components of the ANSP meet, or exceed, already the 2024 target level. Maturity has slightly improved with respect 2020.						

KEA					
	2020	2021	2022	2023	2024
Target	1.33%	1.22%	1.22%	1.22%	1.22%
Actual performance	1.21%	1.43%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	1.19%	1.17%	1.14%	1.15%	1.19%	1.23%	1.28%	1.32%	1.35%	1.39%	1.41%	1.43%
KEP	1.34%	1.32%	1.32%	1.33%	1.36%	1.41%	1.47%	1.51%	1.55%	1.60%	1.63%	1.66%
KES	1.24%	1.23%	1.24%	1.26%	1.30%	1.36%	1.42%	1.47%	1.51%	1.56%	1.59%	1.62%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**1. Overview**

Estonia identified two airports, Tallinn and Tartu, as subject to RP3 monitoring. In accordance with IR (EU) 2019/317 and the traffic figures at these 2 airports, additional taxi-out and ASMA times are not monitored and the environmental performance focuses only on the share of arrivals applying CDO.

Traffic at these Estonian airports in 2021 was 48% lower than in 2019.

The share of CDO flights has decreased significantly but is still in the higher range of all observed values in 2021.

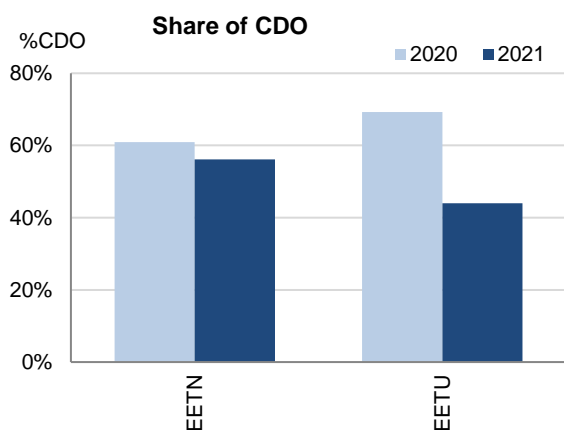
**2. Additional Taxi-Out Time**

This indicator is not monitored for airports below 80 000 IFR movements average during the 2016-2018 period, so it is not monitored for any airport in this state.

**3. Additional ASMA Time**

This indicator is not monitored for airports below 80 000 IFR movements average during the 2016-2018 period, so it is not monitored for any airport in this state.

**4. Share of arrivals applying CDO**



The shares of CDO flights have significantly decreased (EETN: -4.8 percentage points; EETU: -25.2 percentage points) but are still well above the overall RP3 value in 2021 (30.5%) and in the higher range of all observed values in 2021.

**5. Appendix**

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Tallin-EETN	-	-				-	-				61%	56%			
Tartu-EETU	-	-				-	-				69%	44%			

Update on Military dimension of the plan					
No update provided					
Military - related measures implemented or planned to improve capacity					
No impact of MIL dimension on the capacity KPA. The planning of airspace use at pre-tactical level is done via the civil/military joint unit Airspace Management Cell (AMC).					
PI#6 Effective use of reserved or segregated airspace - national level					
Ratio PI#6	2020	2021	2022	2023	2024
Estonia					
PI#6 Effective use of reserved or segregated airspace (per ACC)					
Ratio PI#6	2020	2021	2022	2023	2024
Talinn ACC					
Initiatives implemented or planned to improve PI#6					
No data available.					
PI#7 Rate of planning via available airspace structures - national level					
Ratio PI#7	2020	2021	2022	2023	2024
Estonia					
PI#7 Rate of planning via available airspace structures (per ACC)					
Ratio PI#7	2020	2021	2022	2023	2024
Talinn ACC					
Initiatives implemented or planned to improve PI#7					
No data available.					
PI#8 Rate of using available airspace structures - national level					
Ratio PI#8	2020	2021	2022	2023	2024
Estonia					
PI#8 Rate of using available airspace structures (per ACC)					
Ratio PI#8	2020	2021	2022	2023	2024
Talinn ACC					
Initiatives implemented or planned to improve PI#8					
No data available.					



Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.05	0.01	0.03	0.03	0.03		
<b>Actual performance</b>	0.00	0.00					
NSA's assessment of capacity performance							
En route capacity target set in the draft RP3 performance plan has been met for 2021.							
Monitoring process for capacity performance							
Review of the actual values from the NM dashboard.							
Capacity Planning							
No information provided.							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned (Perf Plan)</b>	-	-	25	27	27	27	
<b>Actual</b>	30	23	23				
Application of Corrective Measures for Capacity (if applicable)							
Not applicable.							
Summary of capacity performance							
Estonia experienced an increase in traffic from 96k flights in 2020 to 109k flights in 2021, with zero ATFM delay. However, traffic levels were still substantially below the 227k flights in 2019.							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.05	0.01	0.03	0.03	0.03		
<b>Deadband +/-</b>	-	-	[0-0.06]	[0-0.06]	[0-0.06]		
<b>Actual performance</b>	0.00	0.00					
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.							

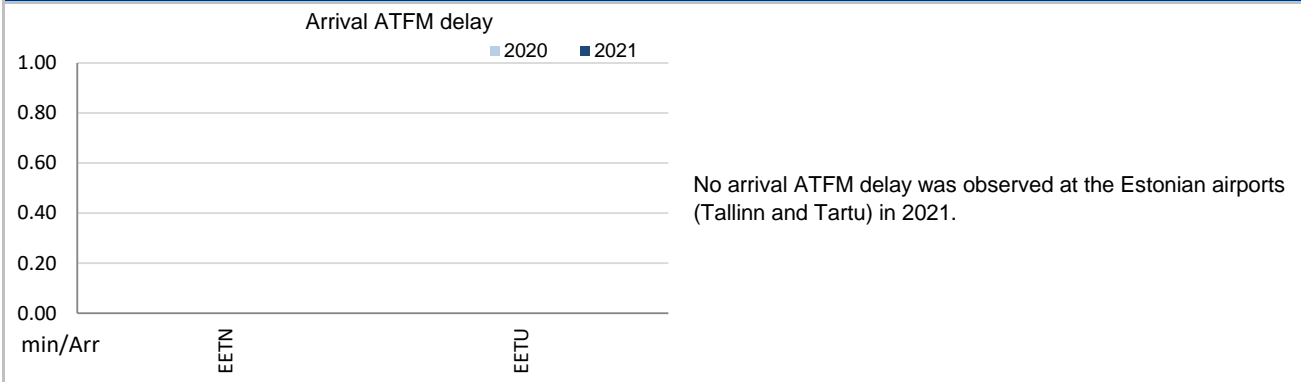
### 1. Overview

Estonia identified two airports, Tallinn and Tartu, as subject to RP3 monitoring. In accordance with IR (EU) 2019/317 and the traffic figures at these 2 airports, pre-departure delays are not monitored and the capacity performance focuses on arrival ATFM delays and slot adherence.

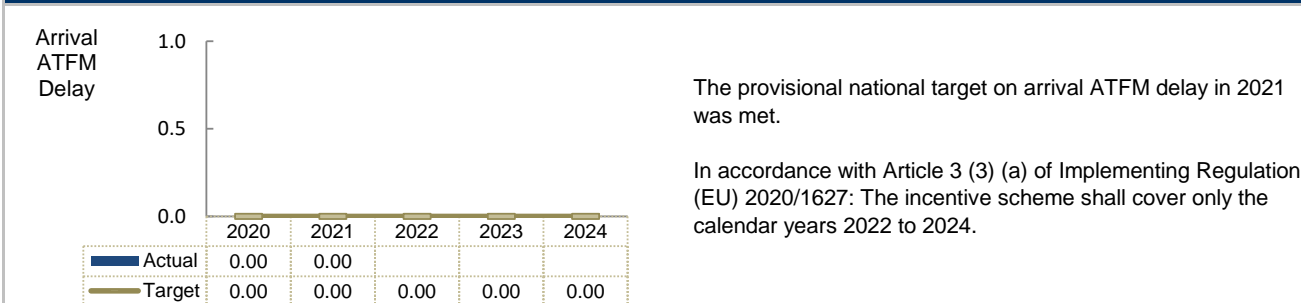
Traffic at these Estonian airports in 2021 was 48% lower than in 2019.

Like in 2020, no arrival ATFM delays were observed in the entire 2021 at these two airports and there were only a few regulated departures with a slot adherence of 98.2%.

### 2. Arrival ATFM Delay



### 3. Arrival ATFM Delay – National Target and Incentive Scheme



### 4. ATFM Slot Adherence



### 5. ATC Pre-departure Delay

This indicator is not monitored for airports below 80 000 IFR movements annual average during the 2016-2018 period, so it is not monitored for any airport in Estonia.

### 6. All Causes Pre-departure Delay

This indicator is not monitored for airports below 80 000 IFR movements annual average during the 2016-2018 period, so it is not monitored for any airport in Estonia.

### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Tallin-EETN	0	0				98.5%	98.2%				-	-				-	-			
Tartu-EETU	0	0				n/a	n/a				-	-				-	-			

1. Contextual economic information: en route air navigation services							
· Estonia ECZ represents 0.5% of the SES en route ANS actual costs in 2019			· FAB: NEFAB				
· National currency: EUR							
· Performance Plan: RP3 draft performance plan dated 10 February 2022 and found consistent as per Commission Decision (EU) 2022/771 of 13 April 2022							
The final version of the plan was adopted and published on 5 May 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317.							
2. Monitoring of the en route determined unit cost (DUC) at charging zone level							
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.							
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.							
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)							
Estonia: Data from RP3 Performance Plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)		26,963,328	26,899,545	53,862,873	26,786,115	28,336,431	29,613,617
Inflation %		0.0%	1.8%		2.5%	2.1%	1.9%
Inflation index (100 in 2017)		105.8	107.7		110.4	112.7	114.8
Real en route costs (EUR2017)		26,132,098	25,829,816	51,961,914	25,297,780	26,447,397	27,337,166
Total en route service units		418,749	444,561	863,310	726,854	865,151	912,301
<b>Real en route DUC per service unit (EUR2017)</b>		<b>62.41</b>	<b>58.10</b>	<b>60.19</b>	<b>34.80</b>	<b>30.57</b>	<b>29.97</b>
Estonia: Actual data from Reporting Tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)		26,963,329	26,509,273	53,472,602			
Inflation %		0.0%	4.5%				
Inflation index (100 in 2017)		105.8	110.5				
Real en route costs (EUR2017)		26,132,099	25,148,805	51,280,904			
Total en route service units		418,749	466,942	885,691			
<b>Real en route AUC per service unit (EUR2017)</b>		<b>62.41</b>	<b>53.86</b>	<b>57.90</b>			
Difference between Actuals and Planned		2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)		in value	1	-390,272	-390,271		
		in %	+0.00%	-1.5%	-0.7%		
Inflation %		in p.p.	0.0 p.p.	2.7 p.p.			
Inflation index (100 in 2017)		in p.p.	0.0 p.p.	2.9 p.p.			
Real en route costs (EUR2017)		in value	1	-681,011	-681,010		
		in %	+0.00%	-2.6%	-1.3%		
Total en route service units		in value	0	22,381	22,381		
		in %	-	+5.0%	+2.6%		
<b>Real en route unit cost per service unit (EUR2017)</b>		<b>in value</b>	<b>0.00</b>	<b>-4.24</b>	<b>-2.29</b>		
		<b>in %</b>	<b>+0.00%</b>	<b>-7.3%</b>	<b>-3.8%</b>		
4. Focus on en route DUC monitoring at charging zone level							
<p><b>AUC vs DUC</b> In the combined year 2020-2021, the AUC was lower than the planned DUC (by -3.8%, or -2.29€2017). This results from the combination of higher than planned TSUs (+2.6%) and lower than planned en route costs in real terms (by -1.3%, or -0.7 M€2017).</p> <p><b>En route service units</b> The difference between actual and planned TSUs (+2.6%) falls outside the ±2% dead band, but does not exceed the ±10% threshold foreseen in the traffic risk sharing mechanism. The resulting gain of additional en route revenues is therefore shared between the ATSP and the airspace users, with the ATSP (EANS) retaining an amount of +0.9 M€2017.</p> <p><b>En route costs by entity at charging zone level</b> Actual real en route costs for 2020-2021 are -1.3% (-0.7 M€2017) lower than planned. This result is driven by the main ANSP, EANS (-0.7%, or -0.3 M€2017) and the NSA/EUROCONTROL costs (-3.5%, or -0.4 M€2017).</p> <p><b>En route costs for the main ANSP (EANS) at charging zone level</b> Lower than planned en route costs in real terms for EANS in 2020-2021 (-0.7%, or -0.3 M€2017) results from: - lower staff costs (-2.0%); - lower other operating costs (-9.0%), due to implementation extensive cost-cutting measures to reduce losses. Travelling expenses, rental expenses (especially communication service rental costs) and training expenses were lower than planned and other cost items were cut where possible; - higher depreciation (+2.4%), due to taking some fixed assets into operation earlier than planned; - higher cost of capital (+24.0%), resulting from the approval of an additional shareholder investment in equity, leading to higher cost of capital, although the rate of return on equity remained unchanged.</p>				<p>2020-2021 actual vs. planned TSUs</p>			
<p><b>Costs by nature for main ANSP (M€2017):</b></p>				<p><b>Costs by entity at ECZ level (M€2017):</b></p>			

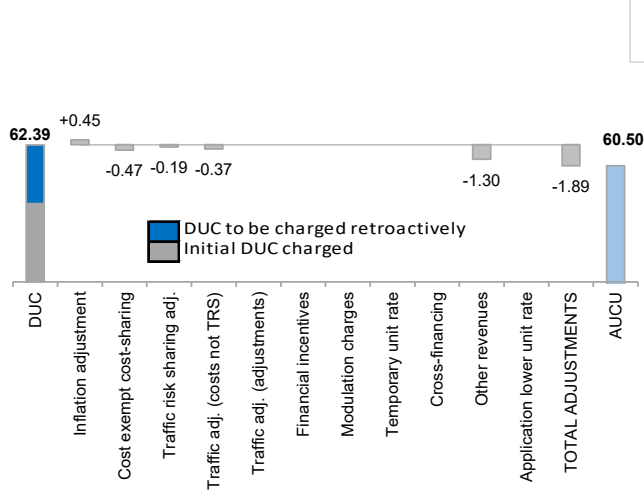
5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level

Estonia 2020-2021 DUC vs. Actual Unit Cost for users in national currency in nominal terms - EUR



Components of the AUCU	EUR/SU
Initial DUC charged	35.61
DUC to be charged retroactively	26.78
<b>DUC</b>	<b>62.39</b>
Inflation adjustment	0.45
Cost exempt from cost-sharing	-0.47
Traffic risk sharing adjustment	-0.19
Traffic adj. (costs not TRS)	-0.37
Traffic adj. (adjustments)*	-0.37
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	0.00
Cross-financing	0.00
Other revenues	-1.30
Application of lower unit rate	0.00
Total adjustments	-1.89
<b>AUCU</b>	<b>60.50</b>
<b>AUCU vs. DUC</b>	<b>-3.0%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

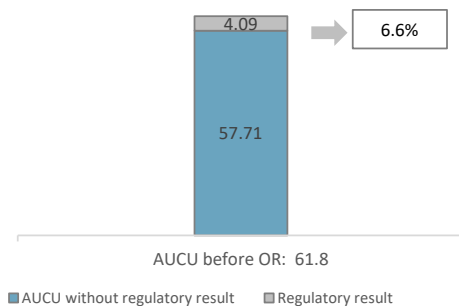
7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	0	0.00
Competent authorities and qualified entities costs	-312	-0.35
Eurocontrol costs	-108	-0.12
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-420</b>	<b>-0.47</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	EUR '000	EUR/SU
EANS	3,620	4.09
METSP(s)	EUR '000	EUR/SU
<b>Total charging zone</b>	<b>3,620</b>	<b>4.09</b>
<b>Actual cost for users***</b>	<b>54,740</b>	<b>61.80</b>
<b>Regulatory result (% AUCU)</b>	<b>6.6%</b>	<b>6.6%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 for Estonia en route charging zone (60.50€) is 3.0% lower than the nominal DUC (62.39€) which includes DUC initially charged: 35.61€; and to be charged: 26.78€. The difference between these two figures (-1.89€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.45€/SU);
- the deduction of the traffic risk sharing adjustments (-0.19€/SU) and the traffic adjustment (-0.37€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- the deduction of the other revenues (-1.30€/SU);
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.47€/SU).

The share of regulatory result (see items 10 to 13) in the AUCU is 6.6%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

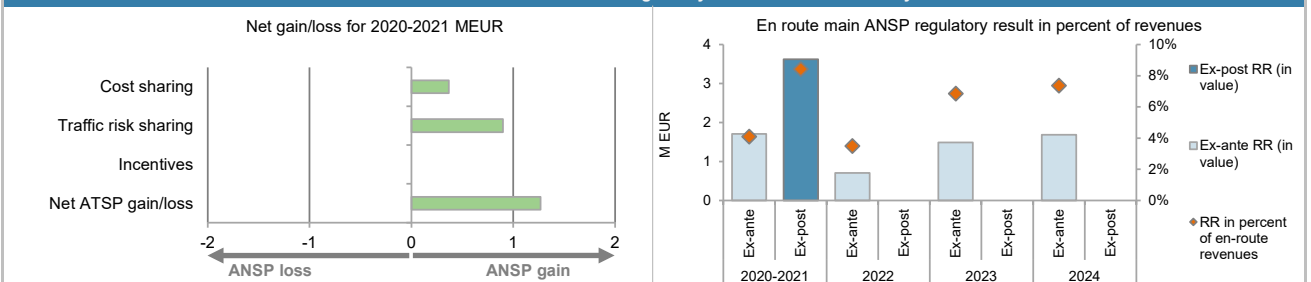
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	-29			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	398			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	0			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>368</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	2.6%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	41,272			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>899</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>1,267</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

EANS planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	28,085	27,018	55,103	26,775	28,649	30,168
Proportion of financing through equity (in %)	61%	23%	42%	36%	71%	77%
RoE pre-tax rate (in %)	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%
RoE (in value)	1,257	452	1,708	708	1,491	1,687
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>1,257</b>	<b>452</b>	<b>1,708</b>	<b>708</b>	<b>1,491</b>	<b>1,687</b>
<b>Revenue for the en route charging zone</b>	<b>21,284</b>	<b>20,433</b>	<b>41,716</b>	<b>20,360</b>	<b>21,792</b>	<b>22,944</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>5.9%</b>	<b>2.2%</b>	<b>4.1%</b>	<b>3.5%</b>	<b>6.8%</b>	<b>7.4%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>
EANS actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	28,085	28,876	56,961			
Proportion of financing through equity (in %)	61%	52%	57%			
RoE pre-tax rate (in %)	7.3%	7.3%	7.3%			
RoE (in value)	1,257	1,096	2,353			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	1,267	1,267			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>1,257</b>	<b>2,363</b>	<b>3,620</b>			
<b>Revenue for the en route charging zone</b>	<b>21,284</b>	<b>21,729</b>	<b>43,013</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>5.9%</b>	<b>10.9%</b>	<b>8.4%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>7.3%</b>	<b>15.7%</b>	<b>11.2%</b>			

13. Focus on the main ANSP regulatory result on en route activity



EANS net gain on en route activity in the Estonia charging zone in the combined year 2020-2021

EANS's net gain amounts to +1.3 M€, as a combination of a gain of +0.4 M€ arising from the cost sharing mechanism and a gain of +0.9 M€ arising from the traffic risk sharing mechanism.

EANS overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+1.3 M€) and the actual RoE (+2.4 M€) amounts to +3.6 M€ (8.4% of the en route revenues). The resulting ex-post rate of return on equity is 11.2%, which is higher than the 7.3% planned in the PP.

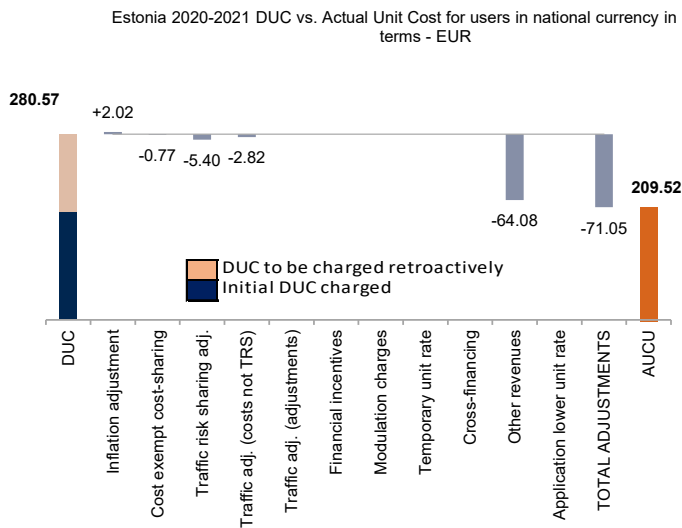
1. Contextual economic information: terminal air navigation services							
· Estonia TCZ represents 0.2% of the SES terminal ANS actual costs in 2019				· Airports with fewer than 80,000 IFR mvmts:		2	
· Number of airports in charging zone in 2021: 2		of which:		· Airports with more than 80,000 IFR mvmts:		0	
· National currency: EUR							
· Performance Plan: See item 1 for the en route charging zone(s).							
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level							
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.							
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.							
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)							
Estonia: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D	
Terminal costs (nominal EUR)	2,572,617	2,526,192	5,098,809	2,393,127	2,528,987	2,646,202	
Inflation %	0.0%	1.8%		2.5%	2.1%	1.9%	
Inflation index (100 in 2017)	105.8	107.7		110.4	112.7	114.8	
Real terminal costs (EUR2017)	2,496,661	2,422,118	4,918,779	2,254,405	2,355,293	2,438,319	
Total terminal service units	8,201	9,972	18,173	17,372	18,786	19,870	
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>304.43</b>	<b>242.90</b>	<b>270.66</b>	<b>129.77</b>	<b>125.37</b>	<b>122.71</b>	
Estonia: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A	
Terminal costs (nominal EUR)	2,572,617	2,446,840	5,019,457				
Inflation %	0.0%	4.5%					
Inflation index (100 in 2017)	105.8	110.5					
Real terminal costs (EUR2017)	2,496,661	2,323,789	4,820,450				
Total terminal service units	8,201	10,986	19,188				
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>304.43</b>	<b>211.52</b>	<b>251.23</b>				
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024	
Terminal costs (nominal EUR)	in value	0	-79,352	-79,352			
	in %	-	-3.1%	-1.6%			
Inflation %	in p.p.	0.0 p.p.	2.7 p.p.				
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	2.9 p.p.				
Real terminal costs (EUR2017)	in value	0	-98,329	-98,329			
	in %	-	-4.1%	-2.0%			
Total terminal service units	in value	0	1,015	1,015			
	in %	-	+10.2%	+5.6%			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-31.38</b>	<b>-19.44</b>			
	<b>in %</b>	<b>-</b>	<b>-12.9%</b>	<b>-7.2%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>						
	<b>in %</b>						
4. Focus on terminal DUC monitoring at charging zone level							
<b>AUC vs. DUC</b> In the combined year 2020-2021, the terminal AUC was -7.2% (or -19.44€2017) lower than the planned DUC. This results from the combination of higher than planned TNSUs (+5.6%) and lower than planned terminal costs in real terms (-2.0%, or -0.1 M€2017).				<p>2020-2021 actual vs. planned TNSUs</p> <p>Threshold -10%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p> <p>+5.6%</p>			
<b>Terminal service units</b> The difference between actual and planned TNSUs (+5.6%) falls outside the ±2% dead band, but does not exceed the ±10% threshold foreseen in the traffic risk sharing mechanism. The resulting gain of additional terminal revenues is therefore shared between the ATSP and the airspace users, with the ATSP (EANS) retaining an amount of +0.1 M€2017.							
<b>Terminal costs by entity</b> Actual real terminal costs are -2.0% (-0.1 M€2017) lower than planned. This is driven by the main ANSP, EANS (-2.0%, or -0.1 M€2017) and NSA (-2.3%, or -0.01 M€2017).				<p>Costs by entity at TCZ level (M€2017):</p> <p>Main ANSP -2.0%</p> <p>Other ANSP(s) -0.1%</p> <p>METSP(s) -0.1%</p> <p>NSA -2.3%</p> <p>Total CZ -2.0%</p>			
<b>Terminal costs for the main ANSP (EANS) at charging zone level</b> The lower than planned terminal costs in real terms for EANS (-2.0%, or -0.1 M€2017) result from:							
<ul style="list-style-type: none"> <li>- lower staff costs (-5.7%);</li> <li>- lower other operating costs (-8.3%), due to implementation extensive cost-cutting measures to reduce losses. Travelling expenses, rental expenses (especially communication service rental costs) and training expenses were lower than planned and other cost items were cut where possible;</li> <li>- lower depreciation (-5.5%), due to the postponement of some investments to 2022 and further;</li> <li>- higher cost of capital (+41.9%), resulting from the approval of an additional shareholder investment in equity, leading to higher cost of capital, although the rate of return on equity remained unchanged.</li> </ul>				<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs -5.7%</p> <p>Other operating costs -8.3%</p> <p>Depreciation -5.5%</p> <p>Cost of capital +41.9%</p> <p>Exceptional costs 0%</p> <p>VFR exempted flights 0%</p> <p>Total Main ANSP -2.0%</p>			

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	163.51
DUC to be charged retroactively	117.07
<b>DUC</b>	<b>280.57</b>
Inflation adjustment	2.02
Cost exempt from cost-sharing	-0.77
Traffic risk sharing adjustment	-5.40
Traffic adj. (costs not TRS)	-2.82
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	-64.08
Application of lower unit rate	0.00
Total adjustments	-71.05
<b>AUCU</b>	<b>209.52</b>
<b>AUCU vs. DUC</b>	<b>-25.3%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

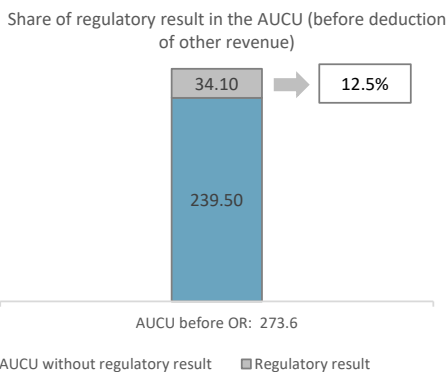
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	0	0.00
Competent authorities and qualified entities costs	-15	-0.77
Eurocontrol costs	0	0.00
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-15</b>	<b>-0.77</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	EUR '000	EUR/SU
EANS	654	34.10
METSP(s)	EUR '000	EUR/SU
<b>Total charging zone</b>	<b>654</b>	<b>34.10</b>
<b>Actual cost for users***</b>	<b>5,250</b>	<b>273.60</b>
<b>Regulatory result (% AUCU)</b>	<b>12.5%</b>	<b>12.5%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Estonia terminal charging zone (209.52€) is -25.3% lower than the nominal DUC (280.57€) which includes DUC initially charged: 163.51€, and to be charged: 117.07€. The difference between these two figures (-71.05€/SU) is due to:

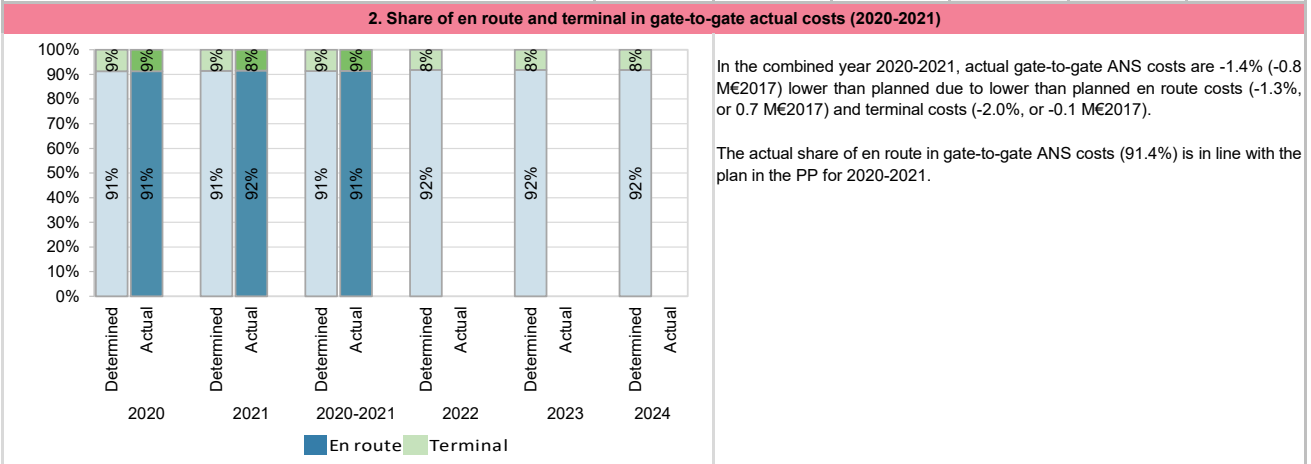
- the positive inflation adjustment resulting from higher than planned inflation (+2.02€/SU);
- the deduction of the traffic risk sharing adjustments (-5.40€/SU) and the traffic adjustment (-2.82€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- the deduction of the other revenues (-64.08€/SU);
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.77€/SU).

The share of regulatory result (see items 10 to 13) in the terminal AUCU is 12.5%.

10. Monitoring of the terminal ANSPs regulatory results (RR)						
<p>The <b>Regulatory Result (RR)</b> corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.</p> <p>The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.</p> <p>- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.</p> <p>- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.</p> <p>The <b>net gain/loss</b> calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).</p> <p>The monitoring of the RR is carried out in national currency in nominal terms.</p>						
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level						
Cost sharing (EUR '000)	2020-2021	2022	2023	2024		
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	65					
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	39					
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	0					
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>103</b>					
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024		
Difference in total service units (actual vs PP) %	5.6%					
Determined costs subject to traffic risk sharing for the ANSP (PP)	4,128					
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>127</b>					
Incentives (EUR '000)	2020-2021	2022	2023	2024		
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>					
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>230</b>					
12. Regulatory result (RR) for the main ANSP at charging zone level						
EANS planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	7,835	7,538	15,373	6,499	7,992	8,416
Proportion of financing through equity (in %)	35%	2%	19%	3%	16%	19%
RoE pre-tax rate (in %)	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%
RoE (in value)	202	13	215	13	94	117
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>202</b>	<b>13</b>	<b>215</b>	<b>13</b>	<b>94</b>	<b>117</b>
<b>Revenue for the terminal charging zone</b>	<b>2,263</b>	<b>2,200</b>	<b>4,463</b>	<b>2,061</b>	<b>2,188</b>	<b>2,297</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>8.9%</b>	<b>0.6%</b>	<b>4.8%</b>	<b>0.6%</b>	<b>4.3%</b>	<b>5.1%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>
EANS actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	7,835	8,055	15,890			
Proportion of financing through equity (in %)	35%	38%	37%			
RoE pre-tax rate (in %)	7.3%	7.3%	7.3%			
RoE (in value)	202	222	424			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	230	230			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>202</b>	<b>452</b>	<b>654</b>			
<b>Revenue for the terminal charging zone</b>	<b>2,263</b>	<b>2,366</b>	<b>4,629</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>8.9%</b>	<b>19.1%</b>	<b>14.1%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>7.3%</b>	<b>14.9%</b>	<b>11.3%</b>			
13. Focus on main ANSP regulatory result on terminal activity						
<p><b>EANS net gain on activity in the Estonia terminal charging zone in the combined year 2020-2021</b></p> <p>EANS's net gain amounts to +0.2 M€ due to gains of +0.1 M€ from the cost sharing mechanism and of +0.1 M€ from the traffic risk sharing mechanism.</p> <p><b>EANS overall regulatory results (RR) for the terminal charging zone activity</b></p> <p>Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+0.2 M€) and the actual RoE (+0.4 M€) amounts to +0.7 M€ (14.1% of the terminal revenues). The resulting ex-post rate of return on equity is 11.3%, which is higher than the 7.3% planned in the PP.</p>						



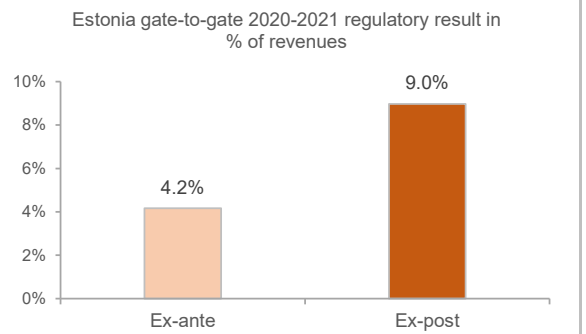
1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1: Estonia		En route charging zone 2:					
Terminal charging zone 1: Estonia		Terminal charging zone 2:					
Estonia: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		26,132,098	25,829,816	51,961,914	25,297,780	26,447,397	27,337,166
Real terminal costs (EUR2017)		2,496,661	2,422,118	4,918,779	2,254,405	2,355,293	2,438,319
Real gate-to-gate costs (EUR2017)		28,628,758	28,251,934	56,880,693	27,552,184	28,802,690	29,775,486
En route share (%)		91.3%	91.4%	91.4%	91.8%	91.8%	91.8%
Estonia: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		26,132,099	25,148,805	51,280,904			
Real terminal costs (EUR2017)		2,496,661	2,323,789	4,820,450			
Real gate-to-gate costs (EUR2017)		28,628,760	27,472,594	56,101,354			
En route share (%)		91.3%	91.5%	91.4%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017) in value		1	-779,340	-779,339			
in %		0.0%	-2.8%	-1.4%			
En route share in p.p.		0.0 p.p.	0.1 p.p.	0.1 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In EUR '000							
ANSP(S)	RR	Ex-ante			RR	Ex-post	
		Revenues	RR % revenues	Revenues		RR % revenues	
EANS	1,924	46,180	4.2%	4,274	47,642	9.0%	
METSP(s)							
RR	Revenues	RR % revenues	RR	Revenues	RR % revenues		
<b>Total</b>	<b>1,924</b>	<b>46,180</b>	<b>4.2%</b>	<b>4,274</b>	<b>47,642</b>	<b>9.0%</b>	

For the ANSPs providing services in the en route and terminal charging zones of Estonia covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +4.3 M€ (+3.6 M€ for en route and +0.7 M€ for terminal - see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 9.0% of gate-to-gate ANS revenues.

This is higher than the return planned for the year (4.2%).



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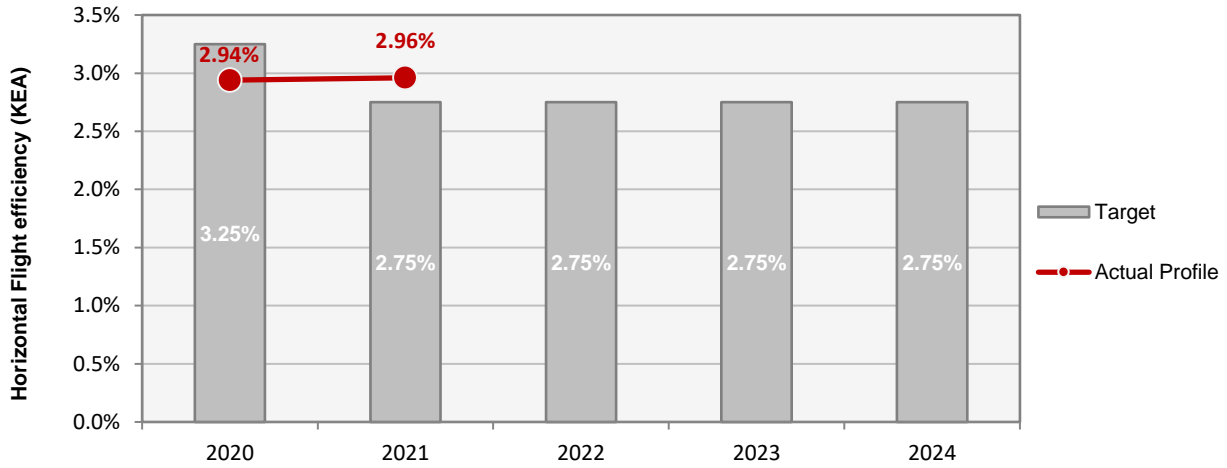
# **Annual Monitoring Report 2021**

## Local level view

### FABEC

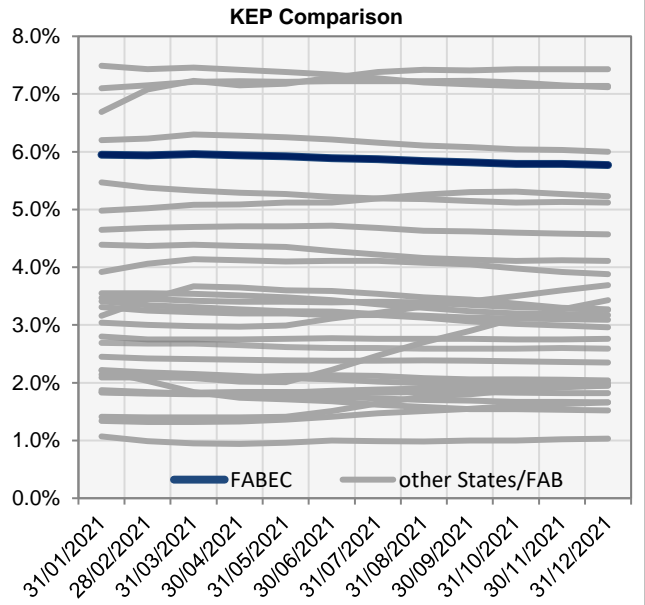
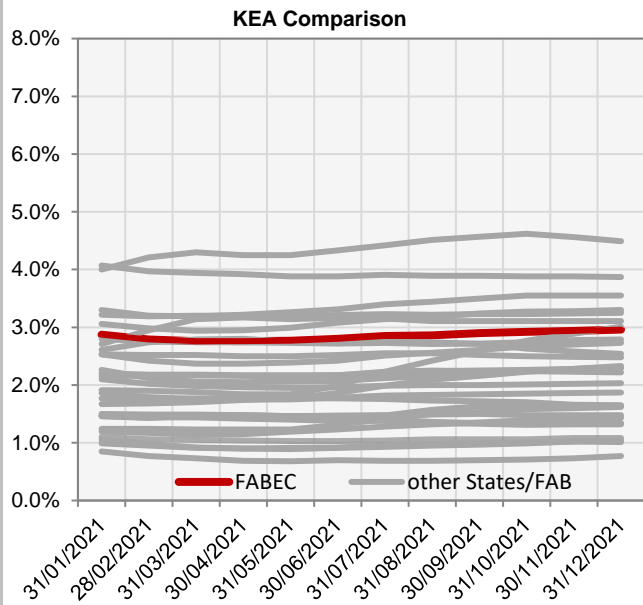
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KEA					
	2020	2021	2022	2023	2024
Target	3.25%	2.75%	2.75%	2.75%	2.75%
Actual performance	2.94%	2.96%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	2.87%	2.79%	2.76%	2.76%	2.77%	2.80%	2.85%	2.86%	2.90%	2.92%	2.94%	2.96%
KEP	5.95%	5.94%	5.96%	5.94%	5.92%	5.89%	5.87%	5.84%	5.82%	5.79%	5.79%	5.77%
KES	5.58%	5.56%	5.58%	5.58%	5.58%	5.56%	5.56%	5.55%	5.55%	5.53%	5.53%	5.53%

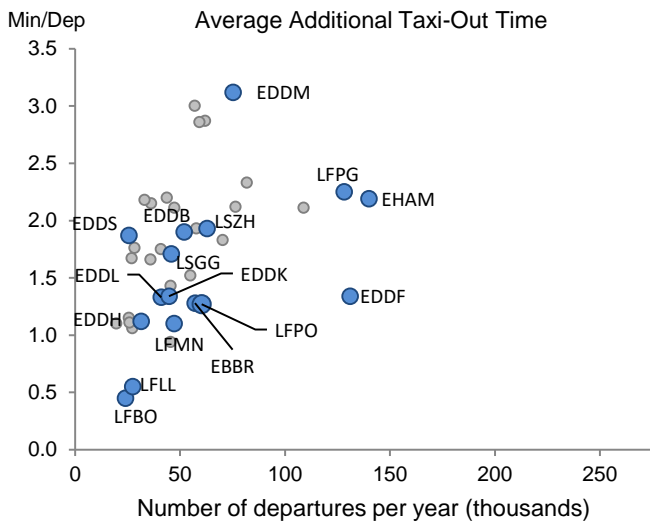


The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

1. Overview

With the closure of Tegel, FABEC states identify a total of 81 airports as subject to RP3 monitoring. The regulation IR (EU) 2019/317 establishes that additional taxi-out and ASMA times must be monitored only for airports with an average annual IFR traffic of at least 80 000 movements in the 2016-2018 period. In FABEC, 18 airports meet this criteria and are therefore monitored for these indicators. All these 18 airports provide the data required for the monitoring through the Airport Operator Data Flow, except for Marseille (LFML) where the data quality for the collected off-block times does not allow for the calculation of the taxi-out times. After an important improvement in 2020, the evolution of the additional times at these 18 airports in 2021 differs from one airport to another. The share of CDO flights stayed rather low in 2021 and was for most airports lower than in 2020. Overall, 17.3% of the arrivals at FABEC airports performed a CDO.

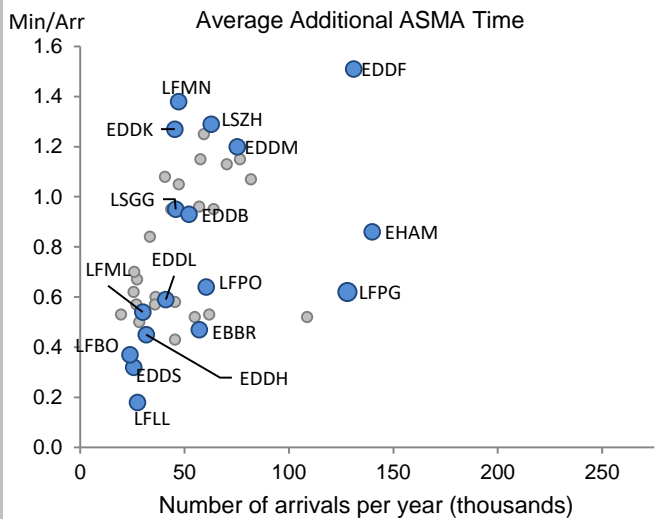
2. Additional Taxi-Out Time



Some of the FABEC airports observed a significant increase of the additional taxi-out times with respect to the previous year (biggest increase observed at Munich, Amsterdam and Berlin). Additional times at Munich are the highest in the SES monitored reports (3.12 min/dep).

According to FABEC monitoring report: *The additional taxi-out time is computed by EUROCONTROL/PRU and can be retrieved on the SES e-dashboard (<https://www.eurocontrol.int/prudata/dashboard/data/>) but the indicator is not available for all airports. However, the methodology defined by PRU is still under discussion because it remains unclear what the time difference from year to year indicates, or the meaningfulness of an airport A versus airport B comparison, in particular when focussing on the ANSP influence on the performance.*

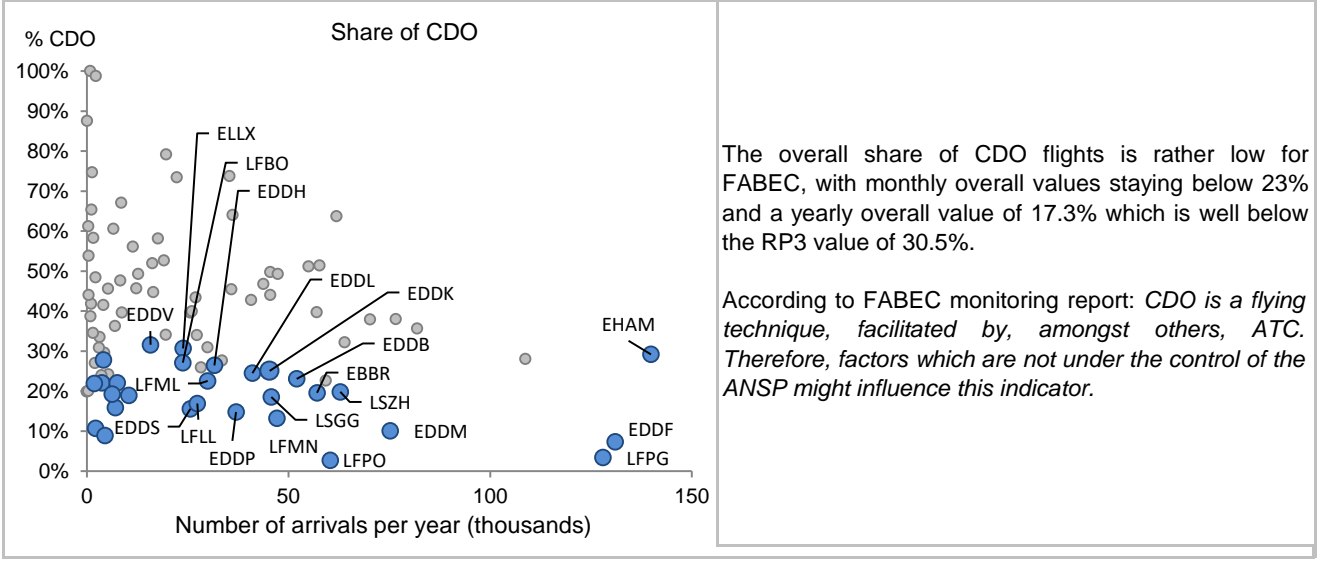
3. Additional ASMA Time



Only three FABEC airports observed a significant increase of their additional ASMA times in 2021 with respect to the previous year: Berlin, Nice and Cologne. Frankfurt, despite a further decrease of its additional ASMA times in 2021 (it already decreased significantly in 2020), remains the airport with the highest additional ASMA times in the SES area.

According to FABEC monitoring report: *The additional time in terminal airspace (ASMA) is computed by EUROCONTROL/PRU and can be retrieved on the SES e-dashboard (<https://www.eurocontrol.int/prudata/dashboard/data/>). However, the methodology defined by PRU is still under discussion. FABEC trials showed that changes of the ambient air temperature alone can significantly influence the measured performance.*

#### 4. Share of arrivals applying CDO



The overall share of CDO flights is rather low for FABEC, with monthly overall values staying below 23% and a yearly overall value of 17.3% which is well below the RP3 value of 30.5%.

According to FABEC monitoring report: *CDO is a flying technique, facilitated by, amongst others, ATC. Therefore, factors which are not under the control of the ANSP might influence this indicator.*

**Update on Military dimension of the plan**

For obvious flight safety reasons, military activities must be segregated from civil flows and thereby induce for civil flights deviations of trajectories, which can have an impact on both horizontal (HFE) and vertical flight efficiency (VFE).

This normal way of working, related to safety reasons, shall be considered as part of the performance baseline rather than a key factor degrading environmental KPIs.

To tackle these issues, FUA concept has been implemented for years and the impact of military activities using Restricted Airspace-RSA on civil performance is significantly reduced when associated with an efficient ASM process:

At strategic level (HLAPB) by designing areas in accordance with A-FUA concept (MVPA/VGA structures), especially for congested airspaces.

At pre-tactical (AMC), by managing these areas in a dynamic way, with an associated level 2 CDM process, validated by HLAPB.

At tactical level (ACC/CRC) by activating/deactivating areas as close as possible to actual use and allowing crossing or direct routes when possible (in accordance with TRA status), with an associated level 3 CDM process validated by HLAPB.

At each level, HLAPB, AMC or ACC/CRC, a key factor of efficiency is a trust-driven civil-military cooperation. As a counterpart, AOs and CFSPs should be more reactive and take efficiently into account available or released airspaces. At last, ANSP have also to adapt the route network to create more DCTs within military areas when they are not active.

Finally, local circumstances (e.g. constrained airspace, proximity of international hubs, etc....) as well as a large array of military missions that can be very different from one State to another must be taken into account. Therefore, airspace needs and related ASM procedures of the States may differ and standardized objectives cannot be defined.

**Military - related measures implemented or planned to improve capacity**

FABEC States are working on mid-term improvements regarding implementation of ASM level 1, 2, and 3 procedures. Some local initiatives regarding ASM/ATFCM convergence, like the Traffic Light Scheme concept in France or the Rolling UUP concept in Belgium and Switzerland are promoted at FABEC level, as well as at ECAC level in the EUROCONTROL OEP framework.

Another major improvement is the interconnection of the existing ASM tools (e.g. LARA, STANLY\_ACOS) at FABEC Level, to enhance regional coordination among FABEC AMCs as well as with the NM, but without impacting the national prerogatives.

**PI#6 Effective use of reserved or segregated airspace - National Level**

Ratio PI#6	2020	2021	2022	2023	2024
Belgium	98%	89%			
France	71%	72%			
Germany	51%	42%			
Luxembourg					
Netherlands	91%	88%			
Switzerland	92%*	90%*			

**Switzerland:** PI #6 was calculated as follows : Time still allocated at latest UUP (if any) / time allocated by AUP.

[\*Definition of the PI according to the Regulation: Time that restricted (or segregated) airspace was **used** / time allocated as reserved (or segregated) by AUP. Therefore values provided are not in accordance with Regulation.]



### PI#6 Effective use of reserved or segregated airspace (per ACC)

Ratio PI#6	2020	2021	2022	2023	2024
Brussels					
Bordeaux					
Brest					
Paris					
Marseille					
Reims					
Bremen					
Karlsruhe					
Langen					
Munich					
Amsterdam					
Geneva	92%*	91%*			
Zurich	91%*	90%*			
Maastricht					

\* This value is not in accordance with Regulation.

### Initiatives implemented or planned to improve PI#6

**Belgium:** Also: as from 2021, a Rolling UUP trial was held in Belgium, changing the way military planned airspace is released for civil use between H-3 and H - this has been implemented officially as from 27 Jan 2022.

**France:** France provides 2 KPIs, NEGO and ENV. KPI NEGO, which is roughly around 93% for years and higher than 96% in the COVID crisis period, reflects the robustness of the French national civil-military CDM process regarding ASM.

KPIs ENV, which are roughly for years around 65 % (ratio between the real use and AUP planning at D-1) and 75 % (ratio between the real use and AUP/UUP processes at H-3), are considered as very efficient, regarding that they have to compose with several mission cancellation causes (Weather, Technical or Operational reasons).

Since 2 years, in the COVID crisis context, these indicators have respectively exceed 70% and 85%. To improve further flight efficiency with this virtuous approach, civil and military AMC staff continue to work together and 15 indicators regarding 3 domains (NEGO, RELIABILITY, and CURA) are currently experimented since March 2021, in coordination with PRISMIL Team. If successful, final Implementation is expected by end of 2022. Even all efforts, a glass ceiling will still exist, as some military mission cancellation causes remain unpredictable.

**Netherlands:** KPIs ENV, which are around 91 % (ratio between the real use and AUP planning at D-1) and 88 % (ratio between the real use and AUP/UUP processes at H-3), are considered to be very efficient, regarding that they have to compose with several mission cancellation causes (Weather, Technical or Operational reasons).

**Switzerland:** The Rolling UUP and Procedure 3 were introduced in Switzerland on 01.01.2016. Since then the PI#6 ratio improved and remained high over years implying more reliable flight planning by AUs across Swiss airspace. Nevertheless, additional improvements are foreseen at the mid/long term such as introduction of VPA, improved CDM-ATFCM, improved civ-mil ASM Tools, etc. CH NSA is in the process of defining specific national PIs and/or "Use cases" in order to better assess (and improve, if necessary) the effectiveness of national FUA processes.

### PI#7 Rate of planning via available airspace structures - National Level

Ratio PI#7	2020	2021	2022	2023	2024
Belgium					
France	62%	66%			
Germany					
Luxembourg					
Netherlands					
Switzerland	94%	96%			

**PI#7 Rate of planning via available airspace structures (per ACC)**

Ratio PI#7	2020	2021	2022	2023	2024
Brussels					
Bordeaux	97%	86%			
Brest	90%	81%			
Paris	54%	51%			
Marseille	88%	84%			
Reims		71%			
Bremen					
Karlsruhe					
Langen					
Munich					
Amsterdam					
Geneva	98%	94%			
Zurich	93%	97%			
Maastricht					

**Initiatives implemented or planned to improve PI#7**

**France:** Please note that such data is not available at CIV and MIL French levels.

Dataset has been provided by EUROCONTROL (AFRL, ANFR, AU at FIR, UIR levels and per ACC for years 2020 and 2021) and the above figures have been used as follows to fill in the 2020 and 2021 FR data for PI#7&8, in line with the latest version of ASM handbook:

Nb of aircraft filing plans via reserved or segregated airspace and CDRs = ARFL  
 Nb of aircraft that could have planned through those airspace structures = ARFL + ANRF  
 Nb of aircraft flying reserved or segregated airspace and CDRs = AU

Due to time constraints, such data was not scrutinized and validated by the French NSA.  
 For next years, further coordination is required to agree and harmonize both the methodology and process to monitor that PI between EUROCONTROL, CIV/MIL French authorities, the French NSA, the French ANSP and within FABEC.

This PI first needs to be correctly understood and monitored in order to analyse and compare it before defining additional measures as appropriate.

**Netherlands:** Military cannot answer this point.

**Switzerland:** In the absence of clear guidelines, PI #7 was calculated as follows :  
 Number of flights that filed through the available RSA / Number of flights that could have filed through the available RSA (Shortest Constrained Route, i.e. shortest route for the citypair, RAD and IFPS compliant)

Note: Due to PRISMIL Database corruption, the 2020 data submitted was incomplete. Corrected data are inserted here.

Note that in the current figures provided by Eurocontrol (PRISMIL), there is no way of knowing whether the flights that filed through the available RSA are indeed a subset of the flights that could have filed through the available RSA. This correction will be available for the 2022 data.

Military planning remained stable at a high level over years implying more reliable flight planning by AUs across Swiss airspace. Additional improvements are foreseen at the mid/long term such as introduction of VPA, improved CDM-ATFCM, improved civ-mil ASM Tools, etc. CH NSA is in the process of defining specific national PIs and/or "Use cases" in order to better assess (and improve, if necessary) the effectiveness of national FUA processes.

**PI#8 Rate of using available airspace structures - National Level**

Ratio PI#8	2020	2021	2022	2023	2024
Belgium					
France	66%	67%			
Germany					
Luxembourg					
Netherlands					
Switzerland	125%	125%			

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Brussels					
Bordeaux	116%	86%			
Brest	101%	83%			
Paris	99%	100%			
Marseille	90%	96%			
Reims		127%			
Bremen					
Karlsruhe					
Langen					
Munich					
Amsterdam					
Geneva	134%	122%			
Zurich	122%*	127%*			
Maastricht					

**Initiatives implemented or planned to improve PI#8**

**France:** Same comments as in PI#7 above

**Switzerland:** In the absence of clear guidelines, PI #8 was calculated as follows :  
 Number of flights that flew through the available RSA / Number of flights that could have filed through the available RSA (Shortest Constrained Route, i.e. shortest route for the citypair, RAD and IFPS compliant)

Note: Due to PRISMIL Database corruption, the 2020 data submitted was incomplete. Corrected data are inserted here.

Obviously, the ratio PI 8 can be higher than 100%, as flights can tactically fly through an airspace, without there being a plannable route.

Military planning remained stable at a high level over years implying more reliable flight planning by AUs across Swiss airspace. Additional improvements are foreseen at the mid/long term such as introduction of VPA, improved CDM-ATFCM, improved civ-mil ASM Tools, etc. CH NSA is in the process of defining specific national PIs and/or "Use cases" in order to better assess (and improve, if necessary) the effectiveness of national FUA processes.

Minutes of ATFM en-route delay						
	2020	2021	2022	2023	2024	Observations
<b>FAB Target</b>	3.45	0.27	0.37	0.37	0.37	
<b>Actual performance</b>	0.42	0.39				
<b>Local performance</b>						
	2020	2021	2022	2023	2024	Observations
<b>skeyes</b>	0.06	0.01				
<b>DSNA</b>	0.61	0.46				
<b>DFS</b>	0.18	0.24				
<b>LVNL</b>	0.01	0.07				
<b>Skyguide</b>	0.04	0.07				
<b>MUAC</b>	0.01	0.00				

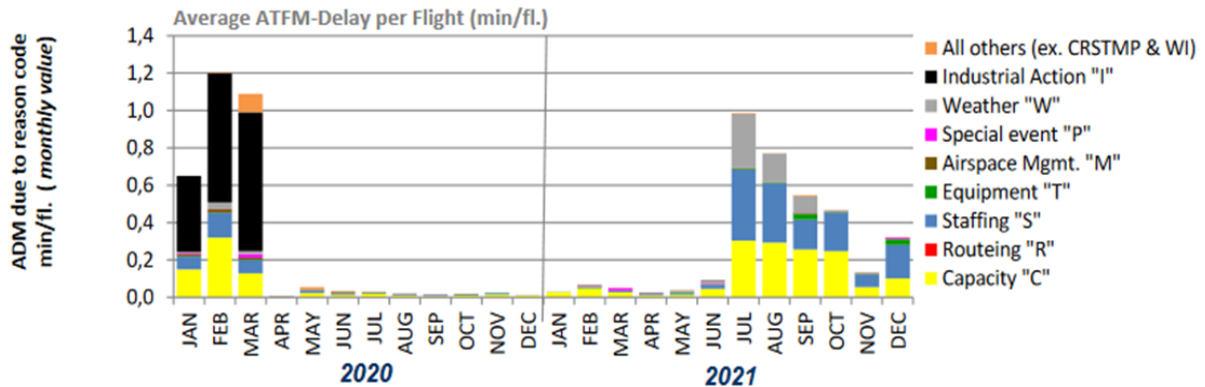
### FABEC NSAs' assessment of capacity performance

The delay in 2021 was mainly caused by limited ATC capacity, staffing and severe weather at ACCs Reims, ACC Marseille and to a lesser extent ACC Bremen and ACC Karlsruhe.

The capacity and staff delays were mainly caused by training activities for the 4-FLIGHT implementation in France, OJT (workforce augmentation) training and high-traffic simulations to maintain competency. ACC Bremen is coping with a great wave of ATCO retirements.

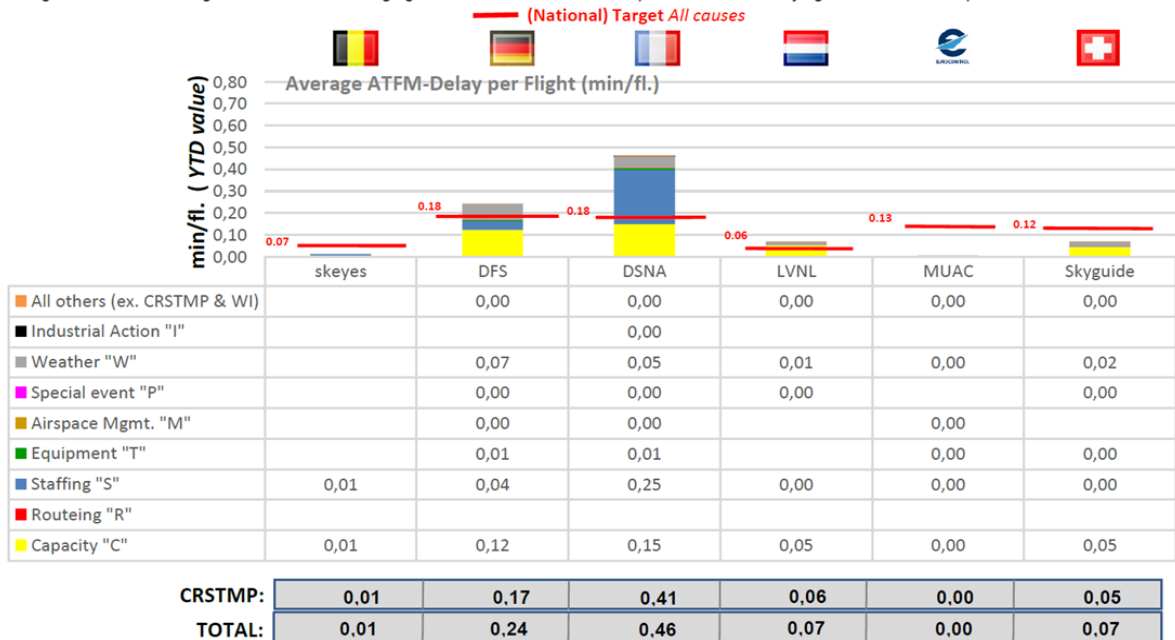
Late traffic pick-up, new traffic patterns and increased volatility, impact of Covid-19 (illness, isolation, EASA leave-days for vaccination) had also an aggravating impact during the Summer period in some FABEC ACCs already affected by staffing issues.

The following graph extracted from the FABEC ANSP monitoring reports illustrates the monthly FABEC level delay values classified by ATFM causes compared with previous year 2020.



The following graph, extracted from FABEC ANSP yearly monitoring report, shows that DFS, DSNA and LVNL (marginally) did not meet their respective reference values for 2021 and provides the respective shares of ATFM delay causes.

\*Belgium and Luxembourg are in a common charging zone and FIR. There is no separate en-route delay figure and incentives/penalties are shared.



## Monitoring process for capacity performance

The monitoring for en-route capacity performance is carried out under the auspices of the FABEC Financial and Performance Committee (FPC), counterpart of the European Commission at the States side, consulting and reporting to FABEC Council as appropriate.

On a monthly basis and through the AFG/PMG (ANSP FABEC Group / Performance Management Group) the ANSPs collectively submit a report to the FPC, based on PRU available data, consolidated and analysed, on their joint progress in achieving the FABEC target set and reference or indicative values and on the results and analysis of the en- route capacity achievement.

In case the FABEC target set and/or the annual/reference values are threatened not to be met, AFG/PMG is asked to propose to FPC possible corrective measures which the ANSPs determine fit to react to the weaker performance at FAB, national and/or ACC level, in order to remedy the situation.

The FPC analyses the reports, assesses the actions considered by the ANSPs together with the necessity of appropriate measures to be taken by the States or the NSAs and makes an advice to the proposals, made by the AFG/PMG, to the FABEC Council for such appropriate measures, after consultation with the AFG/PMG. The potential corrective measures take into account the seriousness of the risk of not meeting the targets set and/or the annual/reference values.

The FPC is also responsible for the management of the Capacity KPA financial incentive schemes (no incentive scheme is applied to 2021 capacity achievement as per Article 3.3(a) of 2020/1627).

This monitoring process is described in the FABEC FPC States Performance Process description, regularly updated.

## Capacity Planning

Initial Network Operation Plan 2020 launched in Winter 2019/2020 has been overwhelmed by the COVID-19 pandemic and the massive drop of traffic.

A new NOP Recovery Plan process initiated and launched by the Network Manager and its first edition was published on 30 April 2020, as European traffic began a slow recovery from its lowest point of just 2,099 flights across the network on 12 April 2020.

Since then a weekly Rolling NOP, published every Friday has been introduced through which NM coordinates with all partners to ensure capacity is available at ACCs and in the airspace they manage, and on the ground at airports, to meet the expected traffic demand from the airlines on each day of the next six weeks enabling to coordinate all operational stakeholders throughout the pandemic to ensure that network actors can plan their recovery effectively based on predicted traffic levels.

6th May 2022, a first version of the new 2022-2026 NOP has been released (however still based on the STATFOR forecast published in October 2021 as STATFOR has postponed the publication of its new forecast). It includes the capacity planning for FABEC ANSPs and is still to be updated and finalized in June 2022 with the latest available capacity information and remedial measures for all FABEC ANSPs concerned by capacity issues.

FABEC ANSPs and ACCs are of course part of this process and contribute to the provision for a consolidated European network view of the evolution of the air traffic, enabling the planning of the service delivered in the recovery phase to match the expected air traffic demand in a safe, efficient and coordinated manner. However, the 10% capacity buffer requested by the NM, the recommendation for zero delay and the continuous optimistic traffic forecast selected have naturally an adverse impact on ANSPs finance.

ATCO in OPS (FTE)							
<b>Brussels</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>
Planned 2021 Perf Plan	-	-	89	92	93	97	
Planned 2022 Perf Plan				86	87	92	
Actual number	81	82	89				
<b>Bordeaux</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>
Planned (Perf Plan)	-	-	238	244	246	249	
Actual number	218	229	247				
<b>Brest</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>
Planned (Perf Plan)	-	-	254	252	257	255	
Actual number	249	248	256				
<b>Marseille</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>
Planned (Perf Plan)	-	-	310	319	321	322	
Actual number	283	291	308				
<b>Paris</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>
Planned (Perf Plan)	-	-	254	262	256	265	
Actual number	257	248	249				
<b>Reims</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>
Planned (Perf Plan)	-	-	188	182	191	198	
Actual number	195	186	190				
<b>Bremen</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>
Planned (Perf Plan)	-	-	235	233	248	268	
Actual number	260	235*	223				*Previously (2020 AMR) FABEC reported 249 FTE ATCOs for 2020.
<b>Karlsruhe</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>
Planned (Perf Plan)	-	-	404	446	473	485	
Actual number	438	380*	386				*Previously (2020 AMR) FABEC reported 435 FTE ATCOs for 2020.

Langen	2019	2020	2021	2022	2023	2024	Observations
Planned (Perf Plan)	-	-	440	424	441	447	*Previously (2020 AMR) FABEC reported 466 FTE ATCOs for 2020.
Actual number	473	438*	429				
Munich	2019	2020	2021	2022	2023	2024	Observations
Planned (Perf Plan)	-	-	279	272	281	286	*Previously (2020 AMR) FABEC reported 303 FTE ATCOs for 2020.
Actual number	309	278*	274				
Amsterdam	2019	2020	2021	2022	2023	2024	Observations
Planned (Perf Plan)	-	-	85	86	85	81	*Previously (2020 AMR) FABEC reported 89 FTE ATCOs for 2020.
Actual number	87	90*	83				
Geneva	2019	2020	2021	2022	2023	2024	Observations
Planned (Perf Plan)	-	-	122	129	124	120	*Previously (2020 AMR) FABEC reported 120 FTE ATCOs for 2020.
Actual number	117	121*	118				
Skyguide report "Updated actual values for 2020 and 2021 are due to a fundamental review change on the FTE forecasting process."							
Zurich	2019	2020	2021	2022	2023	2024	Observations
Planned (Perf Plan)	-	-	113	113	112	109	*Previously (2020 AMR) FABEC reported 113 FTE ATCOs for 2020.
Actual number	121	120*	118				
Skyguide report "Updated actual values for 2020 and 2021 are due to a fundamental review change on the FTE forecasting process."							
Maastricht	2019	2020	2021	2022	2023	2024	Observations
Planned (Perf Plan)	-	-	290	309	315	317	*Previously (2020 AMR) FABEC reported 283 FTE ATCOs for 2020.
Actual number	284	286*	288				



### Additional FABEC comments on ATCO planning

Regarding ATCO planning, FABEC NSAs and ANSPs question if ATCO planning figures are legally required by the performance regulation to be included in the Performance Monitoring for RP3, as it is not a prescribed indicator. In addition, FABEC NSAs question if this is the right level of detail to be monitored by the EC. Technically the plans are and will always be subject to change, creating the unnecessary burden of tracking, supervising and explaining the figures within the SES performance scheme domain. In addition, the details of the planned evolution of ATCO numbers within an ANSP with several ACCs are socially sensitive.

However, ATCO hiring and assignment is one of the major driver for current capacity and staffing issues solving. ACE figures are provided and can be referred to. Nevertheless, FABEC States consider that they cannot be considered as a commitment where planning figures are requested, due to the high level of uncertainties related to such ATCO recruitment plans management. These figures, even when provided on annual basis, can only be regarded as snapshot information, i.e. a situation at one point in time which does not guarantee a realistic view throughout the entire duration of RP3.

There are many factors with a high level of uncertainty that have an impact on the ATCO planning: first of all, the Labour Law and the Collective Labour Agreement in place in an ANSP play a major role in the availability of ATCOs to fulfill the ops needs. Then, there are classical uncertainty factors of general staff planning like the actual rate of retirement, the absence rate of employees, as well as maternity and parent leave. Moreover, ATCOs mobility has become a severe issue recently, leading to high rate of unforeseen leaves.

Another factor which cannot be significantly mitigated further impacting the availability of ATCOs is the number of suitable applicants, the failure rate of the theoretical training at the academies and the success rate during the on-the-job training phases of trainees.

The final retirement age is firmly set by law, but in many countries employees may go earlier. ANSPs can only assume a certain amount of people opting out/in. It is common culture now that companies offer varying working hours to enable employees to adjust their work to different phases of their life. Again, ANSPs can only assume a certain amount of people opting in/out. On top of all that, future social agreements will significantly determine the ATCO availability per person and by that the total available FTE per ANSP.

Before the planned ATCO FTE can be reported in an harmonised and consistent way, a revised specification for information disclosure is required, clearly describing how to count ATCOs partially working in projects (another uncertainty factor) and (very important) standardising the assumptions for the uncertainties mentioned above.

For those ANSP having more than one national ACC, ATCO hiring plan are managed at ANSP level but changes in traffic volumes or flows and volatility or local human resources factors can influence the assignment to different ACCs.

It should also be noted that some social agreements regarding numbers of ATCO to be recruited and working conditions (salaries, extra hours, rostering) are currently under renegotiation due to the impact of covid-19 pandemic and ongoing redrafting of RP3 performance plan according to new RP3 targets. Outcomes of such negotiations, in which ANSP and unions but also Ministeries of Finance or Public administration are involved, have an impact on those figures.

Specifically for 2021, ATCO training has been affected by the COVID pandemic, which led to lower traffic levels, limiting the opportunity for OJT at high traffic levels. This slowed down the inflow of new ATCOs in OPS in some ACCs.

## Identification of need for Corrective Measures for Capacity

2021 FABEC en route capacity has not been met at FABEC level mainly due to capacity issues at DFS, DSNA and in a very minor proportion at LVNL.

The French, German and Dutch NSA have analysed with their respective ANSPs the main reasons and circumstances having led to these local performance 2021 FABEC en route capacity has not been met at FABEC level mainly due to capacity issues at DFS, DSNA and in a very minor proportion at LVNL.

The French, German and Dutch NSA have analysed with their respective ANSPs the main reasons and circumstances having led to these local performance underachievements. Their conclusions are provided below.

**The German NSA** is aware of the reasons and circumstances having led to the underperformance in the German contribution to the overall FABEC target being

1) COVID effects and restrictions: primarily occupational health and safety measures (e.g., changes to the workplace environment through protective measures such as Plexiglas panels) and COVID-related restrictions in staff scheduling (sick leave/quarantine orders, significantly earlier employment ban for pregnant women, etc.).

2.) Increased peak hour demand: already in 2021, hourly traffic demand values were reached that exceeded the 2019 traffic peaks by a factor of 1.5 - 2 in some cases. As a result, the demand could not be fully satisfied during these peak times and it had to be regulated accordingly.

**The French NSA** has been provided with clear and documented explanations regarding either temporary or more systemic reasons which generated delays at DSNA in 2021 (46% of European delays) despite the overall 2021 limited recovering traffic compared to 2019 traffic, even if the 2021 Summer traffic regularly reached and - in some sectors at peak days - exceeded 2019 Summer traffic levels.

Those delays were mainly due to the following reasons:

- Traffic has partially recovered in 2021 but with new traffic patterns and increased volatility (difference between mean and peak traffics; decreased traffic during the week days and increased traffic during week-ends ; average volatility factors per day increase from +/- 5% in average in 2019 up to +/-12 % in average in 2021);
- After a long period of low traffic, 2021 traffic picked up late in the season: ATCO and FMP staff competence to handle high traffic volumes was affected and training duration had to be temporarily extended (despite simulator use for training) leading to capacity reductions in Reims, Marseille (July traffic peak days similar to 2019 levels: 80% of 2019 traffic in average, with some days between 90-100%) and Paris ACCs (these ACCs are still understaffed to handle traffic levels at 80% of 2019 traffic levels without implementing ATFM regulations);
- Due to the massive traffic drop in 2020 and in order to reduce costs, densified rostering schemes were ended in 2020 which, combined with the above mentioned traffic volatility and late pick-up, generated a lack of flexibility and adaptability in ATCO rosters for the Summer season;
- More than 2000 leave-days due to either Covid-19 related ATCO illness or isolation or to EASA recommendation on vaccination;
- It should also be recalled that Reims and Marseille ACCs were in the training phase to prepare for 4-FLIGHT implementation respectively planned 5th April 2022 and 6th December 2022.

**The Dutch NSA** understand that the minor underperformance of LVNL on its contribution to the FABEC en route capacity target should be seen in combination with significant overperformance on the terminal capacity target for the Netherlands. During the recovery period following the pandemic, Schiphol airport still saw an uneven distribution in traffic flows over the different initial approach fixes in 2021. During the pre-pandemic traffic situation, the overload on the airport was the result of the combined flows from the different IAFs, whereas during 2021 it was only the flow coming from the east (IAF ARTIP) that caused issues. As a result, some of the delays that previously occurred in the terminal area (due to overload on combined flows) shifted to the en route area (due to overload on a specific flow), but overall delay minutes were significantly lower, reflecting lower traffic levels. The NL NSA has accepted this clarification from LVNL, and recognises that the combined delay minutes for en route and terminal were notably lower than in 2020.

## Application of Corrective Measures for Capacity (if applicable)

**The Dutch NSA:** since the LVNL underperformance was the result of exceptional circumstances during the recovery phase of the pandemic, the issues are not expected to occur again and therefore no immediate actions are requested. However, when normal traffic patterns resume, ATFM delays could shift back from the en route zone to the terminal zone. The NSA therefore recommends LVNL to continue working on the initiatives listed in the performance plan to reduce terminal delays.

**The French NSA:** a specific meeting has been organized with DSNA in order to gather both explanations and information about remedial measures already launched during year 2021 and identify potential additional measures that could be implemented by DSNA in 2022 and beyond to tackle non temporary capacity issues.

The following recommendations / course of actions have been discussed and agreed with DSNA:

- General remedial measures already identified, coordinated with the Network Manager and published in the NOP 2022-2026 released 6th May for the 5 French ACCs should be implemented as soon as possible;
- A set of specific remedial measures put in place as from 2021 by DSNA or already planned in 2022 to mitigate identified non temporary issues at the French ACCs have been presented to the French NSA and are listed in the table below: the French NSA will be kept informed by DSNA of their timely implementation, of the expected benefit and of any issue in the implementation plan;
- An analysis of potential risks on 2022 and beyond underperformance has been carried over and required potential remedial measures to address such a situation have been discussed; they are also addressed in the final chapter of the en route capacity tab of the monitoring together with the actions taken by the NSA to monitor future performance through its surveillance program.

**The German NSA:** recommends to focus on the remedial measures which are stated further below. Besides this the NSA will be in regular contact with the ANSP to evaluate the situation in the course of the year, the outcome of the below stated remedial actions and if necessary the implementation of further remedial actions.

### Further measures to be taken by NSAs:

**The French NSA** will closely monitor the implementation of the above listed remedial measures by DSNA and assess their impact on the en route capacity performance through its surveillance program ; should any additional measures be necessary, it will be studied and discussed accordingly with DSNA in order to assess their feasibility, their potential impact on other performance area KPIs, their benefits and the related implementation timeline.

**The German NSA** will monitor the addressed staffing issues and the above mentioned remedial measures. The NSA is therefore planning to receive regular updates on the situation and have accordingly discussions with the ANSP on the situation, measures in place and potential further measures.

## Summary of capacity performance

FABEC experienced an increase in traffic from 2,696k flights in 2020 to 3,245k flights in 2021, with 1,286k minutes of en route ATFM delays. However, traffic levels were still substantially below the 6,241k flights in 2019.

The individual ANSPs experienced the following traffic growth from 2020 levels: Belgium (skeyes) 22%; EUROCONTROL (MUAC) 12%; France (DSNA) 30%; Germany (DFS) 15%; Netherlands (LVNL) 16% and Switzerland (skyguide) 30%.

Whilst FABEC refers to difficulties in planning ATCO FTE numbers for future years, it does not explain the significant fluctuation in actual FTE ATCOs reported for 2020 between last years' monitoring report and this years' one. One ANSP, DFS, reports >100 fewer actual ATCO FTEs in 2020 than were reported last year.

### FABEC - wide En route capacity incentive scheme

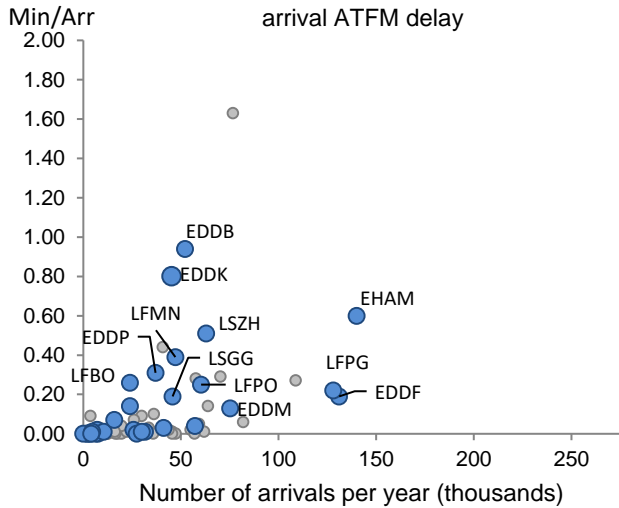
	2020	2021	2022	2023	2024	Observations
<b>FAB Capacity target</b>	-	-	0.37	0.37	0.37	
<b>Deadband +/-</b>	-	-	[0.192-0.306]	[0.192-0.306]	[0.192-0.306]	
<b>Actual performance</b>	0.42	0.39				

In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the

**1. Overview**

With the closure of Tegel, FABEC states identify a total of 81 airports as subject to RP3 monitoring. The regulation IR (EU) 2019/317 establishes that ATC pre-departure delay and All Causes pre-departure delay must be monitored only for airports with an average annual IFR traffic of at least 80 000 movements in the 2016-2018 period. In FABEC, 17 airports meet this criteria and are therefore monitored for these indicators. All these 17 airports provide the data required for the monitoring through the Airport Operator Data Flow, although in many cases the data quality does not allow for the calculation of the ATC pre-departure delay indicator.

**2. Arrival ATFM Delay**



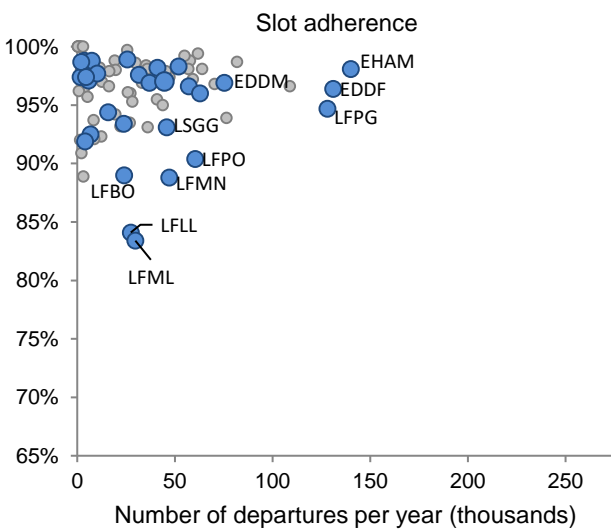
In 2021, most airports in FABEC showed less arrival ATFM delay per flight than in 2020. Nevertheless, the recovery of the traffic brought back the delays, concentrated in the second half of the year. 46% of these delays at FABEC airports were due to weather followed by aerodrome capacity (28%). Berlin Brandenburg (EDDB) and Cologne (EDDK) showed the highest delays per flight, mainly associated with aerodrome capacity.

**3. Arrival ATFM Delay – National Targets and Incentive Schemes**

The 2021 performance by all FABEC states except Luxembourg met the provisional national targets on arrival ATFM delay.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

**4. ATFM Slot Adherence**



Within FABEC slot adherence varies widely amongst the airports. Disregarding the small French airports grouped in the basket, most of the airports within FABEC showed a compliance above 90%, and more than half of those above 95%.

## 5. ATC Pre-departure Delay

2021 actual performance is generally lower or consistent with 2020 performance and still better than 2019 achievements for airports where data were provided at that time. No particular issues have been identified and no specific measures have been implemented in 2021 in relation to this PI.

The calculation of the ATC pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF), which is implemented at all the airports above 80 000 movements in FABEC.

However, there are several quality checks before EUROCONTROL can produce the final value which is established as the average minutes of pre-departure delay (delay in the actual off block time) associated to the IATA delay code 89 (through the APDF, for each delayed flight, the reasons for that delay have to be transmitted and coded according to IATA delay codes.

However, sometimes the airport operator has no information concerning the reasons for the delay in the off block, or they cannot convert the reasons to the IATA delay codes. In those cases, the airport operator might:

- Not report any information about the reasons for the delay for that flight (unreported delay)
- Report a special code to indicate they do not have the information (code ZZZ)
- Report a special code to indicate they do not have the means to collect or translate the information (code 999)

To be able to calculate with a minimum of accuracy the PI for a given month, the minutes of delay that are not attributed to any IATA code reason should not exceed 40% of the total minutes of pre-departure delay observed at the airport. In 2021 most of FABEC airports have still a very high share of "unexplained" delay, situation worsened since the Covid-19 pandemic outbreak in March 2020, as the share of special flights that might not report the reasons for their delay has been higher since then. For some airports there is an improvement in the reporting since the summer 2021, but the lack of enough quality data in the first half of the year prevents the calculation of the yearly figure.

However, some FABEC airports (EDDK for example) still have to implement properly this reporting.

Finally, to be able to produce the annual figure, at least 10 months of valid data is requested by Eurocontrol which has only been the case for EDDB, EDDL, LFLL, LFMN, LFPO and LSZH in 2021. In order to provide information for remaining FABEC airports, data provided by the airlines through the Aircraft Operator Data Flow (AODF) published by PRU has been used by FABEC NSA for other airports (in bold) for this reporting even if it covers only about 70% of the flights, while the airport operator data flow covers all flights at the airport.

in 2021 the share of commercial versus "other special" flights was still far from the normal balance, which created a problem for the reporting.

In order to improve the situation EUROCONTROL contacts regularly these airports to check on the status of the reporting and provide support in the final correct implementation of the APDF. EUROCONTROL is also part of an ACI sub-group (APN) that includes several airports and informs them regularly on data provision issues.

It should be noted that in 2021 four more airports were able to provide enough data quality for the calculation of the indicator (EDDB, EDDL, LFLL, LFPO).

FABEC provides in its monitoring report a figure for those airports where this PI cannot be calculated, based on the data provided by the airlines. However this PI has to be calculated based on a 100% of the traffic, which the airline data does not cover. Therefore these figures are not considered in this report.

## 6. All Causes Pre-departure Delay

*FABEC reports that All cause departure delay is very generic and ATFM delay is only a small contributor. Departure delay can be generated by ATFM en-route delay (not only local airport, but the complete Network) but also reactionary and turnaround delay, technical issues with the aircraft, airport operations, problems with passengers and or luggage, etc. In other words, it is not always possible to address a specific reason as this delay is quite generic.*

*The traffic load during the crisis years of 2020 and 2021 was very difficult to anticipate. Several airports used the unusual low traffic for construction and maintenance which in some areas led to a lower bandwidth to adapt capacity.*

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# **Annual Monitoring Report 2021**

## Local level view

### Belgium and Luxembourg

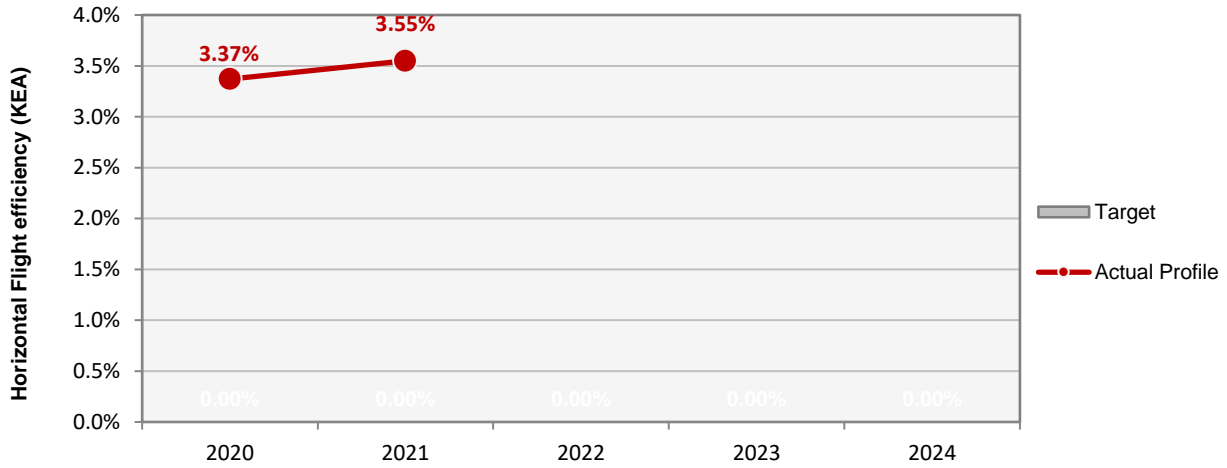
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<b>Effectiveness of Safety Management</b>						
	<b>Score</b>	<b>Safety Culture</b>	<b>Safety Policy and Objectives</b>	<b>Safety Risk Management</b>	<b>Safety Assurance</b>	<b>Safety Promotion</b>
<b>Skeyes</b>	76	B	B	C	C	C
<p>Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.</p>						
<b>Observations</b>						
<p>Improvements in maturity levels have been observed with respect to 2020. Two out of five EoSM components of the ANSP meet the 2024 target level, namely "Safety Assurance" and "Safety Promotion". The other three components are below 2024 target levels and are expected to improve in the next years of RP3.</p>						

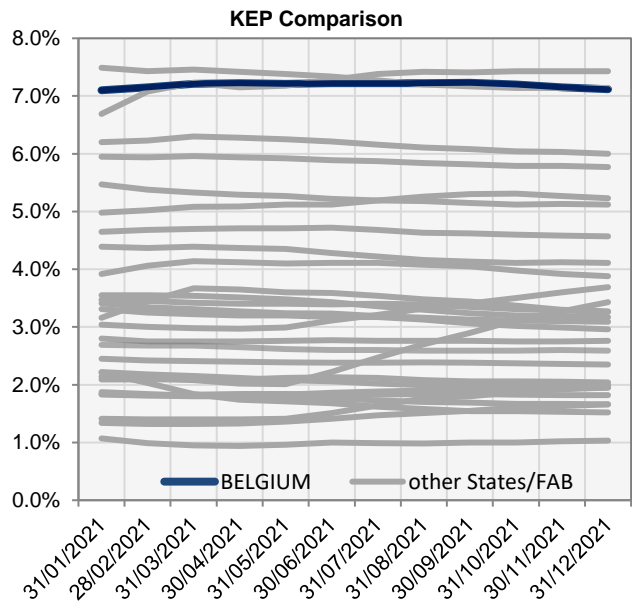
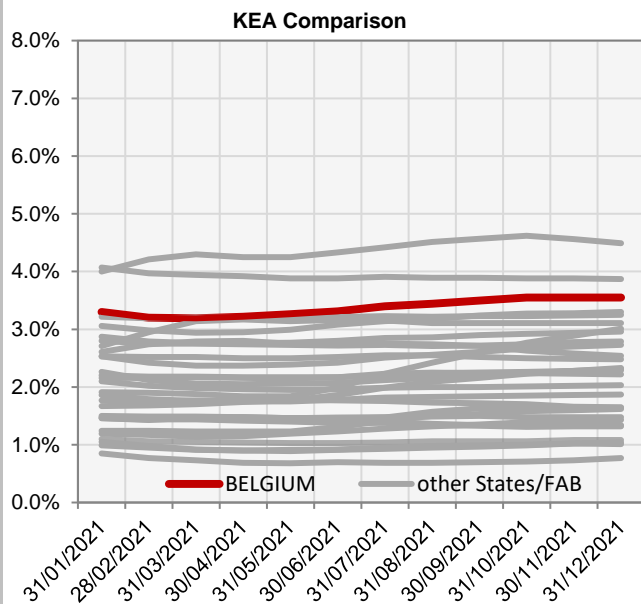
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>ANA LUX</b>	73	B	B	C	B	B
Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.						
Observations						
Decrease levels in maturity have been observed with respect 2020. All EoSM components remain below 2024 EoSM target levels. Improvements in safety management in all componenets are still expected during RP3 to achieve 2024 targets.						

KEA					
	2020	2021	2022	2023	2024
Target	n/a	n/a	n/a	n/a	n/a
Actual performance	3.37%	3.55%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	3.30%	3.20%	3.19%	3.22%	3.26%	3.31%	3.40%	3.44%	3.50%	3.55%	3.55%	3.55%
KEP	7.10%	7.15%	7.21%	7.22%	7.21%	7.22%	7.22%	7.22%	7.23%	7.20%	7.15%	7.12%
KES	6.58%	6.62%	6.70%	6.74%	6.77%	6.82%	6.87%	6.92%	6.98%	6.97%	6.95%	6.93%

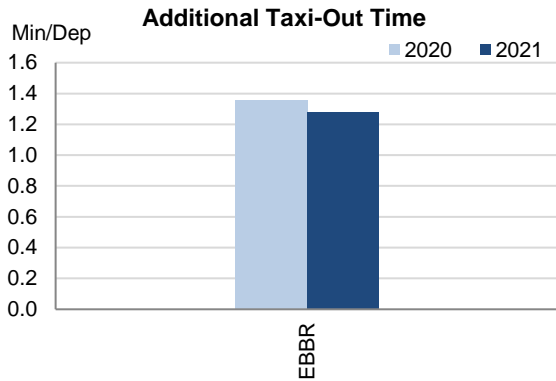


The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**1. Overview**

Belgium identifies only Brussels airport as subject to RP3 monitoring. The Airport Operator Data Flow is fully established and the monitoring of all environmental indicators can be performed. Traffic levels in 2021 were still 50% less than in 2019 at Brussels airport. However, regardless of a 25% traffic increase with respect to 2020, the additional times in 2021 were lower than in 2020, especially the additional ASMA times. The share of CDO flights increased from 18.5% to 19.6% in 2021.

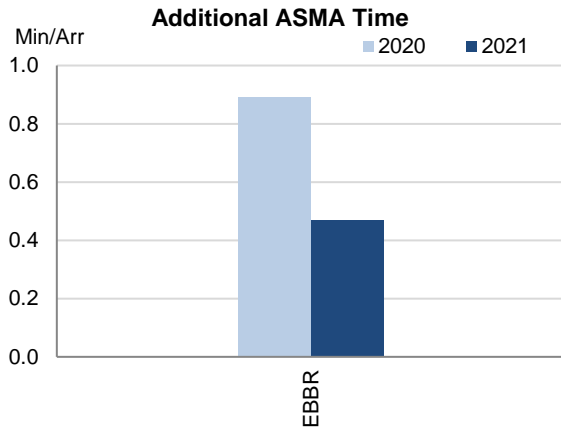
**2. Additional Taxi-Out Time**



Additional taxi-out times at Brussels decreased once more even if just slightly in 2021 (EBBR; 2019: 2.21 min/dep.; 2020: 1.36 min/dep.; 2021: 1.28 min/dep) The reduction is in fact only due to the improvement in the first trimester compared to the first trimester of 2020. For the rest of the year the additional taxi-out times averaged 1.25 min/dep, almost 30 seconds more than in 2020, but still a minute lower than in 2019.

According to FABEC monitoring report: *For Belgium, it is noted that some factors included in the Taxi-out time (for example: push-back time) influence this indicator but are beyond control of ANSP. A-CDM is implemented for many years, and continuously being improved. Latest improvements focused on incorporating de-icing (and hence reducing taxi times).*

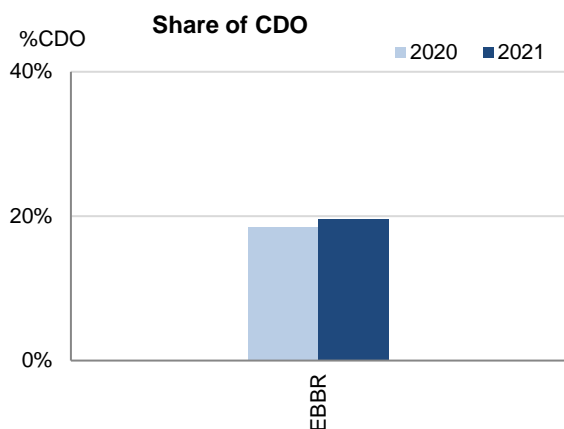
**3. Additional ASMA Time**



Additional ASMA times at Brussels significantly decreased again in 2021 (EBBR; 2019: 1 min/arr.; 2020: 0.89 min/arr.); 2021: 0.47 min/arr. Like with the additional taxi-out times, the annual reduction is in fact only due to the improvement in the first trimester compared to the first trimester of 2020. For the rest of the year the additional ASMA times averaged 0.71 min/arr., 0.21 min/dep. but still half of the additional ASMA times in 2019.

According to FABEC monitoring report: *For Belgium, ASMA is considered to be intended primarily to capture terminal holdings. Within EBBR, stacking aircraft in holding to absorb delays (similar to EGLL) is seldom applied. Within a radius of 30 NM around EBBR, radar vectoring is most often applied. Depending on the traffic demand, shorter or longer trajectories are being flown (-> sequencing). However radar vectoring has the advantage that shortest routes can be issued, hence leading to 'best possible' ASMA values, while of course taking into account applicable restrictions (e.g. noise abatement).*

#### 4. Share of arrivals applying CDO



The share of CDO flights for Brussels is 19.6% which is an increase of 1.1 percentage points but still quite low compared to other airports with similar traffic numbers and the overall RP3 value (30.5%).

According to the FABEC monitoring report: *For Belgium, the following (non-exhaustive) list of initiatives applies:*

- *CEM EBBR -> collaboration between operational stakeholders. Various initiatives are on-going to improve predictability in the arrival process, which facilitates airspace users in optimizing their descent. Example: Trials regarding 'Increased Use RNP Approaches' are planned for 2022. As these procedures aim to improve predictability throughout the arrival process, those allow aircraft operators to better optimize their descent.*
- *The Environmental Action Plan that has been developed by skeyes, where improving (vertical) flight efficiency is one of the key pillars*
- *A PBN Transition Plan improved and optimised PBN routes . This ameliorated predictability and consequently improved CDO performance.*

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Brussels-EBBR	1.36	1.28				0.89	0.47				18%	20%			

**1. Overview**

The scope of RP3 monitoring for Luxembourg comprises the main airport (ELLX), where traffic in 2021 was still 37% lower than in 2019 regardless the increase of 18% with respect to 2020. In accordance with IR (EU) 2019/317 and the traffic volume, additional taxi-out and ASMA times are not monitored at Luxembourg and the environmental performance focuses only on the share of arrivals applying CDO.

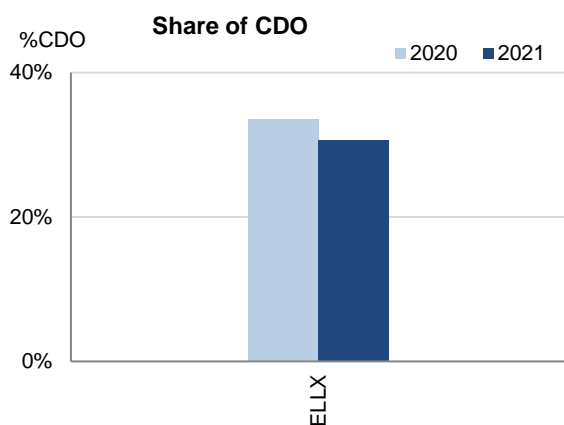
**2. Additional Taxi-Out Time**

This indicator is not monitored for airports below 80 000 IFR movements average during the 2016-2018 period, so it is not monitored for any airport in this state.

**3. Additional ASMA Time**

This indicator is not monitored for airports below 80 000 IFR movements average during the 2016-2018 period, so it is not monitored for any airport in this state.

**4. Share of arrivals applying CDO**



The share of CDO flights for Luxembourg is 30.7% which is a decrease of 2.8 percentage points but still just above the overall RP3 value (30.5%). The monthly values decreased from 37.2% in January to 25.3% in December.

**5. Appendix**

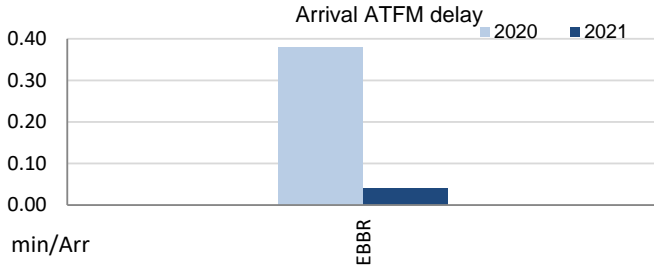
n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Luxembourg-ELLX	-	-				-	-				34%	31%			

**1. Overview**

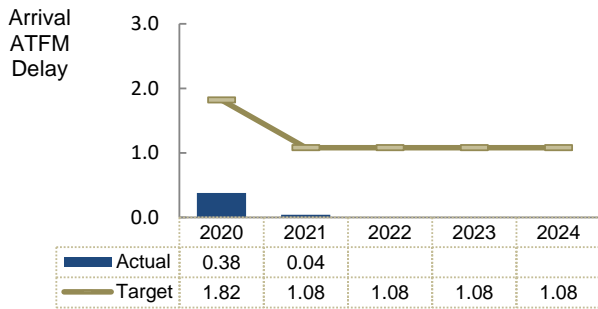
Belgium identifies only Brussels airport as subject to RP3 monitoring. The Airport Operator Data Flow is fully established and the monitoring of pre-departure delays can be performed. Nevertheless, the quality of the reporting does not allow for the calculation of the ATC pre-departure delay, with more than 60% of the reported delay not allocated to any cause. Traffic levels in 2021 were still 50% less than in 2019 at Brussels airport. However, regardless of a 25% traffic increase with respect to 2020. Average arrival ATFM delays in 2021 was 0.04 min/arr, compared to 0.38 min/arr in 2020. ATFM slot adherence has slightly deteriorated (2021: 96.6%; 2020: 97.4%).

**2. Arrival ATFM Delay**



ATFM arrival delays at Brussels have almost disappeared in 2021 (EBBR; 2019: 0.90 min/arr; 2020: 0.38 min/arr; 2021: 0.04 min/arr). Delays were only registered in July, November and December. Most of these delays were attributed to weather (67%) followed by ATC staffing (14%) and special events (10%)

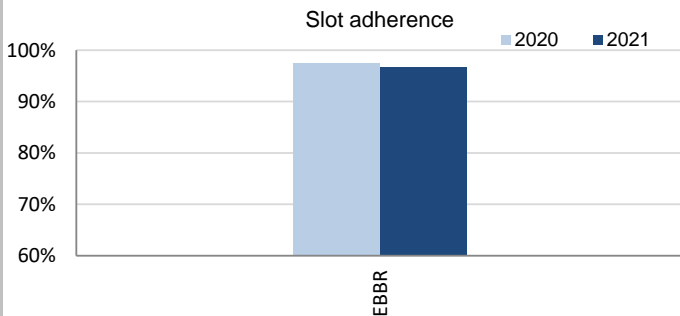
**3. Arrival ATFM Delay – National Target and Incentive Scheme**



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024. No bonus will be awarded to keyes for 2021 achievement.

**4. ATFM Slot Adherence**



With the drastic drop in traffic, regulated departures from Brussels virtually disappeared until July 2021. Brussels ATFM slot compliance in 2021 was 96.6% With regard to the 3.4% of flights that did not adhere, 2.2% was early, 1.2% was late. The FABEC monitoring report highlights that *national level and main national individual airports involved are above the 80% threshold of compliance.*

**5. ATC Pre-departure Delay**

The share of unidentified delay reported by Brussels was above 40% for more than 2 months in the year, preventing the calculation of this indicator. This was due to the special traffic composition in the first half of the year. Brussels had proper reporting before the pandemic and with the traffic recovery the reporting has improved since June 2021.

**6. All Causes Pre-departure Delay**

The total (all causes) delay in the actual off block time at Brussels increased in 2021 (EBBR: 2020: 13.88 min/dep.; 2021: 15.29 min/dep.)

The highest average delay per flight was observed in the month of February, exceeding the 27 min/dep.

According to FABEC monitoring report: *During 2021 the efficiency of airport operations suffered from the fact that travel restrictions and corresponding PLF regulations changed from time to time, leading to extra difficulties at departure, arrival and during transit resulting in delays for passengers and flights.*

**7. Appendix**

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

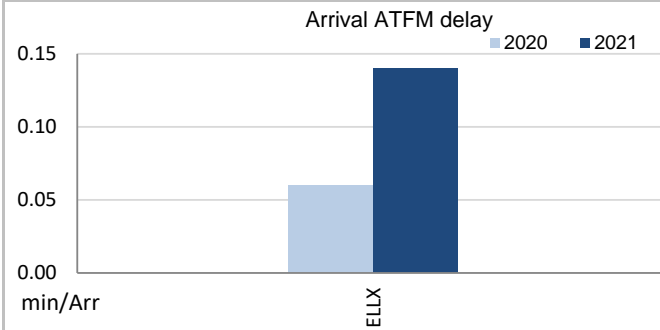
Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Brussels-EBBR	0.38	0.04				97.4%	96.6%	163			n/a	n/a				13.88	15.29	Annex II		

1. Overview

The scope of RP3 monitoring for Luxembourg comprises the main airport (ELLX), where traffic in 2021 was still 37% lower than in 2019 regardless the increase of 18% with respect to 2020. In accordance with IR (EU) 2019/317 and the traffic volume, pre-departure delays are not monitored at Luxembourg and the capacity performance monitoring focuses on arrival ATFM delay and slot adherence.

Average arrival ATFM delays in 2021 was 0.14 min/arr, compared to 0.06 min/arr in 2020. ATFM slot adherence has improved (2021: 93.4%; 2020: 90.2%).

2. Arrival ATFM Delay



Arrival ATFM delays at Luxembourg have significantly increased in 2021. All delays were registered between June and December, and were mostly attributed to equipment issues (58%) and weather (42%)

According to FABEC's monitoring report: *Target was not achieved due to traffic flow restrictions put in place as a result of a lack of required performance study of the surveillance chain and as a consequence increased separations within the TMA. It is acknowledged and known to the DAC/NSA that, during 2021, ANA has experienced some technical problems and operational constraints in its SURCHAIN that had an impact on overall capacity. Currently, ANA is actively working on the overall improvement of its SURChain. The DAC is actively and closely following the subject.*

Recommendations to the ANSP to rectify the situation:

- *Successfully implementation of the new SURChain updates as planned in its Change and Project Management;*
- *Strict adherence to the ESSAP' periodicities agreed by the DAC/NSA;*
- *Better definition of the separations minima scenarios based on the available radars and its ESSAPs results;*

Three Remedial Measures have been taken by the ANSP

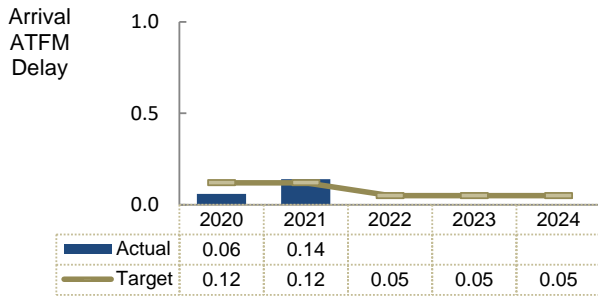
*End 2022: Successful implementation of new SURChain updates as planned in its Change Management and Project Management (On-going)*

*Strict adherence to the ESSAP periodicities agreed by DAC/NSA (On-going)*

*ANA commissioned a Eurocontrol study on the status of its SURChain and a number of recommendations will be issued, among them a redefinition of separation status. ANA is committed to implementing them (On-going)*



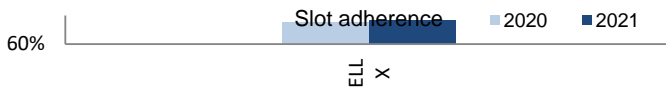
### 3. Arrival ATFM Delay – National Target and Incentive Scheme



The provisional national target on arrival ATFM delay in 2021 was not met, with actual arrival ATFM delays at 0.14 min/arr. in average, and the national target set at 0.12 min/arr.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024. No malus will be awarded to ANA LUX for 2021 achievement.

### 4. ATFM Slot Adherence



with the drastic drop in traffic, regulated departures from Luxembourg virtually disappeared until July 2021. Luxembourg's ATFM slot compliance was 93.4%, an improvement with respect to 2020 (90.2%)

### 5. ATC Pre-departure Delay

This indicator is not monitored for airports below 80 000 IFR movements annual average during the 2016-2018 period, so it is not monitored for Luxembourg.

### 6. All Causes Pre-departure Delay

This indicator is not monitored for airports below 80 000 IFR movements annual average during the 2016-2018 period, so it is not monitored for Luxembourg.

### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Luxembourg-ELLX	0.06	0.14				90.2%	93.4%				-	-				-	-			

1. Contextual economic information: en route air navigation services																				
· Belgium-Luxembourg ECZ represents 3.1% of the SES en route ANS actual costs in 2019			· FAB: FABEC																	
· National currency: EUR																				
· Performance Plan: RP3 draft performance plan dated 17 November 2021 and found inconsistent as per Commission Decision (EU) 2022/728 of 13 April 2022			FABEC has submitted a revised RP3 draft performance plan in July 2022, currently under assessment.																	
2. Monitoring of the en route determined unit cost (DUC) at charging zone level																				
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.																				
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.																				
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)																				
Belgium-Luxembourg: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D														
En route costs (nominal EUR)	214,796,327	227,401,527	442,197,853	250,216,368	269,472,006	271,693,533														
Inflation %	0.4%	1.7%		7.8%	3.4%	1.9%														
Inflation index (100 in 2017)	103.9	105.7		115.6	119.6	121.8														
Real en route costs (EUR2017)	207,900,840	216,999,041	424,899,880	220,164,809	230,239,134	228,481,759														
Total en route service units	1,080,873	1,161,104	2,241,977	2,107,529	2,444,554	2,542,413														
<b>Real en route DUC per service unit (EUR2017)</b>	<b>192.35</b>	<b>186.89</b>	<b>189.52</b>	<b>104.47</b>	<b>94.18</b>	<b>89.87</b>														
Belgium-Luxembourg: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A														
En route costs (nominal EUR)	214,796,327	217,646,269	432,442,596																	
Inflation %	0.4%	3.2%																		
Inflation index (100 in 2017)	103.9	107.3																		
Real en route costs (EUR2017)	207,900,840	205,143,235	413,044,074																	
Total en route service units	1,080,873	1,166,899	2,247,771																	
<b>Real en route AUC per service unit (EUR2017)</b>	<b>192.35</b>	<b>175.80</b>	<b>183.76</b>																	
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024														
En route costs (nominal EUR)	0	-9,755,258	-9,755,258																	
	in value																			
	in %	-4.3%	-2.2%																	
Inflation %	0.0 p.p.	1.5 p.p.																		
	in p.p.																			
Inflation index (100 in 2017)	0.0 p.p.	1.6 p.p.																		
	in p.p.																			
Real en route costs (EUR2017)	0	-11,855,806	-11,855,806																	
	in value																			
	in %	-5.5%	-2.8%																	
Total en route service units	0	5,795	5,795																	
	in value																			
	in %	+0.5%	+0.3%																	
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>0.00</b>	<b>-11.09</b>	<b>-5.76</b>																	
	in value																			
	in %	-5.9%	-3.0%																	
4. Focus on en route DUC monitoring at charging zone level																				
<b>AUC vs. DUC</b>			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      +0.3%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>																	
<p>In the combined year 2020-2021, the en route AUC was -3.0% (or -5.76€2017) lower than the planned DUC. This results from the combination of slightly higher than planned TSUs (+0.3%) and lower than planned en-route costs in real terms (-2.8%, or -11.9 M€2017).</p>			<p>Costs by entity at ECZ level (M€2017):</p> <table border="1"> <tr><td>Main ANSP</td><td>-3.8%</td></tr> <tr><td>Other ANSP(s)</td><td>-1.0%</td></tr> <tr><td>METSP(s)</td><td>0%</td></tr> <tr><td>NSA/EUROCONTROL</td><td>-2.7%</td></tr> <tr><td>Total CZ</td><td>-2.8%</td></tr> </table>				Main ANSP	-3.8%	Other ANSP(s)	-1.0%	METSP(s)	0%	NSA/EUROCONTROL	-2.7%	Total CZ	-2.8%				
Main ANSP	-3.8%																			
Other ANSP(s)	-1.0%																			
METSP(s)	0%																			
NSA/EUROCONTROL	-2.7%																			
Total CZ	-2.8%																			
<p><b>En route service units</b></p> <p>The difference between actual and planned TSUs (+0.3%) falls within the ±2% dead band. Hence the resulting additional en-route revenue is kept by the ANSPs (see items 10 to 14).</p>			<p>Costs by nature for main ANSP (M€2017):</p> <table border="1"> <tr><td>Staff costs</td><td>-1.8%</td></tr> <tr><td>Other operating costs</td><td>-13.5%</td></tr> <tr><td>Depreciation</td><td>-1.4%</td></tr> <tr><td>Cost of capital</td><td>-2.7%</td></tr> <tr><td>Exceptional costs</td><td>0%</td></tr> <tr><td>VFR exempted flights</td><td>0%</td></tr> <tr><td>Total Main ANSP</td><td>-3.8%</td></tr> </table>				Staff costs	-1.8%	Other operating costs	-13.5%	Depreciation	-1.4%	Cost of capital	-2.7%	Exceptional costs	0%	VFR exempted flights	0%	Total Main ANSP	-3.8%
Staff costs	-1.8%																			
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Depreciation	-1.4%																			
Cost of capital	-2.7%																			
Exceptional costs	0%																			
VFR exempted flights	0%																			
Total Main ANSP	-3.8%																			
<p><b>En route costs by entity</b></p> <p>Actual real en route costs are -2.8% (-11.9 M€2017) lower than planned. This is driven by the main ANSP, Skeyes (-3.8%, or -9.4 M€2017), the other ANSPs (MUAC and ANA Luxembourg, -1.0%, or -1.4 M€2017 together) and the NSA/EUROCONTROL costs (-2.7%, or -1.0 M€2017).</p>																				
<p><b>En route costs for the main ANSP (Skeyes) at charging zone level</b></p> <p>The lower than planned en route costs in real terms for Skeyes (-3.8%, or -9.4 M€2017) result from:</p> <ul style="list-style-type: none"> <li>- lower staff costs (-1.8%);</li> <li>- lower other operating costs (-13.5%);</li> <li>- slightly lower depreciation (-1.4%); and</li> <li>- lower cost of capital (-2.7%).</li> </ul> <p>The additional information to the reporting tables does not provide qualitative information explaining the reasons underlying the differences between the determined and actual costs.</p>																				

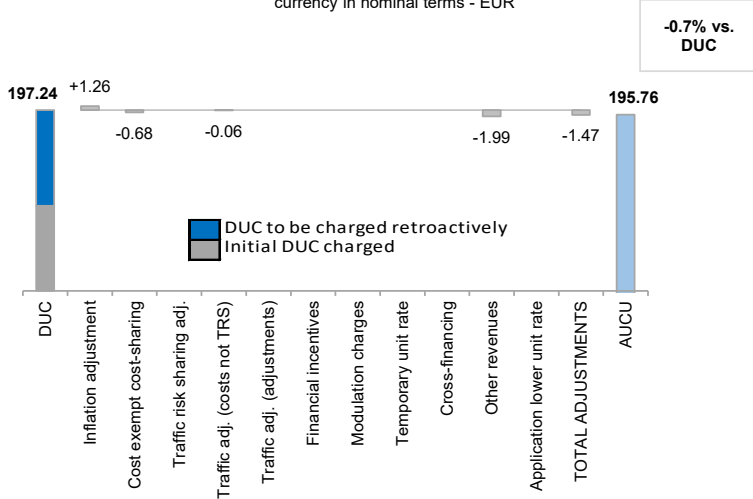
5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level

Belgium-Luxembourg 2020-2021 DUC vs. Actual Unit Cost for users in national currency in nominal terms - EUR



Components of the AUCU	EUR/SU
Initial DUC charged	92.74
DUC to be charged retroactively	104.49
<b>DUC</b>	<b>197.24</b>
Inflation adjustment	1.26
Cost exempt from cost-sharing	-0.68
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.06
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	-1.99
Application of lower unit rate	0.00
Total adjustments	-1.47
<b>AUCU</b>	<b>195.76</b>
<b>AUCU vs. DUC</b>	<b>-0.7%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

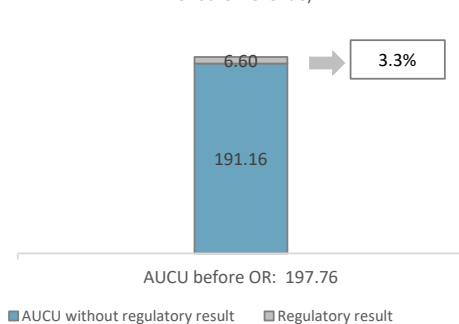
7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-488	-0.22
Competent authorities and qualified entities costs	-118	-0.05
Eurocontrol costs	-927	-0.41
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-1,533</b>	<b>-0.68</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	EUR '000	EUR/SU
skeyes (Belgium-Lux)	13,013	5.79
ANA LUX	681	0.30
MUAC (Belgium)	1,101	0.49
MUAC (Luxembourg)	34	0.02
METSP(s)	EUR '000	EUR/SU
<b>Total charging zone</b>	<b>14,829</b>	<b>6.60</b>
<b>Actual cost for users***</b>	<b>444,510</b>	<b>197.76</b>
<b>Regulatory result (% AUCU)</b>	<b>3.3%</b>	<b>3.3%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (195.76€) is -0.7% lower than the nominal DUC (197.24€) which includes DUC initially charged: 92.74€, and to be charged: 104.49€. The difference between these two figures (-1.47€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+1.26€/SU);
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.68€/SU);
- the deduction of the traffic adjustment (-0.06€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years; and
- the deduction of the other revenues (-1.99€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 3.3%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

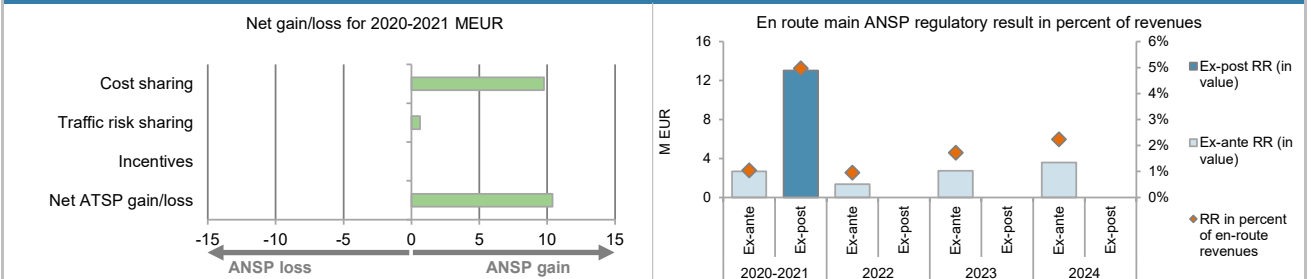
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	8,272			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	1,828			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-338			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>9,762</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.3%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	246,514			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>637</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>10,399</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

skeyes (Belgium-Lux) planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	77,960	70,127	148,088	80,148	96,528	113,624
Proportion of financing through equity (in %)	89%	72%	81%	68%	74%	83%
RoE pre-tax rate (in %)	2.2%	2.3%	2.2%	2.5%	3.8%	3.8%
RoE (in value)	1,532	1,157	2,689	1,368	2,729	3,597
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>1,532</b>	<b>1,157</b>	<b>2,689</b>	<b>1,368</b>	<b>2,729</b>	<b>3,597</b>
<b>Revenue for the en route charging zone</b>	<b>125,844</b>	<b>134,183</b>	<b>260,028</b>	<b>143,554</b>	<b>158,956</b>	<b>160,967</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>1.2%</b>	<b>0.9%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>1.7%</b>	<b>2.2%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>2.2%</b>	<b>2.3%</b>	<b>2.2%</b>	<b>2.5%</b>	<b>3.8%</b>	<b>3.8%</b>
skeyes (Belgium-Lux) actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	77,960	65,584	143,544			
Proportion of financing through equity (in %)	89%	72%	81%			
RoE pre-tax rate (in %)	2.2%	2.3%	2.2%			
RoE (in value)	1,532	1,082	2,614			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	10,399	10,399			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>1,532</b>	<b>11,481</b>	<b>13,013</b>			
<b>Revenue for the en route charging zone</b>	<b>125,844</b>	<b>136,311</b>	<b>262,155</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>1.2%</b>	<b>8.4%</b>	<b>5.0%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>2.2%</b>	<b>24.4%</b>	<b>11.2%</b>			

13. Focus on the main ANSP regulatory result on en route activity



**Skeyes net gain on activity in the Belgium-Luxembourg en route charging zone in the combined year 2020-2021**

Skeyes reported a net gain of +10.4 M€, resulting from a gain of +9.8 M€ arising from the cost sharing mechanism and a gain of +0.6 M€ arising from the traffic risk sharing mechanism.

**Skeyes overall regulatory results (RR) for the en route activity**

Ex-post, the overall RR corresponding to the net gain from the en route activity mentioned above (+10.4 M€) and the RoE (+2.6 M€) amounts to +13.0 M€ (5.0% of the en route revenues), compared to 1.0% ex-ante. The resulting ex-post rate of return on equity is 11.2%, which is higher than the 2.2% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
<b>ANA LUX planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	74	198	272	194	230	228
Revenue for the en route charging zone	7,230	7,734	14,964	7,312	7,568	7,407
Ex-ante regulatory result (+/-) in percent of revenues	1.0%	2.6%	1.8%	2.7%	3.0%	3.1%
Ex-ante RoE pre-tax rate (in %)	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
<b>ANA LUX actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	74	607	681			
Revenue for the en route charging zone	7,230	7,828	15,058			
Ex-post regulatory result (+/-) in percent of revenues	1.0%	7.8%	4.5%			
Ex-post RoE pre-tax rate (in %)	1.8%	14.7%	8.2%			
<b>MUAC (Belgium) planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	62,219	61,994	124,213	81,791	85,630	88,348
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>MUAC (Belgium) actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	1,101	1,101			
Revenue for the en route charging zone	62,219	63,095	125,314			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	1.7%	0.9%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>MUAC (Luxembourg) planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	1,924	1,917	3,842	2,530	2,648	2,733
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>MUAC (Luxembourg) actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	34	34			
Revenue for the en route charging zone	1,924	1,952	3,876			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	1.8%	0.9%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSPs planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	74	198	272	194	230	228
Revenue for the en route charging zone	71,374	71,645	143,019	91,633	95,847	98,488
Ex-ante regulatory result (+/-) in percent of revenues	0.1%	0.3%	0.2%	0.2%	0.2%	0.2%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total other ANSPs actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	74	1,742	1,817			
Revenue for the en route charging zone	71,374	72,875	144,248			
Ex-post regulatory result (+/-) in percent of revenues	0.1%	2.4%	1.3%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for the other ANSPs in the en route charging zone for Belgium-Luxembourg (ANA and MUAC) corresponds to 1.3% of the en route revenues. The RoE cannot be calculated for MUAC, as it has no equity.						

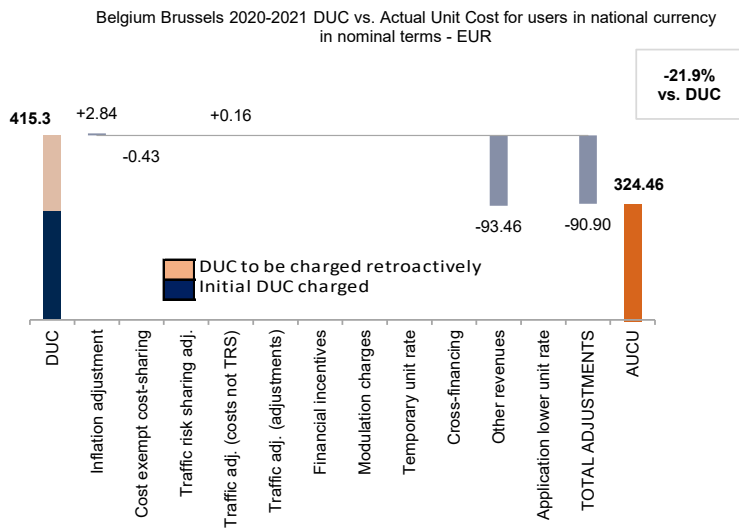
1. Contextual economic information: terminal air navigation services						
· Belgium Brussels TCZ represents 3.0% of the SES terminal ANS actual costs in 2019 · Number of airports in charging zone in 2021: 1 of which: <ul style="list-style-type: none"> <li>· Airports with fewer than 80,000 IFR mvmts: 0</li> <li>· Airports with more than 80,000 IFR mvmts: 1</li> </ul>						
· National currency: EUR · Performance Plan: See item 1 for the en route charging zone(s).						
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Belgium Brussels: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal EUR)	33,736,743	35,784,167	69,520,910	38,337,098	43,166,363	43,811,473
Inflation %	0.4%	1.7%		7.8%	3.4%	1.9%
Inflation index (100 in 2017)	103.9	105.7		115.6	119.6	121.8
Real terminal costs (EUR2017)	32,616,947	34,053,447	66,670,395	33,645,140	36,843,247	37,032,815
Total terminal service units	72,921	94,454	167,375	133,421	153,720	159,060
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>447.29</b>	<b>360.53</b>	<b>398.33</b>	<b>252.17</b>	<b>239.68</b>	<b>232.82</b>
Belgium Brussels: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal EUR)	33,736,743	33,691,784	67,428,527			
Inflation %	0.4%	3.2%				
Inflation index (100 in 2017)	103.9	107.3				
Real terminal costs (EUR2017)	32,616,947	31,654,357	64,271,304			
Total terminal service units	72,921	93,631	166,553			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>447.29</b>	<b>338.07</b>	<b>385.89</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal EUR)	in value	0	-2,092,383	-2,092,383		
	in %	-	-5.8%	-3.0%		
Inflation %	in p.p.	0.0 p.p.	1.5 p.p.			
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	1.6 p.p.			
Real terminal costs (EUR2017)	in value	0	-2,399,090	-2,399,090		
	in %	-	-7.0%	-3.6%		
Total terminal service units	in value	0	-823	-823		
	in %	-	-0.9%	-0.5%		
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-22.46</b>	<b>-12.44</b>		
	<b>in %</b>	<b>-</b>	<b>-6.2%</b>	<b>-3.1%</b>		
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>					
	<b>in %</b>					
4. Focus on terminal DUC monitoring at charging zone level						
<b>AUC vs DUC</b> The AUC for the combined year 2020-2021 is lower than the planned DUC (by -3.1%, or -12.44 €2017). This is due to the combination of lower than planned TNSUs (-0.5%) and lower than planned terminal costs in real terms (by -3.6%, or -2.4 M€2017).						
<b>Terminal service units</b> The difference between actual and planned TNSUs (-0.5%) falls within the ±2% dead band. Hence the resulting loss is borne by the ANSP (see item 11).			<b>Costs by entity at TCZ level (M€2017):</b> 			
<b>Terminal costs by entity at charging zone level</b> Actual real terminal costs for 2020-2021 are -3.6% (-2.4 M€2017) lower than planned. This result is driven by the main ANSP, Skeyes (-3.7%, or -2.4 M€2017), while the NSA costs are -0.5% lower than planned.			<b>Costs by nature for main ANSP (M€2017):</b> 			
<b>Terminal costs for the main ANSP (Skeyes) at charging zone level</b> Overall, the terminal costs in real terms for Skeyes in 2020-2021 were lower than the determined costs from the performance plan (by -3.7%, or -2.4 M€2017 lower). This results from: <ul style="list-style-type: none"> <li>- lower staff costs (-2.4%),</li> <li>- lower other operating costs (-9.4%),</li> <li>- lower depreciation (-0.9%); and</li> <li>- lower cost of capital (-5.5%).</li> </ul> The additional information to the reporting tables provides no qualitative information explaining the reasons underlying the differences between the determined and actual costs.						

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	246.18
DUC to be charged retroactively	169.18
<b>DUC</b>	<b>415.36</b>
Inflation adjustment	2.84
Cost exempt from cost-sharing	-0.43
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	0.16
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	-93.46
Application of lower unit rate	0.00
Total adjustments	-90.90
<b>AUCU</b>	<b>324.46</b>
<b>AUCU vs. DUC</b>	<b>-21.9%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

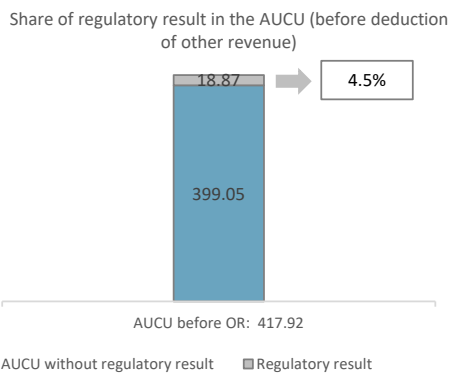
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

		EUR '000	EUR/SU
by item	New and existing investments	-66	-0.40
	Competent authorities and qualified entities costs	-6	-0.03
	Eurocontrol costs	0	0.00
	Pension costs	0	0.00
	Interest on loans	0	0.00
	Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>		<b>-72</b>	<b>-0.43</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	EUR '000	EUR/SU
skeyes	3,143	18.87
<b>METSP(s)</b>		
<b>Total charging zone</b>	<b>3,143</b>	<b>18.87</b>
<b>Actual cost for users***</b>	<b>69,606</b>	<b>417.92</b>
<b>Regulatory result (% AUCU)</b>	<b>4.5%</b>	<b>4.5%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Belgium-Brussels terminal charging zone (324.46€) is -21.9% lower than the nominal DUC (415.36€) which includes DUC initially charged: 246.18€; and to be charged: 169.18€. The difference between these two figures (-90.90€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+2.84€/SU);
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.43€/SU);
- the impact of the traffic adjustment (+0.16€/SU) for the costs not subject to traffic risk sharing to be charged in future years; and mostly
- the deduction of the other revenues (-93.46€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 4.5%.

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

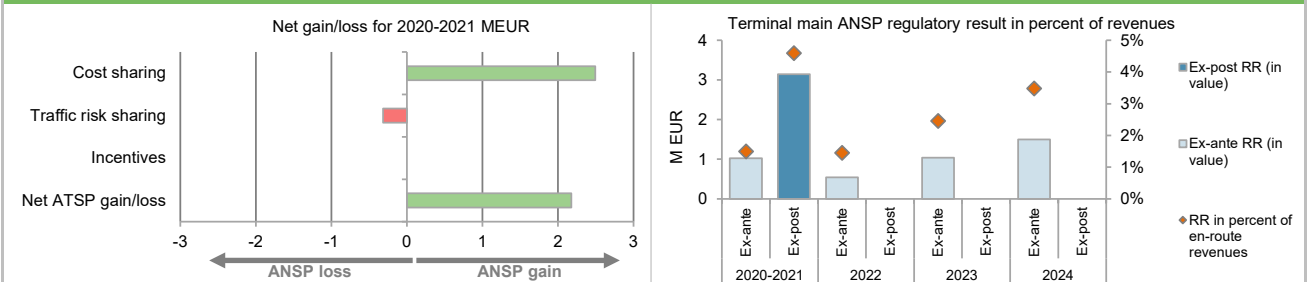
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	2,087			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	473			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-66			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>2,493</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	-0.5%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	64,241			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>-316</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>2,178</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

skeys planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	28,427	28,182	56,609	32,001	36,884	47,381
Proportion of financing through equity (in %)	89%	72%	81%	68%	74%	83%
RoE pre-tax rate (in %)	2.2%	2.3%	2.2%	2.5%	3.8%	3.8%
RoE (in value)	559	465	1,024	546	1,043	1,500
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>559</b>	<b>465</b>	<b>1,024</b>	<b>546</b>	<b>1,043</b>	<b>1,500</b>
<b>Revenue for the terminal charging zone</b>	<b>33,130</b>	<b>35,164</b>	<b>68,294</b>	<b>37,678</b>	<b>42,485</b>	<b>43,117</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>1.7%</b>	<b>1.3%</b>	<b>1.5%</b>	<b>1.4%</b>	<b>2.5%</b>	<b>3.5%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>2.2%</b>	<b>2.3%</b>	<b>2.2%</b>	<b>2.5%</b>	<b>3.8%</b>	<b>3.8%</b>
skeys actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	28,427	24,680	53,106			
Proportion of financing through equity (in %)	89%	72%	81%			
RoE pre-tax rate (in %)	2.2%	2.3%	2.2%			
RoE (in value)	559	407	966			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	2,178	2,178			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>559</b>	<b>2,585</b>	<b>3,143</b>			
<b>Revenue for the terminal charging zone</b>	<b>33,130</b>	<b>35,255</b>	<b>68,385</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>1.7%</b>	<b>7.3%</b>	<b>4.6%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>2.2%</b>	<b>14.6%</b>	<b>7.3%</b>			

13. Focus on main ANSP regulatory result on terminal activity



Skkeys net gain on activity in the Belgium-Brussels terminal charging zone in the combined year 2020-2021

Skkeys reported a net gain of +2.2 M€, resulting from a gain of +2.5 M€ arising from the cost sharing mechanism and a loss of -0.3 M€ arising from the traffic risk sharing mechanism.

Skkeys overall regulatory results (RR) for the terminal activity

Ex-post, the overall RR corresponding to the net gain from the terminal activity mentioned above (+2.2 M€) and the RoE (+1.0 M€) amounts to +3.1 M€ (4.6% of the terminal revenues), compared to 1.5% ex-ante. The resulting ex-post rate of return on equity is 7.3%, which is higher than the 2.2% planned in the PP.



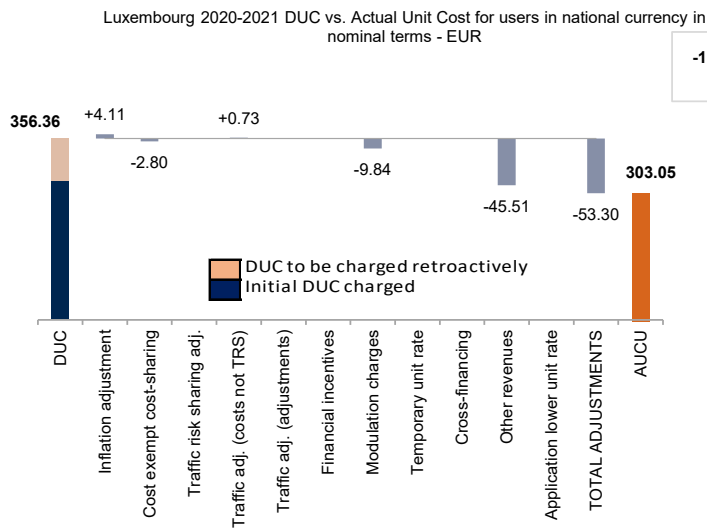
1. Contextual economic information: terminal air navigation services						
· Luxembourg TCZ represents 1.1% of the SES terminal ANS actual costs in 2019				· Airports with fewer than 80,000 IFR mvmts:	1	
· Number of airports in charging zone in 2021:	1	of which:		· Airports with more than 80,000 IFR mvmts:	0	
· National currency:	EUR					
· Performance Plan:	See item 1 for the en route charging zone(s).					
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Luxembourg: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal EUR)	14,886,778	15,998,271	30,885,049	14,758,082	15,289,170	15,808,863
Inflation %	0.0%	0.9%		1.8%	1.9%	1.9%
Inflation index (100 in 2017)	103.6	104.6		106.4	108.4	110.5
Real terminal costs (EUR2017)	14,426,430	15,402,852	29,829,282	13,982,483	14,246,111	14,497,279
Total terminal service units	40,007	46,661	86,668	53,623	57,101	58,613
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>360.60</b>	<b>330.10</b>	<b>344.18</b>	<b>260.76</b>	<b>249.49</b>	<b>247.34</b>
Luxembourg: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal EUR)	14,886,778	14,950,684	29,837,462			
Inflation %	0.0%	3.5%				
Inflation index (100 in 2017)	103.6	107.3				
Real terminal costs (EUR2017)	14,426,430	14,065,550	28,491,980			
Total terminal service units	40,007	45,367	85,374			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>360.60</b>	<b>310.04</b>	<b>333.73</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal EUR)	in value	0	-1,047,587	-1,047,587		
	in %	+0.0%	-6.5%	-3.4%		
Inflation %	in p.p.	0.0 p.p.	2.6 p.p.			
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	2.7 p.p.			
Real terminal costs (EUR2017)	in value	0	-1,337,302	-1,337,302		
	in %	+0.0%	-8.7%	-4.5%		
Total terminal service units	in value	0	-1,294	-1,294		
	in %	-	-2.8%	-1.5%		
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-20.06</b>	<b>-10.45</b>		
	<b>in %</b>	<b>+0.0%</b>	<b>-6.1%</b>	<b>-3.0%</b>		
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>					
	<b>in %</b>					
4. Focus on terminal DUC monitoring at charging zone level						
<b>AUC vs DUC</b>			<p>2020-2021 actual vs. planned TNSUs</p> <p>Threshold -10%   Threshold +10%</p> <p>Dead-band -2%   Dead-band +2%</p> <p>-1.5%</p>			
The AUC for the combined year 2020-2021 is lower than the planned DUC (by -3.0%, or -10.45 €2017). This is due to the combination of lower than planned TNSUs (-1.5%) and lower than planned terminal costs in real terms (by -4.5%, or -1.3 M€2017).						
<b>Terminal service units</b>			<p>Costs by entity at TCZ level (M€2017):</p> <p>Main ANSP -4.2%</p> <p>Other ANSP(s) -13.5%</p> <p>NSA -4.5%</p> <p>Total CZ -4.5%</p>			
The difference between actual and planned TNSUs (-1.5%) falls within the ±2% dead band. Hence the resulting loss is borne by the ANSPs (see item 11).						
<b>Terminal costs by entity at charging zone level</b>			<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs 0.1%</p> <p>Other operating costs -11.6%</p> <p>Depreciation -4.8%</p> <p>Cost of capital -38.4%</p> <p>Exceptional costs -4.2%</p> <p>Total Main ANSP -4.2%</p>			
Actual real terminal costs for 2020-2021 are -4.5% (-1.3 M€2017) lower than planned. This result is driven by the main ANSP, ANA (-4.2%, or -1.2 M€2017), while the NSA costs are also lower than planned (-13.5%, or -0.1 M€2017).						
<b>Terminal costs for the main ANSP (ANA) at charging zone level</b>						
Overall, the terminal costs in real terms for ANA in 2020-2021 were lower than the determined costs from the performance plan (by -4.2%, or -1.2 M€2017). This results from:						
- slightly higher staff costs (+0.1%), "mainly due to the, so far, higher success rate of ATC students, which is well above the expected 50%";						
- significantly lower other operating costs (-11.6%), mainly due to "lower overhead costs";						
- lower depreciation (-4.8%). "Due to budget constraints, ANA had to revise the investment plan which lead to project cancellations and postponements. The main difference in comparison to the plan is related to the later capitalisation of the A-SMGCS project on December 31 only, although it was initially foreseen for mid-2021"; and						
- lower cost of capital (-38.4%), due to the significantly lower net current assets..						

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	272.37
DUC to be charged retroactively	83.99
<b>DUC</b>	<b>356.36</b>
Inflation adjustment	4.11
Cost exempt from cost-sharing	-2.80
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	0.73
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	-9.84
Temporary UR**	
Cross-financing	0.00
Other revenues	-45.51
Application of lower unit rate	0.00
Total adjustments	-53.30
<b>AUCU</b>	<b>303.05</b>
<b>AUCU vs. DUC</b>	<b>-15.0%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

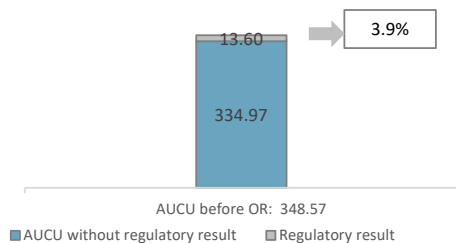
7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-126	-1.47
Competent authorities and qualified entities costs	-114	-1.33
Eurocontrol costs	0	0.00
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-239</b>	<b>-2.80</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ATSP(S)	EUR '000	EUR/SU
ANA LUX	1,161	13.60
METSP(s)	EUR '000	EUR/SU
<b>Total charging zone</b>	<b>1,161</b>	<b>13.60</b>
<b>Actual cost for users***</b>	<b>29,759</b>	<b>348.57</b>
<b>Regulatory result (% AUCU)</b>	<b>3.9%</b>	<b>3.9%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Luxembourg terminal charging zone (303.05€) is -15.0% lower than the nominal DUC (356.36€) which includes DUC initially charged: 272.37€; and to be charged: 83.99€. The difference between these two figures (-53.30€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+4.11€/SU);
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-2.80€/SU);
- the impact of the traffic adjustment (+0.73€/SU) for the costs not subject to traffic risk sharing to be charged in future years;
- the adjustment to ensure revenue neutrality for modulation of charges (-9.84€/SU); and mostly
- the deduction of the other revenues (-45.51€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 3.9%.

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

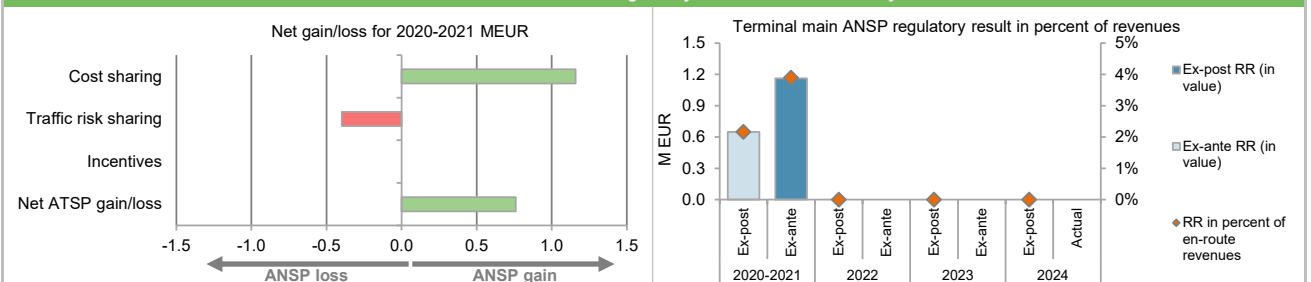
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	934			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	351			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-126			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>1,159</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	-1.5%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	26,686			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>-398</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>761</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

ANA LUX planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	11,080	25,218	36,298	25,044	28,598	28,179
Proportion of financing through equity (in %)	100%	100%	100%	100%	100%	100%
RoE pre-tax rate (in %)	1.8%	1.8%	1.8%	0.0%	0.0%	0.0%
RoE (in value)	198	451	649	0	0	0
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>198</b>	<b>451</b>	<b>649</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Revenue for the terminal charging zone</b>	<b>14,530</b>	<b>15,515</b>	<b>30,044</b>	<b>14,758</b>	<b>15,289</b>	<b>15,809</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>1.4%</b>	<b>2.9%</b>	<b>2.2%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>1.8%</b>	<b>1.8%</b>	<b>1.8%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
ANA LUX actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	11,080	11,313	22,393			
Proportion of financing through equity (in %)	100%	100%	100%			
RoE pre-tax rate (in %)	1.8%	1.8%	1.8%			
RoE (in value)	198	202	400			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	761	761			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>198</b>	<b>963</b>	<b>1,161</b>			
<b>Revenue for the terminal charging zone</b>	<b>14,530</b>	<b>15,342</b>	<b>29,871</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>1.4%</b>	<b>6.3%</b>	<b>3.9%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>1.8%</b>	<b>8.5%</b>	<b>5.2%</b>			

13. Focus on main ANSP regulatory result on terminal activity



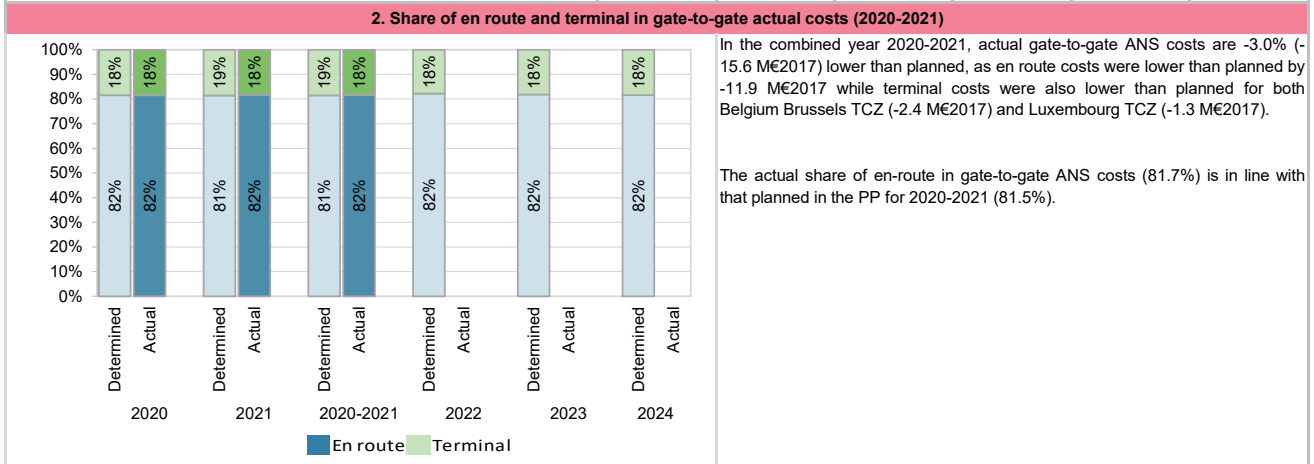
ANA net gain on activity in Luxembourg terminal charging zone in the combined year 2020-2021

ANA reported a net gain of +0.8 M€, resulting from a gain of +1.2 M€ arising from the cost sharing mechanism and a loss of -0.4 M€ arising from the traffic risk sharing mechanism.

ANA overall regulatory results (RR) for the terminal activity

Ex-post, the overall RR corresponding to the net gain from the terminal activity mentioned above (+0.8 M€) and the RoE (+0.4 M€) amounts to +1.2 M€ (3.9% of the terminal revenues), compared to 2.2% ex-ante. The resulting ex-post rate of return on equity is 5.2%, which is higher than the 1.8% planned in the PP.

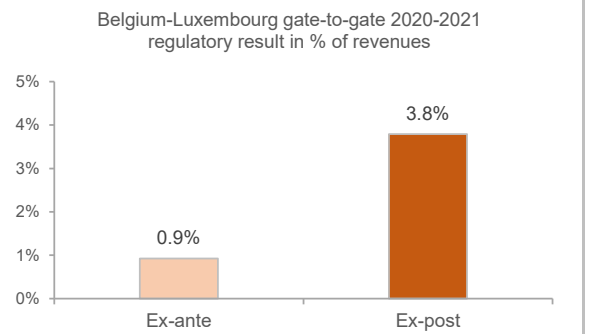
1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1:	Belgium-Luxembourg	En route charging zone 2:	N/A				
Terminal charging zone 1:	Belgium Brussels	Terminal charging zone 2:	Luxembourg				
Belgium-Luxembourg: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		207,900,840	216,999,041	424,899,880	220,164,809	230,239,134	228,481,759
Real terminal costs (EUR2017)		47,043,378	49,456,299	96,499,677	47,627,623	51,089,359	51,530,095
Real gate-to-gate costs (EUR2017)		254,944,217	266,455,340	521,399,557	267,792,432	281,328,492	280,011,853
En route share (%)		81.5%	81.4%	81.5%	82.2%	81.8%	81.6%
Belgium-Luxembourg: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		207,900,840	205,143,235	413,044,074			
Real terminal costs (EUR2017)		47,043,378	45,719,907	92,763,284			
Real gate-to-gate costs (EUR2017)		254,944,217	250,863,142	505,807,359			
En route share (%)		81.5%	81.8%	81.7%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017)	in value	0	-15,592,198	-15,592,198			
	in %	0.0%	-5.9%	-3.0%			
En route share	in p.p.	-0.0 p.p.	0.3 p.p.	0.2 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In EUR '000							
ANSP(S)	RR	Ex-ante			Ex-post		
		Revenues	RR % revenues	RR	Revenues	RR % revenues	
skeyes (Belgium-Lux)	3,713	328,322	1.1%	16,156	330,540	4.9%	
ANA LUX	921	45,008	2.0%	1,843	44,929	4.1%	
MUAC (Belgium)	0	124,213	0.0%	1,101	125,314	0.9%	
MUAC (Luxembourg)	0	3,842	0.0%	34	3,876	0.9%	
METSP(s)	RR	Revenues	RR % revenues	RR	Revenues	RR % revenues	
<b>Total</b>	<b>4,634</b>	<b>501,385</b>	<b>0.9%</b>	<b>19,134</b>	<b>504,660</b>	<b>3.8%</b>	

For the ANSPs providing services in the en route and terminal charging zones of Belgium and Luxembourg covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +19.1 M€ (+14.8 M€ for en route; +3.1 M€ for Belgium-Brussels terminal charging zone, and +1.2 M€ for Luxembourg terminal charging zone (see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 3.8% of gate-to-gate ANS revenues.

This is higher than the return planned for the year included in the performance plan (0.9%).



# **Annual Monitoring Report 2021**

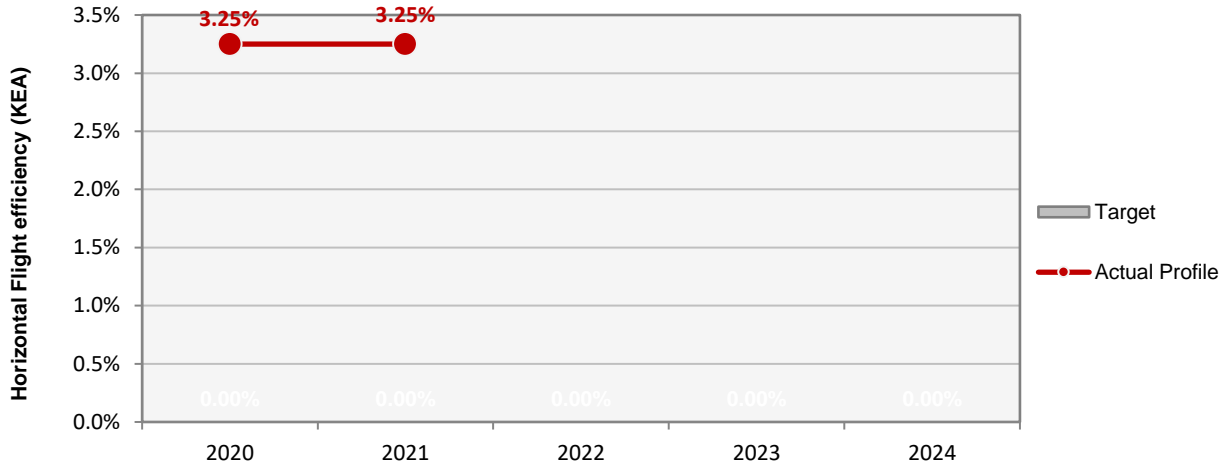
## Local level view

### France

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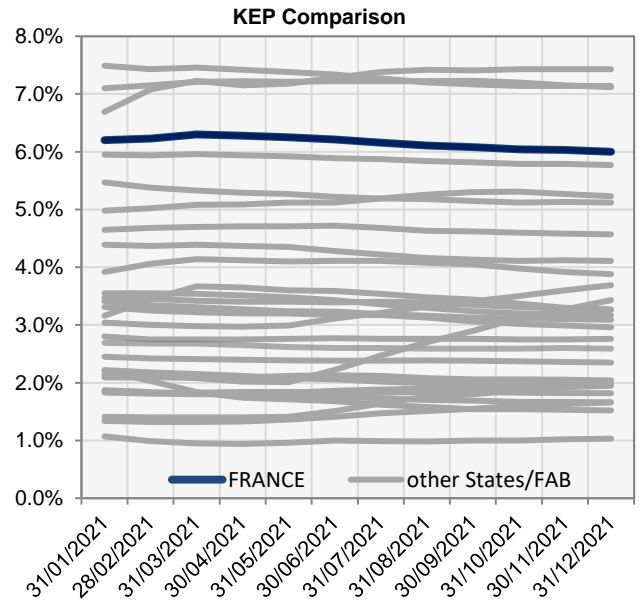
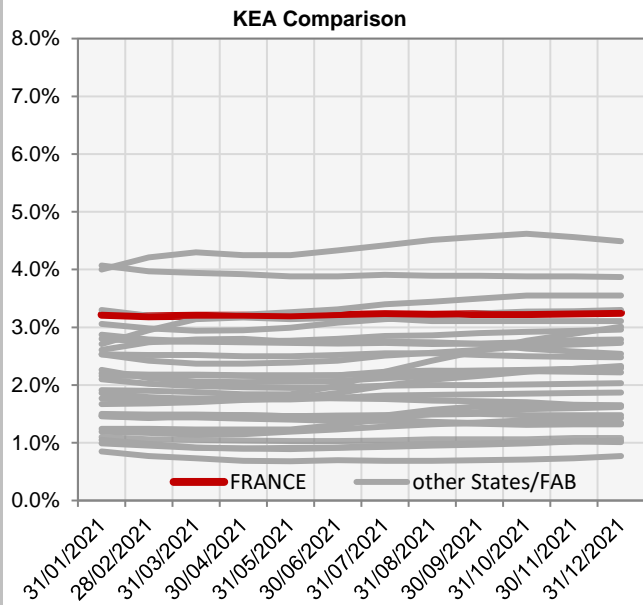
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>DSNA</b>	95	C	C	D	C	C
<p>Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.</p>						
Observations						
<p>Improvements in maturity levels have been observed with respect 2020, reaching already the 2024 targtes in all components.</p>						

KEA					
	2020	2021	2022	2023	2024
Target	n/a	n/a	n/a	n/a	n/a
Actual performance	3.25%	3.25%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	3.22%	3.19%	3.20%	3.20%	3.19%	3.21%	3.23%	3.22%	3.23%	3.23%	3.24%	3.25%
KEP	6.20%	6.23%	6.30%	6.28%	6.25%	6.21%	6.16%	6.11%	6.08%	6.04%	6.03%	6.00%
KES	5.90%	5.92%	5.97%	5.97%	5.96%	5.92%	5.89%	5.86%	5.83%	5.80%	5.80%	5.78%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.



**1. Overview**

For France, the scope of the RP3 monitoring comprises a total of 58 airports. However, in accordance with IR (EU) 2019/317 and the traffic figures, only 6 of those airports must be monitored for additional taxi-out and ASMA times. 52 of these 58 airports are grouped into a basket ("LFX") for monitoring and target setting purposes.

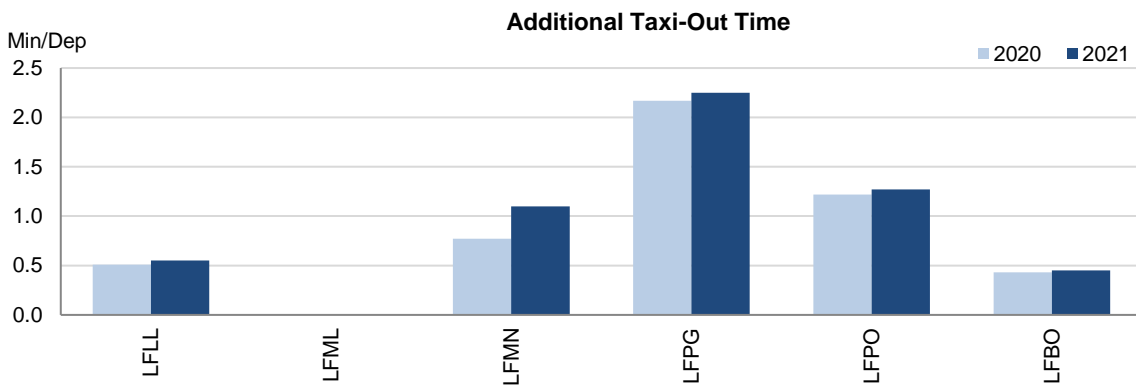
The Airport Operator Data Flow, necessary for the monitoring of the additional times, is established for the 6 airports required. Nevertheless, the data quality in the case for Marseille (LFML) does not allow for the calculation of taxi-out times.

The traffic at the ensemble of these 58 airports in 2021 is still 40% below the 2019 levels, despite the 27% increase with respect to 2020.

Except for a significant increase in the additional ASMA times at Nice (LFMN), the additional times in general remain at similar levels as in 2020.

The share of CDO flights decreased even further in 2021. The 6 airports with the lowest share of CDO are French.

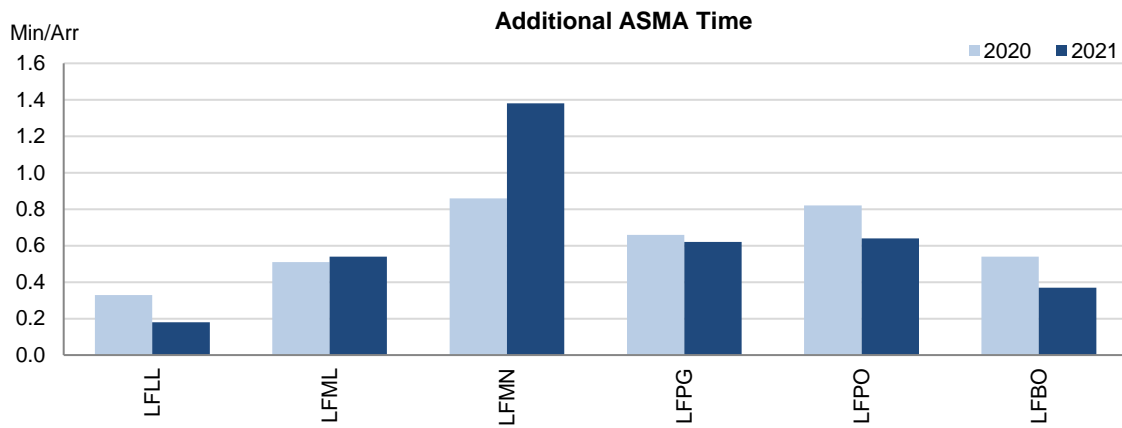
**2. Additional Taxi-Out Time**



Although at annual level most airports show similar performance as in 2020, the evolution is very different along the year. For the first 3 to 5 months depending on the airport, the additional taxi-out times at French airports under monitoring were lower than in 2020. But with the recovery of the traffic the performance deteriorated the national average between June and December was 70% higher than in 2020. Nevertheless, these additional times were still 45% better than in 2019.

According to FABEC monitoring report: *Regarding France, 2021 performance is quite similar to 2020 achievement except at Nice where, in 2020 very low traffic was reported whereas 2021 was a year with much higher traffic close to 2019 levels.*

### 3. Additional ASMA Time

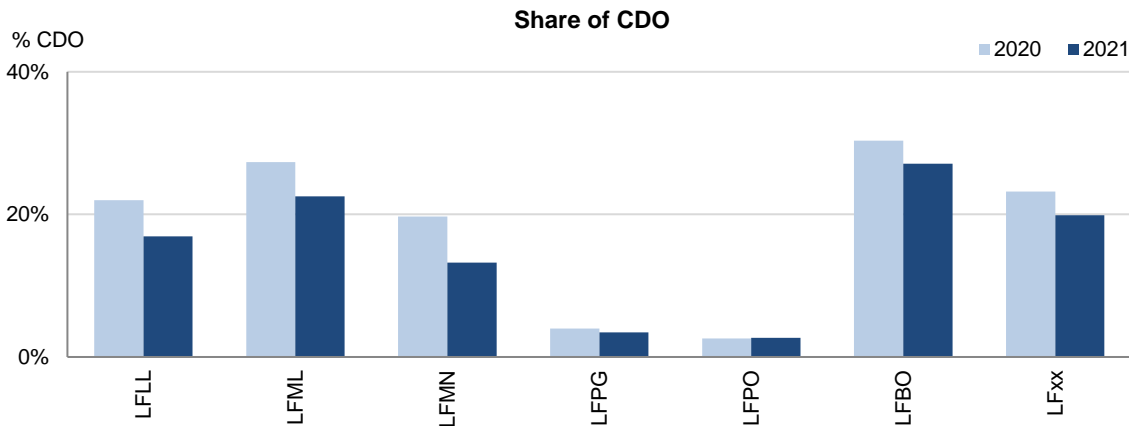


Like observed in the additional taxi-out times, in general the annual average of the additional ASMA times does not show a significant change with respect to 2020 (except for Nice). However once more this is the result of considerably better performance in the first three months of the year, and notably longer additional ASMA times than in 2020 alongside the traffic recovery during the rest of the year.

At Nice, where the traffic recovered better than at the rest of French airports, additional times increased significantly (LFMN; 2019: 1.76 min/arr.; 2020: 0.86 min/arr.; 2021: 1.38 min/arr.) reaching 2019 levels in the second half of the year and resulting in the second highest additional ASMA times amongst the SES monitored airports.

According to FABEC monitoring report: Regarding France, 2021 performance is quite similar to 2020 achievement or even better, except at Nice where, in 2020 very low traffic was reported whereas 2021 was a year of strong recovery for this airport, with much higher traffic close to 2019 levels.

### 4. Share of arrivals applying CDO



For 11 out of the 58 airports, the share of CDO flights was above the RP3 overall value in 2021 (30.5%). In 2021, 13.9% of the arrivals performed a CDO compared to 16.5% in 2020.

The Paris airports have a remarkably low share of CDO flights. The 6 airports with the lowest share of CDO flights in 2021 are French, followed by Frankfurt. As in 2020, Paris-Le Bourget (LFPB) has the lowest share of CDO flights of all airports monitored during 2021 (0.8%).

According to the FABEC monitoring report: *Regarding French airports, Green Aviation Plan is to be developed for the top ten airports in France with the objective of vertical profiles improvements ( Ops Dept Task Force ); Octavie Project at Toulouse; SESAR PJ 01 and SESAR PJ 38, and Albatros project are on going for vertical improvements.*

## 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Lyon/Saint-Exupéry-LFLL	0.51	0.55				0.33	0.18				22%	17%			
Marseille/Provence-LFML	n/a	n/a				0.51	0.54				27%	23%			
Nice/Côte d'Azur-LFMN	0.77	1.1				0.86	1.38				20%	13%			
Paris/Charles-De-Gaulle-LFPG	2.17	2.25				0.66	0.62				4%	3%			
Paris/Orly-LFPO	1.22	1.27				0.82	0.64				3%	3%			
Toulouse/Blagnac-LFBO	0.43	0.45				0.54	0.37				30%	27%			
Agen/La-Garenne-LFBA	-	-				-	-				20%	13%			
Ajaccio/Napoléon-Bonaparte-LFKJ	-	-				-	-				39%	32%			
Albert/Bray-LFAQ	-	-				-	-				29%	31%			
Annecy/Meythet-LFLP	-	-				-	-				16%	13%			
Avignon/Caumont-LFMV	-	-				-	-				14%	12%			
Bale/Mulhouse-LFSB	-	-				-	-				18%	13%			
Bastia/Poretta-LFKB	-	-				-	-				40%	33%			
Beauvais/Tillé-LFOB	-	-				-	-				8%	7%			
Bergerac/Roumanière-LFBE	-	-				-	-				15%	13%			
Béziers/Vias-LFMU	-	-				-	-				27%	25%			
Biarritz/Bayonne-Anglet-LFBZ	-	-				-	-				26%	21%			
Bordeaux/Merignac-LFBD	-	-				-	-				32%	27%			
Brest/Bretagne-LFRB	-	-				-	-				33%	33%			
Brive/Souillac-LFSL	-	-				-	-				15%	20%			
Caen/Carpiquet-LFRK	-	-				-	-				11%	10%			
Calvi/Sainte-Catherine-LFKC	-	-				-	-				37%	34%			
Cannes/Mandelieu-LFMD	-	-				-	-				13%	9%			
Carcassonne/Salvaza-LFMK	-	-				-	-				19%	19%			
Châlons/Vatry-LFOK	-	-				-	-				27%	28%			
Chambéry/Aix-les-Bains-LFLB	-	-				-	-				9%	14%			
Châteauroux/Déols-LFLX	-	-				-	-				12%	10%			
Clermont-Ferrand/Auvergne-LFLC	-	-				-	-				22%	16%			
Deauville/Normandie-LFRG	-	-				-	-				11%	11%			
Dinard/Pleurtuit-Saint-Malo-LFRD	-	-				-	-				19%	13%			
Dole/Tavaux-LFGJ	-	-				-	-				13%	12%			
Figari/Sud-Corse-LFKF	-	-				-	-				35%	32%			
Grenoble/Isère-LFLS	-	-				-	-				18%	20%			
Hyères/Le-Palyvestre-LFTH	-	-				-	-				30%	22%			
Istres/Le-Tubé-LFMI	-	-				-	-				31%	24%			
La-Rochelle/Ile de Ré-LFBH	-	-				-	-				26%	22%			
Lille/Lesquin-LFQQ	-	-				-	-				29%	24%			
Limoges/Bellegarde-LFBL	-	-				-	-				30%	31%			
Lorient/Lann-Bihoué-LFRH	-	-				-	-				30%	28%			
Lyon/Bron-LFLY	-	-				-	-				10%	7%			
Metz-Nancy/Lorraine-LFJL	-	-				-	-				9%	8%			
Montpellier/Méditerranée-LFMT	-	-				-	-				33%	30%			
Nantes/Atlantique-LFRS	-	-				-	-				27%	23%			
Nîmes/Garons-LFTW	-	-				-	-				18%	20%			
Paris/Le Bourget-LFPB	-	-				-	-				1%	1%			
Pau/Pyrénées-LFBP	-	-				-	-				22%	16%			
Perpignan/Rivesaltes-LFMP	-	-				-	-				43%	39%			
Poitiers/Biard-LFBI	-	-				-	-				16%	12%			
Quimper/Pugan-LFRQ	-	-				-	-				29%	25%			

Rennes/St-Jacques-LFRN	-	-									53%	49%			
Rodez/Marcillac-LFCR	-	-									17%	16%			
Rouen/Vallée-de-Seine-LFOP	-	-									29%	28%			
Saint-Etienne/Bouthéon-LFMH	-	-									11%	12%			
Saint-Nazaire/Montoir-LFRZ	-	-									20%	22%			
Strasbourg/Entzheim-LFST	-	-									17%	14%			
Tarbes-Lourdes/Pyrénées-LFBT	-	-									63%	64%			
Tours/Val-de-Loire-LFOT	-	-									48%	46%			
Toussus/Le-Noble-LFPN	-	-									5%	5%			

1. Overview

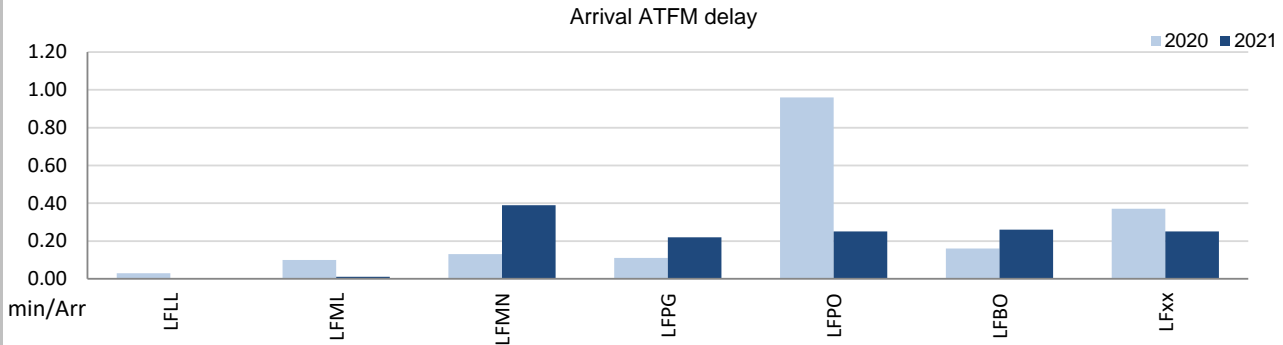
For France, the scope of the RP3 monitoring comprises a total of 58 airports. However, in accordance with IR (EU) 2019/317 and the traffic figures, only 6 of those airports must be monitored for pre-departure delays. 52 of these 58 airports are grouped into a basket ("LFXX") for monitoring and target setting purposes.

The Airport Operator Data Flow, necessary for the monitoring of the pre-departure delays, is established for the 6 airports required. Nevertheless, the quality of the reporting does not allow for the calculation of the ATC pre-departure delay at 3 of those airports, with more than 60% of the reported delay not allocated to any cause.

The traffic at the ensemble of these 58 airports in 2021 is still 40% below the 2019 levels, despite the 27% increase with respect to 2020.

Average arrival ATFM delays in 2021 was 0.23 min/arr, compared to 0.30 min/arr in 2020.  
 ATFM slot adherence has improved (2021: 88.4%; 2020: 88.1%).

2. Arrival ATFM Delay



The national average arrival ATFM delay has decreased for the second year in a row reaching 0.23 min/arr in 2021, compared with 0.30 min/arr in 2020 and 0.42 min/arr in 2019.

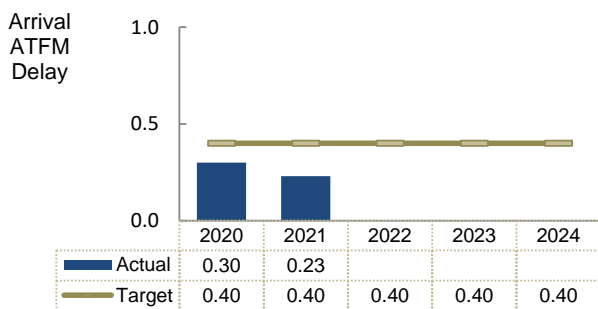
The higher delays were observed at Nice (LFMN), where the 2021 traffic recovered better than at the rest of airports (in average 35% lower than in 2019). These delays were attributed to a mix of weather reasons (34%), ATC staffing (33%), ATC capacity (16%) and equipment (13%)

Paris Charles de Gaulle (LPGA) and Paris Orly (LFPO) only showed delays in the second half of the year mostly due to weather (around 50%) and then some industrial action in July for Charles de Gaulle and ATC staffing in November-December for Orly.

Lyon (LFL) and Marseille (LFM) registered nearly zero delays.

According to FABEC's monitoring report: *At local level, all French major airports and the remaining group of airports have achieved a 2021 performance lower than their local monitoring breakdown values but Nice airport (LFMN) which had to face a strong traffic recovery during the Summer period (at the 2019 level, inducing some staff delay cause and also some technical and meteorological delay causes (densified rostering scheme should be implemented in 2022 and some additional work will be conducted regarding ATFCM and sector configuration management). It should be noted that half of 2021 limited delays (0,12 min/flight) were due to non CRSTMP delay causes.*

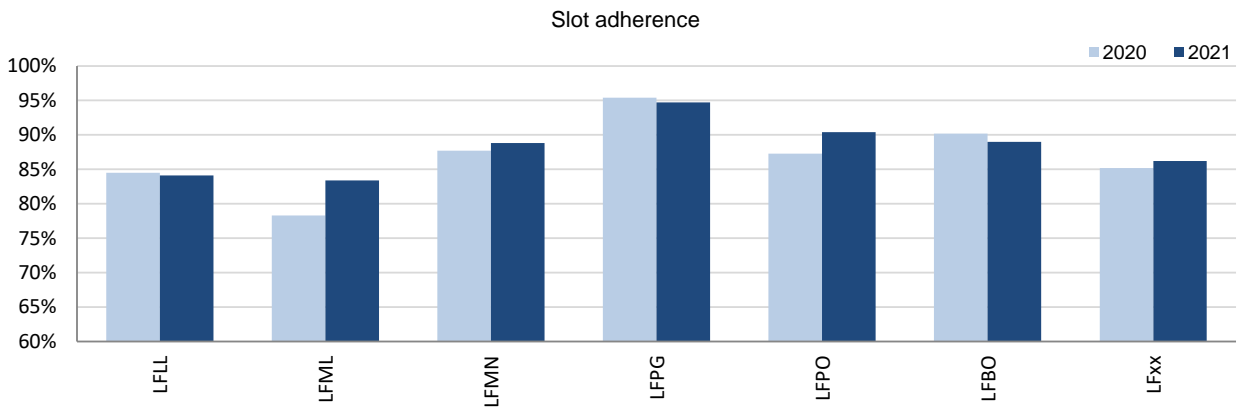
3. Arrival ATFM Delay – National Target and Incentive Scheme



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024. No bonus will be awarded to DSNAs for 2021 achievement.

#### 4. ATFM Slot Adherence



National level and main national individual airports involved are above the 80% threshold of compliance. The national average was 88.4%, slightly better than in 2020 when the adherence was 88.1%. With regard to the 11.6% of flights that did not adhere, 5.6% was early and 6% was late.

According to FABEC monitoring report: *DSNA identified in 2021 that a reason generating a lack of measured adherence in 2020 for Marseille (LFML) was a wrong information sent to NMOC. Indeed, except in the two main Paris airports, the signal for activating the flight plan in the current FDPS system of DSNA (CAUTRA) is also used as the first system activation message (FSA) signal sent to the NMOC. However, this takes place at a time after off-block time (OBT), but well before the actual take-off, while it is interpreted by NMOC as Take-Off Time (TOT). Hence, NMOC detects a large percentage of regulated flights as taking off in advance of the tolerance window, although the actual take-off time is later and actually generally within the STW.*

*This appeared in particular for Marseille (LFML) airport. This is was acknowledged by DSNA as a clear deviation on many airports where the taxiing time is significant. This default has however been corrected in Paris-Charles-de-Gaulle and Paris-Orly through a specific local system that allows sending the NMOC a correct take-off time (TOT).*

*However, an in depth analysis of past results in Marseille (LFML) conducted in 2021 has shown that the root causes were less operational in terms of ATC management but due to problems in calculating the correct CTOT; so the issue was more about the correct calibration of the CTOT calculation than about the accuracy of the detection of actual take-offs (as a reminder, either the ATS unit has an automatic take-off detection system and the "FSA" (First System Activation) message is sent to the NM as close as possible to this event, or the NM itself recalibrates the take-off time using the CPRs).*

*The Marseille (LFML) Operations Department has modified in coordination with the NM the parameters of the LFML taxi time thus the CTOT calculation has been improved and the CTOT compliance measurement has been more adequate; as a result, we can observe an increase in the CTOT compliance rate which brings LFML back to a good level: figures for 2021 now show a compliance of 83.4%.*

#### 5. ATC Pre-departure Delay

The share of unidentified delay reported by 3 out of the 6 French airports subject to this monitoring in 2020 was above 40% for more than 2 months in the year, preventing the calculation of this indicator. This is partially due to the special traffic composition during the COVID crisis, and there has been some improvement in the reporting with the traffic recovery, although not at all airports.

The insufficient data quality provided by Charles de Gaulle is a long standing issue prior to April 2020, and the reporting by Marseille has improved significantly by still not enough.

At Nice the performance has deteriorated with the traffic recovery (LFMN; 2019: 0.31 min/dep.; 2020: 0.21 min/dep.; 2021: 0.38 min/dep.). FABEC monitoring report mentions that *LFMN also faced some more capacity issues in 2021 than in 2020 due to the traffic Summer recovery.*

#### 6. All Causes Pre-departure Delay

The total (all causes) delay in the actual off block time at French airports in 2021 was between 8.28 min/dep for Toulouse(LFBO) and 17.09 min/dep. for Paris Charles de Gaulle (LFPG) which was the 4th highest among the RP3 monitored airports.

The highest delays per flight at these airports were observed in Summer and December

According to FABEC monitoring report: *Regarding LFMN: A new densified rostering scheme should be implemented in order to improve this situation. Some work will also be done to implement a better ATFCM and sector configuration management.*

*Regarding LFPG, half of the 2021 delays were due to meteorological causes and remaining 40% were due to strikes at the airport operator and also for a minor part due to the 14th July event management. No special measures is needed on the ATC side.*

## 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Lyon/Saint-Exupéry-LFLL	0.03	0				84.5%	84.1%				n/a	0.22				11.98	11.88			
Marseille/Provence-LFML	0.1	0.01				78.3%	83.4%				n/a	n/a				9.57	9.94			
Nice/Côte d'Azur-LFMN	0.13	0.39				87.7%	88.8%				0.21	0.38				7.46	10.52			
Paris/Charles-De-Gaulle-LFPG	0.11	0.22				95.4%	94.7%				n/a	n/a				12.85	17.09			
Paris/Orly-LFPO	0.96	0.25				87.3%	90.4%				n/a	0.54				13.41	12.46			
Toulouse/Blagnac-LFBO	0.16	0.26				90.2%	89.0%				n/a	n/a				8.89	8.28			
Agen-La Garenne-LFBA	0	0				79.2%	85.7%				-	-				-	-			
Ajaccio-Napoléon-Bonaparte-LFKJ	0	0.05				76.4%	71.3%				-	-				-	-			
Albert-Bray-LFAQ	0	0				44.0%	72.7%				-	-				-	-			
Anncy-Meythet-LFLP	0.16	0.06				74.9%	82.3%				-	-				-	-			
Avignon-Caumont-LFMV	0.23	0.02				78.7%	84.8%				-	-				-	-			
Bâle-Mulhouse-LFSB	0.41	0.05				87.4%	89.2%				-	-				-	-			
Bastia-Poretta-LFKB	0	0.06				80.7%	87.0%				-	-				-	-			
Beauvais-Tillé-LFOB	0.05	0.01				72.6%	89.3%				-	-				-	-			
Bergerac-Roumanière-LFBE	0	0.14				81.8%	89.4%				-	-				-	-			
Béziers-Vias-LFMU	0	0				68.5%	70.7%				-	-				-	-			
Biarritz-Bayonne-Anglet-LFBZ	0.05	0.15				88.8%	93.0%				-	-				-	-			
Bordeaux-Mérignac-LFBD	0.77	0.07				91.5%	89.7%				-	-				-	-			
Brest-Bretagne-LFRB	0	0.05				97.0%	83.8%				-	-				-	-			
Brive-Souillac-LFSL	0	0				95.7%	85.6%				-	-				-	-			
Caen-Carpiquet-LFRK	0	0				94.2%	92.3%				-	-				-	-			
Calvi-Sainte-Catherine-LFKC	0.07	0.28				82.1%	87.3%				-	-				-	-			
Cannes-Mandelieu-LFMD	2.97	3				93.4%	90.2%				-	-				-	-			
Carcassonne-Salvaza-LFMK	0	0				81.8%	84.3%				-	-				-	-			
Châlons-Vatry-LFOK	0.5	0.78				78.0%	86.1%				-	-				-	-			
Chambéry-Aix-les-Bains-LFLB	1.67	0.08				89.3%	82.5%				-	-				-	-			
Châteauroux-Déols-LFLX	0	0				86.7%	84.9%				-	-				-	-			
Clermont-Ferrand-Auvergne-LFLC	0	0.01				81.5%	86.9%				-	-				-	-			
Deauville-Normandie-LFRG	0	0				90.0%	88.6%				-	-				-	-			

Dinard-Pleurtuit-Saint-Malo-LFRD	0	0			61.3%	93.2%					-	-			-	-		
Dôle-Tavaux-LFGJ	0	0			59.4%	77.5%					-	-			-	-		
Figari-Sud Corse-LFKF	0.18	1.24			80.3%	76.8%					-	-			-	-		
Grenoble-Isère-LFLS	0.5	0.02			93.6%	85.2%					-	-			-	-		
Hyères-Le Palyvestre-LFTH	0.06	0.04			81.1%	88.3%					-	-			-	-		
Istres-Le Tubé-LFMI	0	0			66.7%	68.4%					-	-			-	-		
La Rochelle-Ile de Ré-LFBH	0	0			81.3%	89.2%					-	-			-	-		
Lille-Lesquin-LFQQ	0.33	0.01			86.1%	87.7%					-	-			-	-		
Limoges-Bellegarde-LFBL	0.19	0.11			93.4%	92.4%					-	-			-	-		
Lorient-Lann Bihoué-LFRH	0	0			88.8%	88.3%					-	-			-	-		
Lyon-Bron-LFLY	0.01	0			89.5%	83.8%					-	-			-	-		
Metz-Nancy-Lorraine-LFJL	0	0			82.5%	84.6%					-	-			-	-		
Montpellier-Méditerranée-LFMT	0.01	0			75.1%	84.6%					-	-			-	-		
Nantes-Atlantique-LFRS	0.24	0.08			91.6%	91.3%					-	-			-	-		
Nîmes-Garons-LFTW	0	0.02			83.4%	82.5%					-	-			-	-		
Paris-Le Bourget-LFPB	0.6	0.53			94.2%	95.3%					-	-			-	-		
Pau-Pyrénées-LFBP	1.45	0			85.9%	87.6%					-	-			-	-		
Perpignan-Rivesaltes-LFMP	0.07	0.03			77.4%	77.0%					-	-			-	-		
Poitiers-Biard-LFBI	0	0			87.8%	72.5%					-	-			-	-		
Quimper-Pluguffan-LFRQ	0	0			84.7%	90.6%					-	-			-	-		
Rennes-Saint-Jacques-LFRN	0	0			78.7%	86.7%					-	-			-	-		
Rodez-Marcillac-LFCR	0	0			88.5%	82.5%					-	-			-	-		
Rouen-LFOP	0.13	0.27			74.2%	83.9%					-	-			-	-		
Saint-Etienne-Bouthéon-LFMH	0	0			79.6%	86.8%					-	-			-	-		
Saint-Nazaire-Montoir-LFRZ	0	0			97.2%	94.7%					-	-			-	-		
Strasbourg-Entzheim-LFST	0.03	0.01			79.6%	88.9%					-	-			-	-		
Tarbes-Lourdes Pyrénées-LFBT	0	0.02			90.5%	91.3%					-	-			-	-		
Tours-Val de Loire-LFOT	0	0.11			50.0%	0.0%					-	-			-	-		
Toussus-le-Noble-LFPN	0.97	0.89			77.7%	88.3%					-	-			-	-		



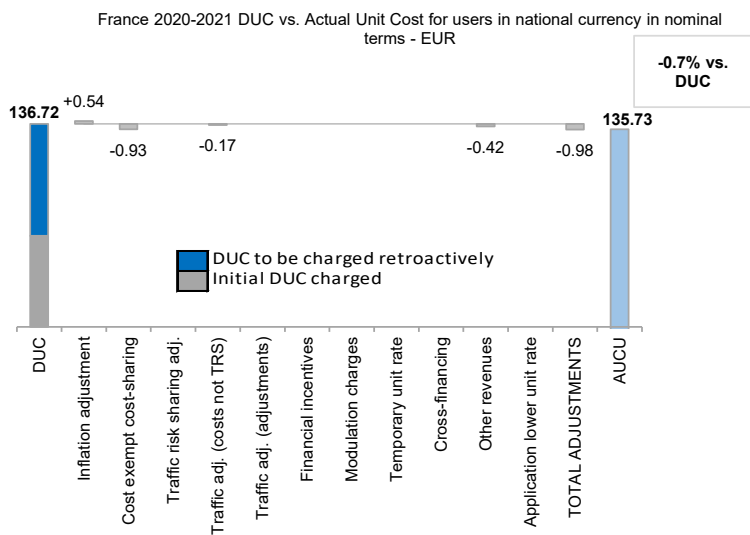
1. Contextual economic information: en route air navigation services																				
· France ECZ represents 21.0% of the SES en route ANS actual costs in 2019						· FAB: FABEC														
· National currency: EUR																				
· Performance Plan: RP3 draft performance plan dated 17 November 2021 and found inconsistent as per Commission Decision (EU) 2022/728 of 13 April 2022																				
FABEC has submitted a revised RP3 draft performance plan in July 2022, currently under assessment.																				
2. Monitoring of the en route determined unit cost (DUC) at charging zone level																				
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.																				
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.																				
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)																				
France: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D														
En route costs (nominal EUR)	1,331,065,667	1,337,151,151	2,668,216,818	1,356,571,126	1,382,095,349	1,407,430,933														
Inflation %	0.5%	1.1%		1.2%	1.3%	1.4%														
Inflation index (100 in 2017)	103.9	105.1		106.3	107.7	109.3														
Real en route costs (EUR2017)	1,290,838,451	1,286,494,015	2,577,332,466	1,293,612,485	1,305,142,346	1,315,459,035														
Total en route service units	8,547,246	10,969,138	19,516,384	16,989,960	21,020,185	22,464,259														
<b>Real en route DUC per service unit (EUR2017)</b>	<b>151.02</b>	<b>117.28</b>	<b>132.06</b>	<b>76.14</b>	<b>62.09</b>	<b>58.56</b>														
France: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A														
En route costs (nominal EUR)	1,331,065,667	1,319,090,332	2,650,155,999																	
Inflation %	0.5%	2.1%																		
Inflation index (100 in 2017)	103.9	106.1																		
Real en route costs (EUR2017)	1,290,838,451	1,258,437,805	2,549,276,256																	
Total en route service units	8,547,246	11,180,520	19,727,767																	
<b>Real en route AUC per service unit (EUR2017)</b>	<b>151.02</b>	<b>112.56</b>	<b>129.22</b>																	
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024														
En route costs (nominal EUR)																				
in value	0	-18,060,819	-18,060,819																	
in %	-	-1.4%	-0.7%																	
Inflation %																				
in p.p.	0.0 p.p.	1.0 p.p.																		
Inflation index (100 in 2017)																				
in p.p.	0.0 p.p.	1.1 p.p.																		
Real en route costs (EUR2017)																				
in value	0	-28,056,210	-28,056,210																	
in %	-	-2.2%	-1.1%																	
Total en route service units																				
in value	0	211,382	211,382																	
in %	-	+1.9%	+1.1%																	
<b>Real en route unit cost per service unit (EUR2017)</b>																				
in value	<b>0.00</b>	<b>-4.73</b>	<b>-2.84</b>																	
in %	-	<b>-4.0%</b>	<b>-2.1%</b>																	
4. Focus on en route DUC monitoring at charging zone level																				
<b>AUC vs DUC</b>			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      +1.1%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>																	
<p>In the combined year 2020-2021, the AUC was lower than the planned DUC (by -2.1%, or -2.84€2017). This results from the combination of higher than planned TSUs (+1.1%) and lower than planned en route costs in real terms (by -1.1%, or -28.1 M€2017).</p>			<p>Costs by entity at ECZ level (M€2017):</p> <table border="1"> <tr><td>Main ANSP</td><td>-1.0%</td></tr> <tr><td>Other ANSP(s)</td><td>-0.2%</td></tr> <tr><td>METSP(s)</td><td>-3.5%</td></tr> <tr><td>NSA/EUROCONTROL</td><td>-1.1%</td></tr> <tr><td>Total CZ</td><td>-1.1%</td></tr> </table>				Main ANSP	-1.0%	Other ANSP(s)	-0.2%	METSP(s)	-3.5%	NSA/EUROCONTROL	-1.1%	Total CZ	-1.1%				
Main ANSP	-1.0%																			
Other ANSP(s)	-0.2%																			
METSP(s)	-3.5%																			
NSA/EUROCONTROL	-1.1%																			
Total CZ	-1.1%																			
<p><b>En route service units</b></p> <p>The difference between actual and planned TSUs (+1.1%) falls within the ±2% dead band. Hence the resulting additional revenue is kept by the ANSPs (see items 10 to 14).</p>			<p>Costs by nature for main ANSP (M€2017):</p> <table border="1"> <tr><td>Staff costs</td><td>-1.3%</td></tr> <tr><td>Other operating costs</td><td>-5.9%</td></tr> <tr><td>Depreciation</td><td>-1.3%</td></tr> <tr><td>Cost of capital</td><td>5.3%</td></tr> <tr><td>Exceptional costs</td><td>-3.8%</td></tr> <tr><td>VFR exempted flights</td><td>-1.0%</td></tr> <tr><td>Total Main ANSP</td><td>-1.0%</td></tr> </table>				Staff costs	-1.3%	Other operating costs	-5.9%	Depreciation	-1.3%	Cost of capital	5.3%	Exceptional costs	-3.8%	VFR exempted flights	-1.0%	Total Main ANSP	-1.0%
Staff costs	-1.3%																			
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Cost of capital	5.3%																			
Exceptional costs	-3.8%																			
VFR exempted flights	-1.0%																			
Total Main ANSP	-1.0%																			
<p><b>En route costs by entity at charging zone level</b></p> <p>Actual real en route costs for 2020-2021 are -1.1% (-28.1 M€2017) lower than planned. This result is driven by the main ANSP, DSNA (-1.0%, or -21.9 M€2017), the MET service provider (-0.2% or -0.3 M€2017) and the NSA/EUROCONTROL costs (-3.5%, or -5.8 M€2017).</p>																				
<p><b>En route costs for the main ANSP (DSNA) at charging zone level</b></p> <p>The lower than planned en route costs in real terms for DSNA in 2020-2021 (-1.0%, or -21.9 M€2017 lower) result from:</p> <ul style="list-style-type: none"> <li>- slightly lower staff costs (-1.3%);</li> <li>- slightly higher other operating costs (+1.3%);</li> <li>- lower depreciation (-5.9%), "mainly in relation with the postponement of commissioning from 2021 to 2022 and the transfer of part of the investment costs to project-related OPEX costs";</li> <li>- higher cost of capital (+5.3%), due to increases in both the asset base (+1.3%) and WACC (+0.08 p.p.);</li> <li>- lower deduction for VFR exempted flights (-3.8%).</li> </ul>																				

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	61.27
DUC to be charged retroactively	75.45
<b>DUC</b>	<b>136.72</b>
Inflation adjustment	0.54
Cost exempt from cost-sharing	-0.93
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.17
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	-0.42
Application of lower unit rate	0.00
Total adjustments	-0.98
<b>AUCU</b>	<b>135.73</b>
<b>AUCU vs. DUC</b>	<b>-0.7%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

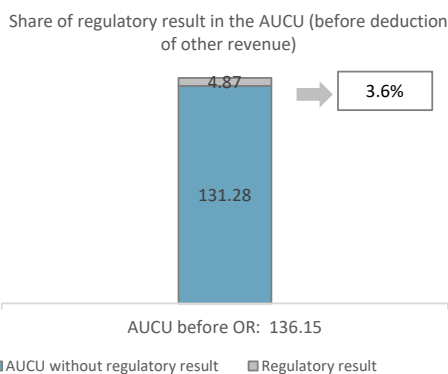
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC ((part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-12,594	-0.64
Competent authorities and qualified entities costs	-232	-0.01
Eurocontrol costs	-5,607	-0.28
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-18,432</b>	<b>-0.93</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level



ANSP(S)	EUR '000	EUR/SU
DSNA	95,570	4.84
METSP(s)	EUR '000	EUR/SU
France MET	464	0.02
<b>Total charging zone</b>	<b>96,034</b>	<b>4.87</b>
<b>Actual cost for users***</b>	<b>2,686,011</b>	<b>136.15</b>
<b>Regulatory result (% AUCU)</b>	<b>3.6%</b>	<b>3.6%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for France en route charging zone (135.73€) is -0.7% lower than the nominal DUC (136.72) which includes DUC initially charged: 61.27€; and to be charged: 75.45€. The difference between these two figures (-0.98€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.54€/SU);
- the deduction of the traffic adjustment (-0.17€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- the deduction of the other revenues (-0.42€/SU);
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.93€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU is 3.6%

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

11. Net gain/loss for the main ANSP for the en route activity at charging zone level

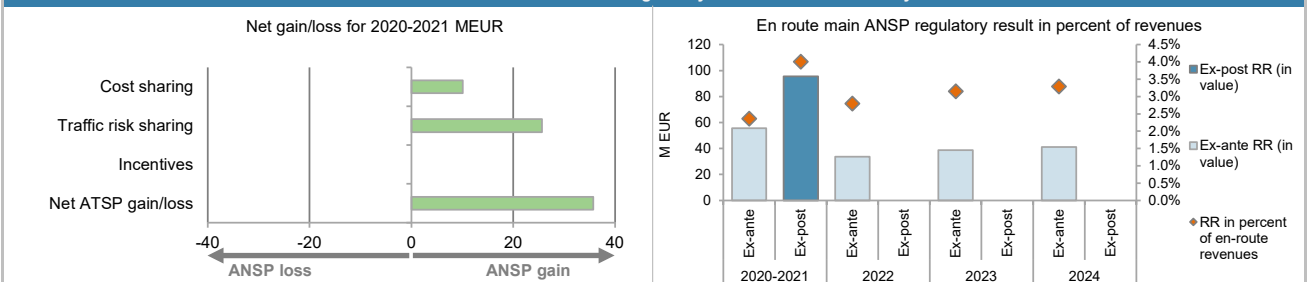
Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	12,493			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	10,038			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-12,464			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>10,067</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	1.1%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	2,367,281			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>25,640</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>35,707</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

DSNA planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	1,589,985	2,353,579	3,943,563	2,557,204	2,301,959	2,005,386
Proportion of financing through equity (in %)	13%	5%	8%	8%	12%	17%
RoE pre-tax rate (in %)	14.9%	21.1%	17.1%	16.2%	13.7%	11.9%
RoE (in value)	31,213	24,500	55,713	33,669	38,654	41,207
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>31,213</b>	<b>24,500</b>	<b>55,713</b>	<b>33,669</b>	<b>38,654</b>	<b>41,207</b>
<b>Revenue for the en route charging zone</b>	<b>1,181,681</b>	<b>1,185,600</b>	<b>2,367,281</b>	<b>1,204,247</b>	<b>1,228,395</b>	<b>1,253,531</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>2.6%</b>	<b>2.1%</b>	<b>2.4%</b>	<b>2.8%</b>	<b>3.1%</b>	<b>3.3%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>14.9%</b>	<b>21.1%</b>	<b>17.1%</b>	<b>16.2%</b>	<b>13.7%</b>	<b>11.9%</b>
DSNA actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	1,589,985	2,404,210	3,994,194			
Proportion of financing through equity (in %), see note	13%	6%	9%			
RoE pre-tax rate (in %)	14.9%	21.1%	17.3%			
RoE (in value)	31,213	28,650	59,863			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	35,707	35,707			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>31,213</b>	<b>64,357</b>	<b>95,570</b>			
<b>Revenue for the en route charging zone</b>	<b>1,181,681</b>	<b>1,208,814</b>	<b>2,390,495</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>2.6%</b>	<b>5.3%</b>	<b>4.0%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>14.9%</b>	<b>47.5%</b>	<b>27.7%</b>			

**Note:** Since the planned and actual share of financing through equity is very low, change in net gain/loss has a significant impact on the calculated ex-post rate of return on equity (RoE).

13. Focus on the main ANSP regulatory result on en route activity



DSNA net gain on en route activity in the France charging zone in the combined year 2020-2021

DSNA's net gain amounts to +35.7 ME, as a combination of a gain of +10.1 ME arising from the cost sharing mechanism and a gain of +25.6 ME arising from the traffic risk sharing mechanism.

DSNA overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+35.7 ME) and the actual RoE (+59.9 ME) amounts to +95.6 ME (4.0% of the en route revenues). The resulting ex-post rate of return on equity is 27.7%, which is higher than the 17.1% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
France MET planned regulatory result (EUR '000)	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	45	45	90	45	46	46
Revenue for the en route charging zone	67,575	68,442	136,017	68,410	69,385	69,379
Ex-ante regulatory result (+/-) in percent of revenues	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Ex-ante RoE pre-tax rate (in %)	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
France MET actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	45	419	464			
Revenue for the en route charging zone	67,575	68,862	136,437			
Ex-post regulatory result (+/-) in percent of revenues	0.1%	0.6%	0.3%			
Ex-post RoE pre-tax rate (in %)	0.1%	1.1%	0.6%			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for METSP in France en route charging zone corresponds to 0.3% of the en route revenues.						
The ex-post RoE 0.6% is higher than planned 0.1%.						

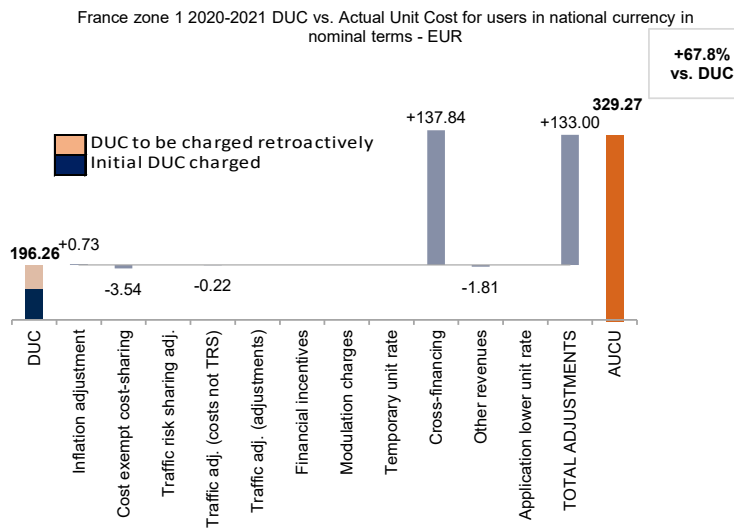
1. Contextual economic information: terminal air navigation services						
· France zone 1 TCZ represents 4.7% of the SES terminal ANS actual costs in 2019			· Airports with fewer than 80,000 IFR mvmts:	0		
· Number of airports in charging zone in 2021:	2	of which:	· Airports with more than 80,000 IFR mvmts:	2		
· National currency:	EUR					
· Performance Plan:	See item 1 for the en route charging zone(s).					
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
France zone 1: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal EUR)	56,623,602	57,425,761	114,049,362	58,939,208	60,366,031	61,594,406
Inflation %	0.5%	1.1%		1.2%	1.3%	1.4%
Inflation index (100 in 2017)	103.9	105.1		106.3	107.7	109.3
Real terminal costs (EUR2017)	54,964,503	55,348,158	110,312,661	56,375,904	57,265,874	57,925,436
Total terminal service units	267,166	313,933	581,099	492,532	560,294	592,207
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>205.73</b>	<b>176.31</b>	<b>189.83</b>	<b>114.46</b>	<b>102.21</b>	<b>97.81</b>
France zone 1: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal EUR)	56,623,602	52,910,714	109,534,315			
Inflation %	0.5%	2.1%				
Inflation index (100 in 2017)	103.9	106.1				
Real terminal costs (EUR2017)	54,964,503	50,542,382	105,506,885			
Total terminal service units	267,166	324,427	591,593			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>205.73</b>	<b>155.79</b>	<b>178.34</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal EUR)	in value	0	-4,515,047	-4,515,047		
	in %	-	-7.9%	-4.0%		
Inflation %	in p.p.	0.0 p.p.	1.0 p.p.			
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	1.1 p.p.			
Real terminal costs (EUR2017)	in value	0	-4,805,776	-4,805,776		
	in %	-	-8.7%	-4.4%		
Total terminal service units	in value	0	10,494	10,494		
	in %	-	+3.3%	+1.8%		
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-20.52</b>	<b>-11.49</b>		
	<b>in %</b>	<b>-</b>	<b>-11.6%</b>	<b>-6.1%</b>		
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>					
	<b>in %</b>					
4. Focus on terminal DUC monitoring at charging zone level						
<b>AUC vs. DUC</b>			<p>2020-2021 actual vs. planned TNSUs</p> <p>Threshold -10%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p> <p>+1.8%</p>			
<p>In the combined year 2020-2021, the terminal AUC was -6.1% (or -11.49€2017) lower than the planned DUC. This results from the combination of higher than planned TNSUs (+1.8%) and lower than planned terminal costs in real terms (-4.4%, or -4.8 M€2017).</p> <p><b>Terminal service units</b></p> <p>The difference between actual and planned TNSUs (+1.8%) falls within the ±2% dead band. Hence the resulting additional terminal revenue is kept by the ANSPs (see items 10 to 14).</p> <p><b>Terminal costs by entity</b></p> <p>Actual real terminal costs are -4.4% (-4.8 M€2017) lower than planned. This is driven by the main ANSP, DSNA (-4.6%, or -4.8 M€2017), the MET service provider (-0.1%, or -0.01 M€2017) and NSA costs (-4.5% or -0.03 M€2017).</p> <p><b>Terminal costs for the main ANSP (DSNA) at charging zone level</b></p> <p>The lower than planned terminal costs in real terms for DSNA (-4.6%, or -4.8 M€2017) result from:</p> <ul style="list-style-type: none"> <li>- lower staff costs (-2.3%);</li> <li>- lower other operating costs (-4.2%);</li> <li>- lower depreciation (-12.0%), mainly in relation with the postponement of commissioning from 2021 to 2022 (contractual negotiations for SYSAT project which were expected to be concluded by the end of 2021 have been delayed to early 2022 therefore shifting some expenditures from 2021 to 2022, including some related OPEX) and the transfer of some investment costs to project-related OPEX costs;</li> <li>- lower cost of capital (-0.5%), due to decrease in net current assets (8.2%), compensating increase in NBV (+4.9%) and WACC (+0.07 p.p.);</li> <li>- higher deduction for VFR exempted flights (+70.3%).</li> </ul>			<p><b>Costs by entity at TCZ level (M€2017):</b></p> <p><b>Costs by nature for main ANSP (M€2017):</b></p>			

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	110.46
DUC to be charged retroactively	85.81
<b>DUC</b>	<b>196.26</b>
Inflation adjustment	0.73
Cost exempt from cost-sharing	-3.54
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.22
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	137.84
Other revenues	-1.81
Application of lower unit rate	0.00
Total adjustments	133.00
<b>AUCU</b>	<b>329.27</b>
<b>AUCU vs. DUC</b>	<b>67.8%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

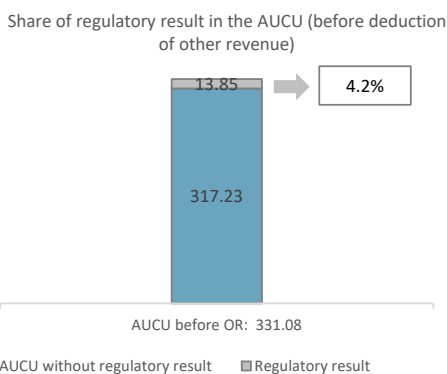
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC ((part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-2066	-3.49
Competent authorities and qualified entities costs	-28	-0.05
Eurocontrol costs	0	0.00
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-2094</b>	<b>-3.54</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	EUR '000	EUR/SU
DSNA	8,175	13.82
METSP(s)	EUR '000	EUR/SU
France zone 1-MET	18	0.03
<b>Total charging zone</b>	<b>8,194</b>	<b>13.85</b>
<b>Actual cost for users***</b>	<b>195,864</b>	<b>331.08</b>
<b>Regulatory result (% AUCU)</b>	<b>4.2%</b>	<b>4.2%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for France terminal charging zone 1 (329.27€) is +67.8% higher than the nominal DUC (196.26€) which includes DUC initially charged: 110.46€, and to be charged: 85.81€. The difference between these two figures (+133.00€/SU) is due to:

- cross-financing France terminal charging zone 2 (+137.84€/SU);
- the positive inflation adjustment resulting from higher than planned inflation (+0.73€/SU);
- the deduction of the traffic adjustment (-0.22€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- the deduction of the other revenues (-1.81€/SU);
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-3.54€/SU).

The share of regulatory result (see items 10 to 14) in the terminal AUCU is 4.2%.

10. Monitoring of the terminal ANSPs regulatory results (RR)																																				
<p>The <b>Regulatory Result (RR)</b> corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.</p> <p>The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.</p> <p>- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.</p> <p>- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.</p> <p>The <b>net gain/loss</b> calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).</p> <p>The monitoring of the RR is carried out in national currency in nominal terms.</p>																																				
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level																																				
<b>Cost sharing (EUR '000)</b>																																				
	2020-2021	2022	2023	2024																																
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	4,506																																			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	407																																			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-2,060																																			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>2,853</b>																																			
<b>Traffic risk sharing (EUR '000)</b>																																				
	2020-2021	2022	2023	2024																																
Difference in total service units (actual vs PP) %	1.8%																																			
Determined costs subject to traffic risk sharing for the ANSP (PP)	106,793																																			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>1,929</b>																																			
<b>Incentives (EUR '000)</b>																																				
	2020-2021	2022	2023	2024																																
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>																																			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>4,781</b>																																			
12. Regulatory result (RR) for the main ANSP at charging zone level																																				
<b>DSNA planned regulatory result (EUR '000) from RP3 PP</b>																																				
	2020	2021	2020-2021D	2022	2023	2024																														
Total asset base	118,981	158,658	277,639	176,689	167,138	152,019																														
Proportion of financing through equity (in %)	11%	4%	7%	8%	12%	16%																														
RoE pre-tax rate (in %)	14.9%	21.1%	17.1%	16.2%	13.7%	11.9%																														
RoE (in value)	1,872	1,479	3,351	2,279	2,683	2,808																														
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>1,872</b>	<b>1,479</b>	<b>3,351</b>	<b>2,279</b>	<b>2,683</b>	<b>2,808</b>																														
<b>Revenue for the terminal charging zone</b>	<b>52,996</b>	<b>53,797</b>	<b>106,793</b>	<b>55,312</b>	<b>56,692</b>	<b>57,920</b>																														
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>3.5%</b>	<b>2.7%</b>	<b>3.1%</b>	<b>4.1%</b>	<b>4.7%</b>	<b>4.8%</b>																														
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>14.9%</b>	<b>21.1%</b>	<b>17.1%</b>	<b>16.2%</b>	<b>13.7%</b>	<b>11.9%</b>																														
<b>DSNA actual regulatory result (EUR '000)</b>																																				
	2020	2021	2020-2021A	2022	2023	2024																														
Total asset base	118,981	147,742	266,723																																	
Proportion of financing through equity (in %), see note	11%	5%	7%																																	
RoE pre-tax rate (in %)	14.9%	21.1%	17.2%																																	
RoE (in value)	1,872	1,522	3,394																																	
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	4,781	4,781																																	
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>1,872</b>	<b>6,303</b>	<b>8,175</b>																																	
<b>Revenue for the terminal charging zone</b>	<b>52,996</b>	<b>54,073</b>	<b>107,069</b>																																	
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>3.5%</b>	<b>11.7%</b>	<b>7.6%</b>																																	
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>14.9%</b>	<b>87.5%</b>	<b>41.3%</b>																																	
<b>13. Focus on main ANSP regulatory result on terminal activity</b>																																				
<p><b>Net gain/loss for 2020-2021 MEUR</b></p> <table border="1"> <tr><th>Category</th><th>Value (MEUR)</th></tr> <tr><td>Cost sharing</td><td>+2.9</td></tr> <tr><td>Traffic risk sharing</td><td>+1.9</td></tr> <tr><td>Incentives</td><td>0</td></tr> <tr><td>Net ATSP gain/loss</td><td>+4.8</td></tr> </table> <p><b>Terminal main ANSP regulatory result in percent of revenues</b></p> <table border="1"> <tr><th>Year</th><th>Ex-ante RR (in value)</th><th>Ex-post RR (in value)</th><th>RR in percent of en-route revenues</th></tr> <tr><td>2020-2021</td><td>3.5%</td><td>3.5%</td><td>3.5%</td></tr> <tr><td>2022</td><td>2.7%</td><td>11.7%</td><td>11.7%</td></tr> <tr><td>2023</td><td>3.1%</td><td>7.6%</td><td>7.6%</td></tr> <tr><td>2024</td><td>4.1%</td><td>4.8%</td><td>4.8%</td></tr> </table>							Category	Value (MEUR)	Cost sharing	+2.9	Traffic risk sharing	+1.9	Incentives	0	Net ATSP gain/loss	+4.8	Year	Ex-ante RR (in value)	Ex-post RR (in value)	RR in percent of en-route revenues	2020-2021	3.5%	3.5%	3.5%	2022	2.7%	11.7%	11.7%	2023	3.1%	7.6%	7.6%	2024	4.1%	4.8%	4.8%
Category	Value (MEUR)																																			
Cost sharing	+2.9																																			
Traffic risk sharing	+1.9																																			
Incentives	0																																			
Net ATSP gain/loss	+4.8																																			
Year	Ex-ante RR (in value)	Ex-post RR (in value)	RR in percent of en-route revenues																																	
2020-2021	3.5%	3.5%	3.5%																																	
2022	2.7%	11.7%	11.7%																																	
2023	3.1%	7.6%	7.6%																																	
2024	4.1%	4.8%	4.8%																																	
<p><b>DSNA net gain on activity in the France terminal charging zone 1 in the combined year 2020-2021</b></p> <p>DSNA's net gain amounts to +4.8 M€ due to gains of +2.9 M€ from the cost sharing mechanism and of +1.9 M€ from the traffic risk sharing mechanism.</p> <p><b>DSNA overall regulatory results (RR) for the terminal charging zone 1 activity</b></p> <p>Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+4.8 M€) and the actual RoE (+3.4 M€) amounts to +8.2 M€ (7.6% of the terminal revenues). The resulting ex-post rate of return on equity is 41.3%, which is higher than the 17.1% planned in the PP.</p>																																				

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
France zone 1-MET planned regulatory result (EUR '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	2	2	4	2	2	2
Revenue for the terminal charging zone	3,300	3,342	6,642	3,341	3,388	3,388
Ex-ante regulatory result (+/-) in percent of revenues	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Ex-ante RoE pre-tax rate (in %)	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
France zone 1-MET actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	2	16	18			
Revenue for the terminal charging zone	3,300	3,364	6,664			
Ex-post regulatory result (+/-) in percent of revenues	0.1%	0.5%	0.3%			
Ex-post RoE pre-tax rate (in %)	0.1%	0.1%	0.1%			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity</b>						
Ex-post, the overall RR for METSP in France terminal charging zone 1 corresponds to 0.3% of the terminal revenues.						
The ex-post RoE is 0.1% as it was planned.						



1. Contextual economic information: terminal air navigation services						
· France zone 2 TCZ represents 15.8% of the SES terminal ANS actual costs in 2019			· Airports with fewer than 80,000 IFR mvmts:	52		
· Number of airports in charging zone in 2021:	56	of which:	· Airports with more than 80,000 IFR mvmts:	4		
· National currency:	EUR					
· Performance Plan:	See item 1 for the en route charging zone(s).					
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
France zone 2: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal EUR)	192,084,499	190,365,182	382,449,681	190,383,772	191,305,181	192,111,965
Inflation %	0.5%	1.1%		1.2%	1.3%	1.4%
Inflation index (100 in 2017)	103.9	105.1		106.3	107.7	109.3
Real terminal costs (EUR2017)	185,717,482	182,368,576	368,086,058	180,553,386	179,399,599	178,028,515
Total terminal service units	244,439	314,005	558,444	508,702	529,498	557,181
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>759.77</b>	<b>580.78</b>	<b>659.13</b>	<b>354.93</b>	<b>338.81</b>	<b>319.52</b>
France zone 2: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal EUR)	192,084,499	200,248,171	392,332,669			
Inflation %	0.5%	2.1%				
Inflation index (100 in 2017)	103.9	106.1				
Real terminal costs (EUR2017)	185,717,482	190,128,162	375,845,644			
Total terminal service units	244,439	316,501	560,940			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>759.77</b>	<b>600.72</b>	<b>670.03</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal EUR)						
in value	0	9,882,989	9,882,989			
in %	-	+5.2%	+2.6%			
Inflation %						
in p.p.	0.0 p.p.	1.0 p.p.				
Inflation index (100 in 2017)						
in p.p.	0.0 p.p.	1.1 p.p.				
Real terminal costs (EUR2017)						
in value	0	7,759,586	7,759,586			
in %	-	+4.3%	+2.1%			
Total terminal service units						
in value	0	2,496	2,496			
in %	-	+0.8%	+0.4%			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>19.94</b>	<b>10.90</b>		
	<b>in %</b>	<b>-</b>	<b>+3.4%</b>	<b>+1.7%</b>		
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>					
	<b>in %</b>					
4. Focus on terminal DUC monitoring at charging zone level						
<b>AUC vs. DUC</b>			<p>2020-2021 actual vs. planned TNSUs</p> <p>Threshold -10%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p> <p>+0.4%</p>			
<p>In the combined year 2020-2021, the terminal AUC was +1.7% (or +10.9€2017) higher than the planned DUC. This results from the combination of higher than planned TNSUs (+0.4%) and higher than planned terminal costs in real terms (+2.1%, or +7.8 M€2017).</p>						
<b>Terminal service units</b>			<p>Costs by entity at TCZ level (M€2017):</p> <ul style="list-style-type: none"> <li>Main ANSP: 2.4%</li> <li>Other ANSP(s): -3.0%</li> <li>METSP(s): 32.6%</li> <li>NSA: 2.1%</li> <li>Total CZ: 2.1%</li> </ul>			
<p>The difference between actual and planned TNSUs (+0.4%) falls within the ±2% dead band. Hence the resulting additional terminal revenue is kept by the ANSPs (see items 10 to 14).</p>						
<b>Terminal costs by entity</b>			<p>Costs by nature for main ANSP (M€2017):</p> <ul style="list-style-type: none"> <li>Staff costs: -0.1%</li> <li>Other operating costs: 11.5%</li> <li>Depreciation: -2.7%</li> <li>Cost of capital: 6.7%</li> <li>Exceptional costs: 1.4%</li> <li>VFR exempted flights: 2.4%</li> <li>Total Main ANSP: 2.4%</li> </ul>			
<p>Actual real terminal costs are +2.1% (+7.8 M€2017) higher than planned. This is driven by the main ANSP, DSNA (+2.4%, or +7.9 M€2017), and NSA costs (+32.6% or +0.8 M€2017), whereas costs for the MET service provider are -3.0% (or -0.9 M€2017) lower than planned.</p>						
<b>Terminal costs for the main ANSP (DSNA) at charging zone level</b>						
<p>The higher than planned terminal costs in real terms for DSNA (+2.4%, or +7.9 M€2017) result from:</p> <ul style="list-style-type: none"> <li>- slightly lower staff costs (-0.1%);</li> <li>- higher other operating costs (+11.5%);</li> <li>- lower depreciation (-2.7%), mainly in relation with the postponement of some commissioning from 2021 to 2022 and the transfer of investment costs to project related OPEX costs;</li> <li>- higher cost of capital (+6.7%), due to increase in both asset base (+2.3%) and WACC (+0.1 p.p.);</li> <li>- higher deduction for VFR exempted flights (+1.4%).</li> </ul>						

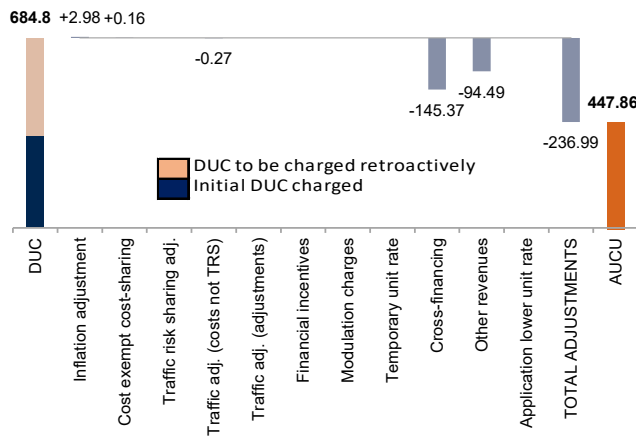
5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level

France zone 2 2020-2021 DUC vs. Actual Unit Cost for users in national currency in nominal terms - EUR



Components of the AUCU	EUR/SU
Initial DUC charged	332.16
DUC to be charged retroactively	352.69
<b>DUC</b>	<b>684.85</b>
Inflation adjustment	2.98
Cost exempt from cost-sharing	0.16
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.27
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	-145.37
Other revenues	-94.49
Application of lower unit rate	0.00
Total adjustments	-236.99
<b>AUCU</b>	<b>447.86</b>
<b>AUCU vs. DUC</b>	<b>-34.61%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC ((part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

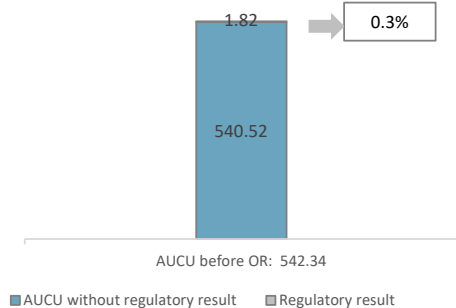
7. Terminal costs exempt from cost sharing

		EUR '000	EUR/SU
by item	New and existing investments	-665	-1.19
	Competent authorities and qualified entities costs	754	1.34
	Eurocontrol costs	0	0.00
	Pension costs	0	0.00
	Interest on loans	0	0.00
	Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>		<b>89</b>	<b>0.16</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ATSP(S)	EUR '000	EUR/SU
DSNA	217	0.39
METSP(s)	EUR '000	EUR/SU
France zone 2-MET	804	1.43
<b>Total charging zone</b>	<b>1,021</b>	<b>1.82</b>
<b>Actual cost for users***</b>	<b>304,223</b>	<b>542.34</b>
<b>Regulatory result (% AUCU)</b>	<b>0.3%</b>	<b>0.3%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for France terminal charging zone 2 (447.86€) is -34.61% lower than the nominal DUC (684.85€) which includes DUC initially charged: 332.16€; and to be charged: 352.69€. The difference between these two figures (-236.99€/SU) is due to:

- cross-financing from France terminal charging zone 1 (-145.37€/SU);
- the positive inflation adjustment resulting from higher than planned inflation (+2.98€/SU);
- the deduction of the traffic adjustment (-0.27€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- the deduction of the other revenues (-94.49€/SU);
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (+0.16€/SU).

The share of regulatory result (see items 10 to 14) in the terminal AUCU is 0.3%.

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

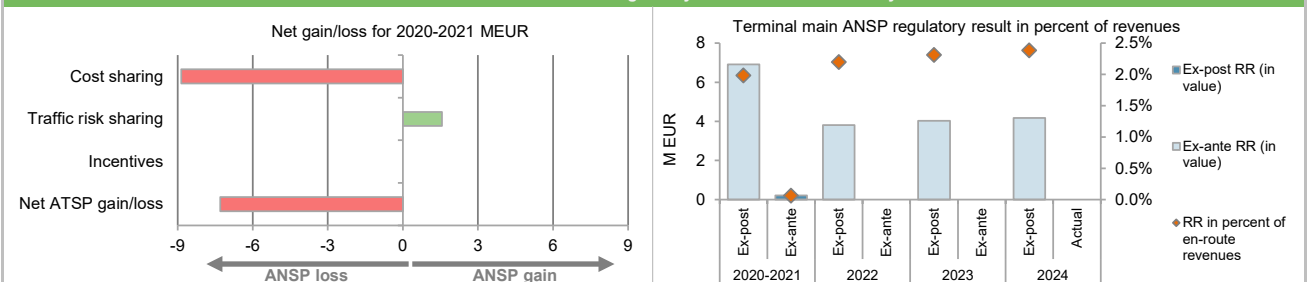
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	-9,945			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	1,544			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-458			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>-8,858</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.4%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	348,678			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>1,559</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>-7,299</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

DSNA planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	170,577	239,315	409,892	255,632	234,858	213,821
Proportion of financing through equity (in %)	15%	6%	10%	9%	13%	16%
RoE pre-tax rate (in %)	14.9%	21.1%	17.1%	16.2%	13.7%	11.9%
RoE (in value)	3,843	3,068	6,911	3,812	4,025	4,166
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>3,843</b>	<b>3,068</b>	<b>6,911</b>	<b>3,812</b>	<b>4,025</b>	<b>4,166</b>
<b>Revenue for the terminal charging zone</b>	<b>175,226</b>	<b>173,452</b>	<b>348,678</b>	<b>173,479</b>	<b>174,176</b>	<b>174,984</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>2.2%</b>	<b>1.8%</b>	<b>2.0%</b>	<b>2.2%</b>	<b>2.3%</b>	<b>2.4%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>14.9%</b>	<b>21.1%</b>	<b>17.1%</b>	<b>16.2%</b>	<b>13.7%</b>	<b>11.9%</b>
DSNA actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	170,576	248,540	419,116			
Proportion of financing through equity (in %)	15%	7%	10%			
RoE pre-tax rate (in %)	14.9%	21.1%	17.4%			
RoE (in value)	3,843	3,673	7,516			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	-7,299	-7,299			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>3,843</b>	<b>-3,627</b>	<b>217</b>			
<b>Revenue for the terminal charging zone</b>	<b>175,226</b>	<b>176,098</b>	<b>351,324</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>2.2%</b>	<b>-2.1%</b>	<b>0.1%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>14.9%</b>	<b>-20.9%</b>	<b>0.5%</b>			

13. Focus on main ANSP regulatory result on terminal activity



DSNA net loss on activity in the France terminal charging zone 2 in the combined year 2020-2021

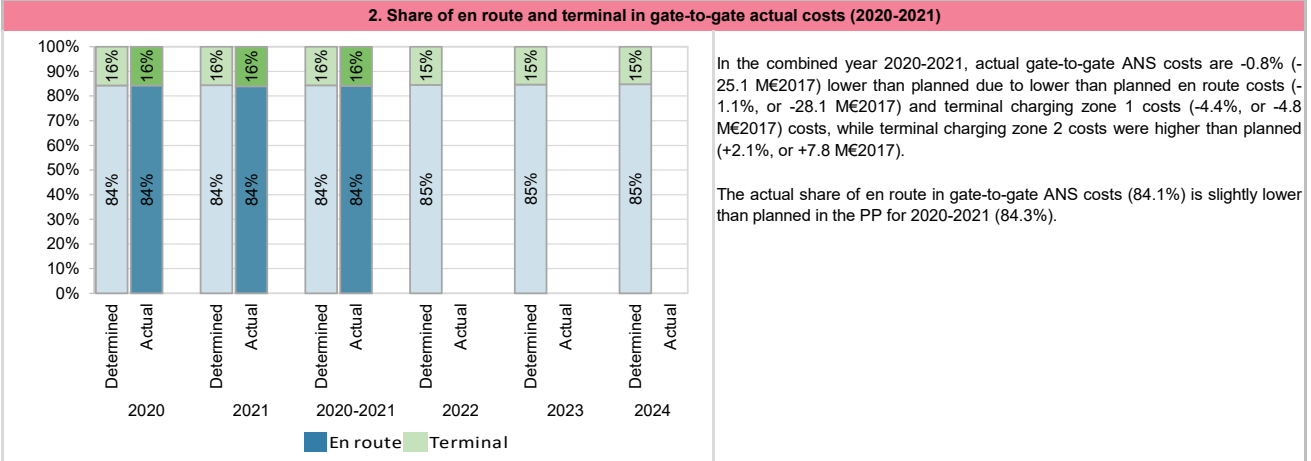
DSNA's net loss amounts to -7.3 M€ due to loss of -8.9 M€ from the cost sharing mechanism and gain of +1.6 M€ from the traffic risk sharing mechanism.

DSNA overall regulatory results (RR) for the terminal charging zone 2 activity

Ex-post, the overall RR taking into account the net loss from the terminal activity mentioned above (-7.3 M€) and the actual RoE (+7.5 M€) amounts to +0.2 M€ (0.1% of the terminal revenues). The resulting ex-post rate of return on equity is 0.5%, which is lower than the 17.1% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
France zone 2-MET planned regulatory result (EUR '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	10	10	21	10	11	11
Revenue for the terminal charging zone	15,629	15,830	31,459	15,822	16,048	16,046
Ex-ante regulatory result (+/-) in percent of revenues	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Ex-ante RoE pre-tax rate (in %)	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
France zone 2-MET actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	10	794	804			
Revenue for the terminal charging zone	15,629	15,749	31,378			
Ex-post regulatory result (+/-) in percent of revenues	0.1%	5.0%	2.6%			
Ex-post RoE pre-tax rate (in %)	0.1%	8.8%	4.5%			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity</b>						
Ex-post, the overall RR for METSP in France terminal charging zone 2 corresponds to 2.6% of the terminal revenues.						
The ex-post RoE 4.5% is higher than planned 0.1%.						

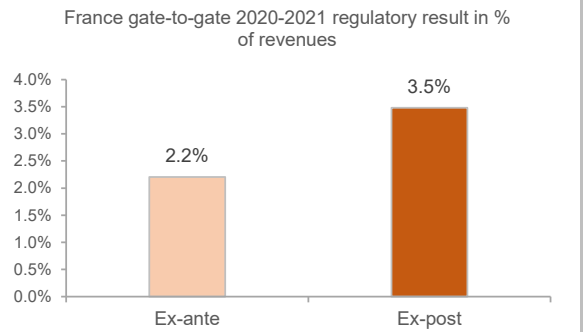
1. Monitoring of gate-to-gate ANS costs						
Charging zones concerned:						
En route charging zone 1: France		En route charging zone 2:				
Terminal charging zone 1: France zone 1		Terminal charging zone 2: France zone 2				
France: data from RP3 performance plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)	1,290,838,451	1,286,494,015	2,577,332,466	1,293,612,485	1,305,142,346	1,315,459,035
Real terminal costs (EUR2017)	240,681,985	237,716,734	478,398,719	236,929,290	236,665,473	235,953,951
Real gate-to-gate costs (EUR2017)	1,531,520,436	1,524,210,749	3,055,731,185	1,530,541,774	1,541,807,819	1,551,412,986
En route share (%)	84.3%	84.4%	84.3%	84.5%	84.7%	84.8%
France: actual data from reporting tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)	1,290,838,451	1,258,437,805	2,549,276,256			
Real terminal costs (EUR2017)	240,681,985	240,670,544	481,352,529			
Real gate-to-gate costs (EUR2017)	1,531,520,436	1,499,108,349	3,030,628,785			
En route share (%)	84.3%	83.9%	84.1%			
Difference between actuals and planned (actuals vs. PP)	2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017)						
	in value	0	-25,102,400	-25,102,400		
	in %	0.0%	-1.6%	-0.8%		
En route share	in p.p.	0.0 p.p.	-0.5 p.p.	-0.2 p.p.		



3. Gate-to-gate regulatory result (RR) 2020-2021							
In EUR '000	ANSP(S)	Ex-ante			Ex-post		
		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	DSNA	65,975	2,822,752	2.3%	103,962	2,848,887	3.6%
	<b>METSP(s)</b>						
	France MET	115	174,118	0.1%	1,286	174,478	0.7%
	<b>Total</b>	<b>66,089</b>	<b>2,996,870</b>	<b>2.2%</b>	<b>105,248</b>	<b>3,023,365</b>	<b>3.5%</b>

For the ANSPs providing services in the en route and terminal charging zones of France covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +105.2 M€ (+96.0 M€ for en route, 8.2 for terminal charging zone 1 and +1.0 M€ for terminal charging zone 2 - see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 3.5% of gate-to-gate ANS revenues.

This is higher than the return planned for the year (2.2%).



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# **Annual Monitoring Report 2021**

## Local level view

### Germany

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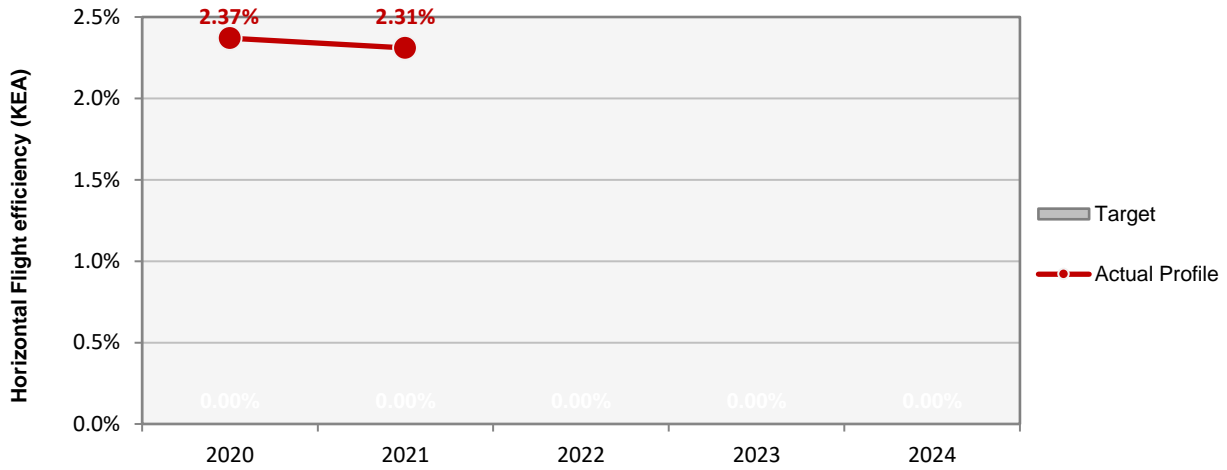
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>DFS</b>	90	C	C	D	C	C

Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.

**Observations**

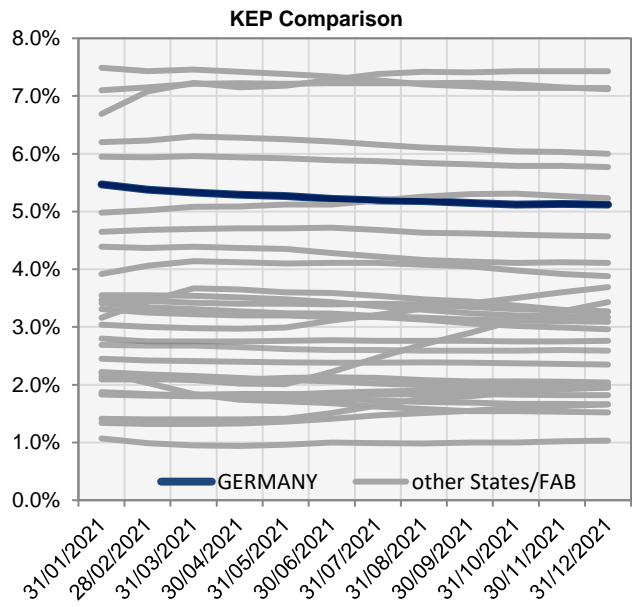
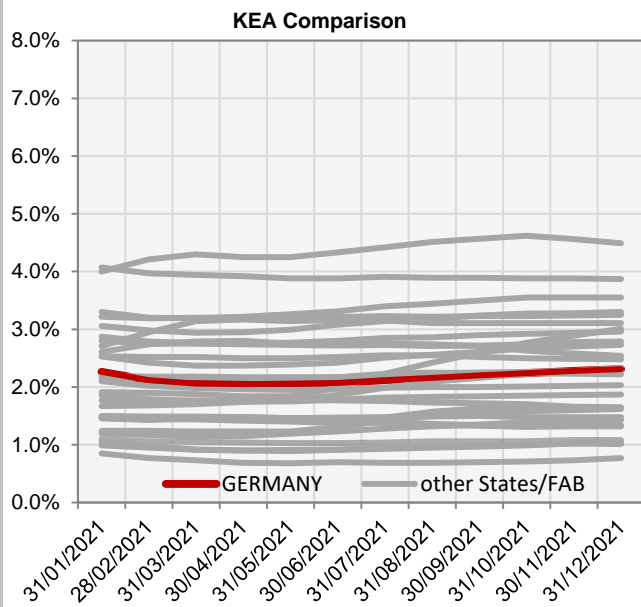
Improvements in maturity levels have been observed with respect 2020, reaching already the 2024 targtes in all components.

KEA					
	2020	2021	2022	2023	2024
Target	n/a	n/a	n/a	n/a	n/a
Actual performance	2.37%	2.31%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	2.26%	2.12%	2.06%	2.05%	2.06%	2.07%	2.12%	2.16%	2.20%	2.24%	2.28%	2.31%
KEP	5.47%	5.38%	5.33%	5.29%	5.27%	5.22%	5.19%	5.18%	5.15%	5.12%	5.13%	5.12%
KES	5.01%	4.93%	4.89%	4.86%	4.86%	4.83%	4.82%	4.83%	4.83%	4.81%	4.83%	4.83%

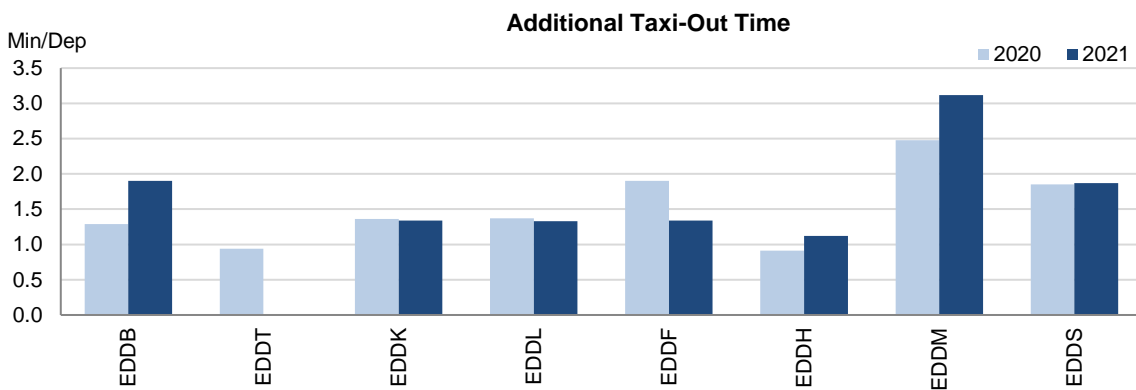


The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**1. Overview**

With the closure of Tegel, Germany identifies a total of 15 airports as subject to RP3 monitoring in 2021. However, in accordance with IR (EU) 2019/317 and the traffic figures, only 7 of those 15 airports must be monitored for additional taxi-out and ASMA times. The Airport Operator Data Flow, necessary for the monitoring of the additional times, is established for the 8 airports required and the monitoring of all environment indicators can be performed. In 2021, traffic at the ensemble of German airports under monitoring was still 55% lower with respect to 2019, with only an 11% over 2020. The recovery differs from airport to airport and while cargo airports like Leipzig (EDDP) saw 98% of the 2019 traffic, Munich (EDDM) and Dusseldorf (EDDL) observed 64% less flights than in 2019. Additional times at German airports, after the drastic decrease in 2020, in 2021 remained at similar levels and at some airports showed some increase. The share of CDO flights stayed rather low and decreased to 16.2% in 2021.

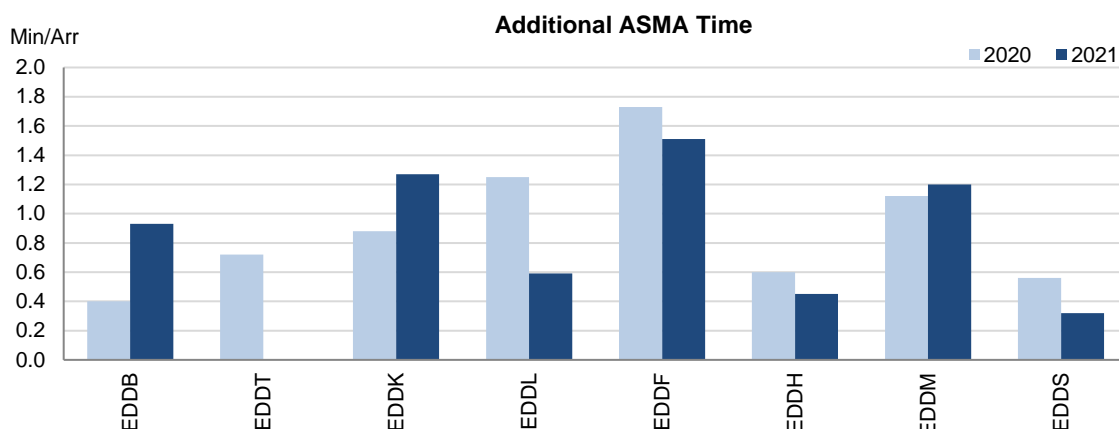
**2. Additional Taxi-Out Time**



The additional taxi-out times in 2021 at German airports remained in general much lower than in the years previous to the COVID crisis. In Frankfurt (EDDF; 2019: 3.85 min/dep; 2020: 1.90 min/dep.; 2021: 1.34 min/dep.) these times further decreased with respect to 2020 and although they progressively augmented in the second part of the year, they were still less than half of the additional times in 2019. Berlin Brandenburg (EDDB; 2020: 1.29 min/dep.; 2021: 1.9 min/dep.) observed a significant increase of these additional times as of May with the traffic recovery and also influenced by some runway closures due to noise and ATC staff training. Munich (EDDM; 2019: 3.82 min/dep; 2020: 2.48 min/dep.; 2021: 3.12 min/dep.) also suffered higher additional taxi-out times, mainly in the Summer due to works on taxiways and aprons and then also at the end of the year reaching the same levels as in 2019, despite the lower traffic recovery. This resulted in the highest additional taxi-out times in the SES monitored airports in 2021.

According to FABEC monitoring report: *Despite the fact that the Taxi-Out-Time Methodology is still subject to discussion, DFS is continuously developing Airport-CDM on German Airports in order to reduce taxi times and holding portions with running engines at airports including a long-term perspective on a Total-Airport-Management-System.*

### 3. Additional ASMA Time



The additional ASMA times evolved in a different manner at each German airport. The most significant evolutions were the increase at Berlin Brandenburg and Cologne, and the drastic decrease at Dusseldorf.

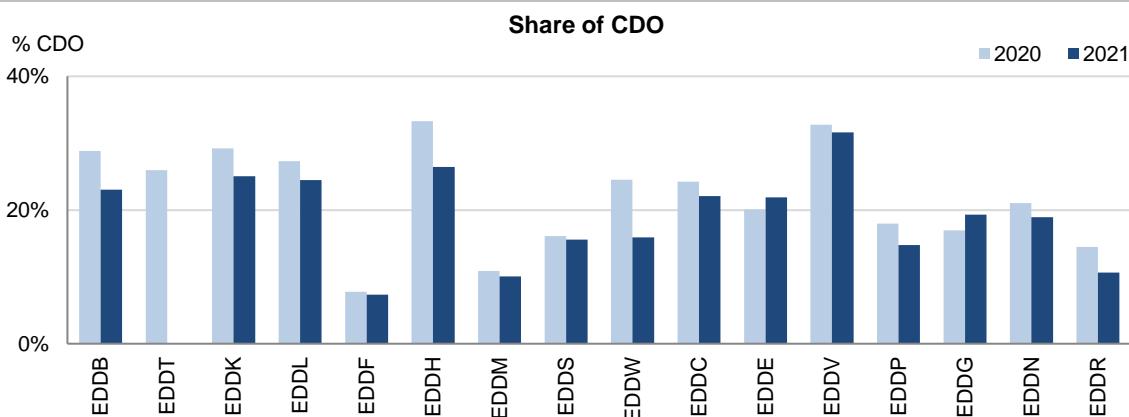
Frankfurt's values (EDDF; 2019: 2.17 min/arr.; 2020: 1.73 min/arr.; 2021: 1.51 min/arr.) decreased at annual level, driven by the performance in January and February 2020 vs 2021 (from March to December the additional ASMA times at Frankfurt were higher than in 2020).

Additional ASMA times at Berlin Brandenburg (EDDB; 2020: 0.4 min/arr.; 2021: 0.93 min/arr.) drastically increased in the second half of the year, reaching 1.58 min/arr in October. At Cologne (EDDK; 2019: 1.15 min/arr.; 2020: 0.88 min/arr.; 2021: 1.27 min/arr.) the additional ASMA times exceeded the 2019 figures for approximately half of the year, even if traffic was still lower than in 2019.

Dusseldorf (EDDL; 2019: 1.91 min/arr.; 2020: 1.25 min/arr.; 2021: 0.59 min/arr.) once again improved the performance significantly at annual level, but showed a slight increase at the end of the year.

According to FABEC monitoring report: *ATM in TMAs is primarily considered a matter of noise abatement (departure) and capacity and traffic flow (approach). Mainly because the latter improvements in 2020 were based on low traffic volumes and therefore reduced extra miles on approach could be realized. With traffic recovering more tactical manoeuvring inside TMAs will occur. Nevertheless, projects to shorten TMA detours have been completed (EDDL/MODRU) or are ongoing (EDDS/TEDGO).*

### 4. Share of arrivals applying CDO



Only for Hanover - EDDV, the share of CDO flights was above the RP3 overall value in 2021 (30.5%). Only Erfurt - EDDE and Münster-Osnabrück - EDDG saw an improvement in the share of CDOs. Overall, the share of CDO decreased from 18.8% in 2020 to 16.2% in 2021.

The two airports with the highest traffic numbers, Frankfurt (EDDF) and Munich (EDDM), still have a rather low share of CDO flights.

The share of CDO at Stuttgart - EDDS decreased significantly throughout the year (January: 26.3%; December: 11.3%).

According to FABEC monitoring report: *Regarding Germany, DFS has successfully implemented High-Transition-Operations to continuously approach Frankfurt from close to cruising levels from the south (EMPAX). The next step is the connection from the north-west ("KUMIK", ongoing, target date: early 2023). Besides DFS is taking every opportunity to apply published or tactical CDO procedures at airspace users individual needs whenever traffic allows.*

## 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Berlin Brandenburg-EDDB	1.29	1.9				0.4	0.93				29%	23%			
Berlin-Tegel-EDDT	0.94	n/a				0.72	n/a				26%	n/a			
Cologne/Bonn-EDDK	1.36	1.34				0.88	1.27				29%	25%			
Dusseldorf-EDDL	1.37	1.33				1.25	0.59				27%	24%			
Frankfurt-EDDF	1.9	1.34				1.73	1.51				8%	7%			
Hamburg-EDDH	0.91	1.12				0.6	0.45				33%	26%			
Munich-EDDM	2.48	3.12				1.12	1.2				11%	10%			
Stuttgart-EDDS	1.85	1.87				0.56	0.32				16%	16%			
Bremen-EDDW	-	-				-	-				25%	16%			
Dresden-EDDC	-	-				-	-				24%	22%			
Erfurt-EDDE	-	-				-	-				20%	22%			
Hannover-EDDV	-	-				-	-				33%	32%			
Leipzig-EDDP	-	-				-	-				18%	15%			
Münster-Osnabrück-EDDG	-	-				-	-				17%	19%			
Nürnberg-EDDN	-	-				-	-				21%	19%			
Saarbrücken-EDDR	-	-				-	-				14%	11%			

1. Overview

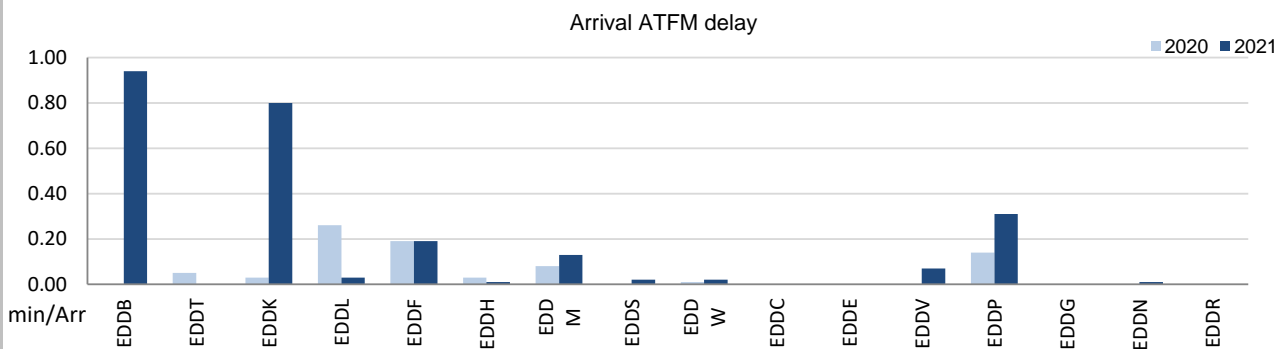
With the closure of Tegel, Germany identifies a total of 15 airports as subject to RP3 monitoring in 2021. However, in accordance with IR (EU) 2019/317 and the traffic figures, only 7 of those 15 airports must be monitored for pre-departure delays.

The Airport Operator Data Flow, necessary for the monitoring of these pre-departure delays, is established for the 8 airports required. Nevertheless, the quality of the reporting does not allow for the calculation of the ATC pre-departure delay at 6 of these airports, with more than 60% of the reported delay not allocated to any cause.

In 2021, traffic at the ensemble of German airports under monitoring was still 55% lower with respect to 2019, with only an 11% over 2020. The recovery differs from airport to airport and while cargo airports like Leipzig (EDDP) saw 98% of the 2019 traffic, Munich (EDDM) and Dusseldorf (EDDL) observed 64% less flights than in 2019. Berlin Tegel ceased operations as of November 2020, so 2020 is the only year that appeared in the monitoring.

Average arrival ATFM delays in 2021 was 0.28 min/arr, compared to 0.10 min/arr in 2020. ATFM slot adherence has improved (2021: 97.3%; 2020: 95.5%).

2. Arrival ATFM Delay



The most important delays at German airports in 2021 were observed at Berlin Brandenburg (EDDB: 2020: 0.00 min/arr.; 2021: 0.94 min/arr.) and Cologne (EDDK: 2020: 0.03 min/arr.; 2021: 0.80 min/arr.)

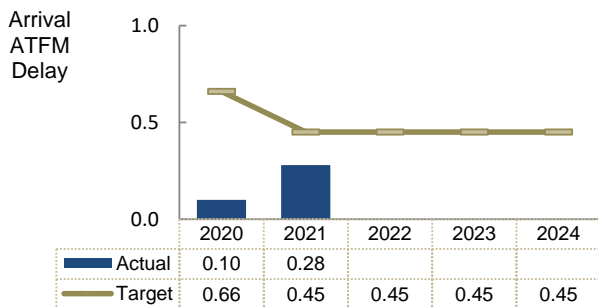
At Berlin Brandenburg, the traffic recovery in the second half of the year, influenced by some runway closures due to noise and ATC staff training, resulted in high delays attributed mostly to aerodrome capacity. In Cologne, where the traffic held better throughout the crisis due to the important cargo operation, delays were registered during the entire year but increased significantly in the second half of the year and were mostly attributed, like for Berlin, to aerodrome capacity issues (82%)

Leipzig (EDDP: 2020: 0.14 min/arr.; 2021: 0.31 min/arr.) doubled the delays per arrival, attributed mainly to weather followed by aerodrome capacity.

Frankfurt (EDDF: 2019: 0.69 min/arr.; 2020: 0.19 min/arr.; 2021: 0.19 min/arr.) and Munich (EDDM: 2019: 0.25 min/arr.; 2020: 0.08 min/arr.; 2021: 0.13 min/arr.) showed delays only in the second half of the year, mainly due to weather.

The rest of German airports registered zero or nearly zero arrival ATFM delays in 2021.

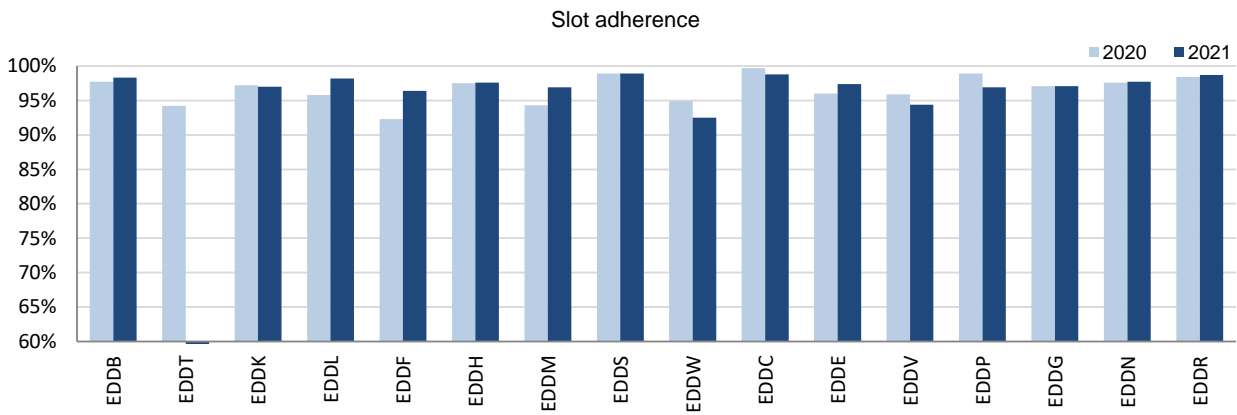
3. Arrival ATFM Delay – National Target and Incentive Scheme



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024. No bonus will be awarded to DFS for 2021 achievement.

#### 4. ATFM Slot Adherence



With the drastic drop in traffic, regulated departures from German airports virtually disappeared until July 2021. All German airports showed adherence above 92% and the national average was 97.3%, an improvement with respect to 2020 (95.5%). With regard to the 2.7% of flights that did not adhere, 1.8% was early and 0.9% was late.

According to FABEC monitoring report: *For the time being there is no significant risk. But the ANSP stated that due to the ambitious targets, there is a risk that the targets cannot be reached due to a single, longer-lasting disruption at one of the airports. Anyways, ANSP and NSA will, in case of any arising significant risk, go into dialogue to evaluate what the risk is and how it can be solved.*

#### 5. ATC Pre-departure Delay

The share of unidentified delay reported by 5 of the 7 German airports subject to monitoring of this indicator in 2021 (Tegel is closed) has been above 40% for more than 2 months in the year, preventing the calculation of this indicator. This is partially due to the special traffic composition during the crisis. Most of these airports normally had proper reporting before the pandemic and only after April 2020 the share of unidentified delay exceeded the required minimum for the computation. On the other hand the insufficient data quality provided by Cologne (EDDK) is a long standing issue.

Only Berlin Brandenburg and Dusseldorf provided enough data quality. Dusseldorf has a low ATC pre-departure delay (EDDL: 2021: 0.03 min/dep) while Brandenburg has a slightly higher value (EDDB: 2021: 0.32 min/dep) FABEC monitoring report mentions that *It should be noted that EDDK faced a deterioration due to "Aerodrome Capacity" (by airport operator, G-Regulations) and that EDDB, EDDM and EDDS faced a deterioration due to more bad weather situations than in 2020 (WX-Regulations).*

## 6. All Causes Pre-departure Delay

The total (all causes) delay in the actual off block time at German airports in 2021 was between 9.04 min/dep for Munich(EDDM) and 20.38 min/dep. for Frankfurt (EDDF) which is the 2nd highest among the RP3 monitored airports. The highest delays per flight at these airports were observed in Summer and increased again at some airports at the end of the year.

## 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Berlin Brandenburg-EDDB	0	0.94				97.7%	98.3%				n/a	0.32				8.17	12.32			
Berlin-Tegel-EDDT	0.05	n/a				94.2%	n/a				n/a	n/a				6.71	n/a			
Cologne/Bonn-EDDK	0.03	0.8				97.2%	97.0%				n/a	n/a				10.77	16.68			
Dusseldorf-EDDL	0.26	0.03				95.8%	98.2%				n/a	0.03				8.19	11.57			
Frankfurt-EDDF	0.19	0.19				92.3%	96.4%				n/a	n/a				16.49	20.38			
Hamburg-EDDH	0.03	0.01				97.5%	97.6%				n/a	n/a				7.38	10.24			
Munich-EDDM	0.08	0.13				94.3%	96.9%				n/a	n/a				7.34	9.04			
Stuttgart-EDDS	0	0.02				98.9%	98.9%				n/a	n/a				6.90	9.05			
Bremen-EDDW	0.01	0.02				94.9%	92.5%				-	-				-	-			
Dresden-EDDC	0	0				99.7%	98.8%				-	-				-	-			
Erfurt-EDDE	0	0				96.0%	97.4%				-	-				-	-			
Hannover-EDDV	0	0.07				95.9%	94.4%				-	-				-	-			
Leipzig-EDDP	0.14	0.31				98.9%	96.9%				-	-				-	-			
Münster-Osnabrück-EDDG	0	0				97.1%	97.1%				-	-				-	-			
Nürnberg-EDDN	0	0.01				97.6%	97.7%				-	-				-	-			
Saarbrücken-EDDR	0	0				98.4%	98.7%				-	-				-	-			



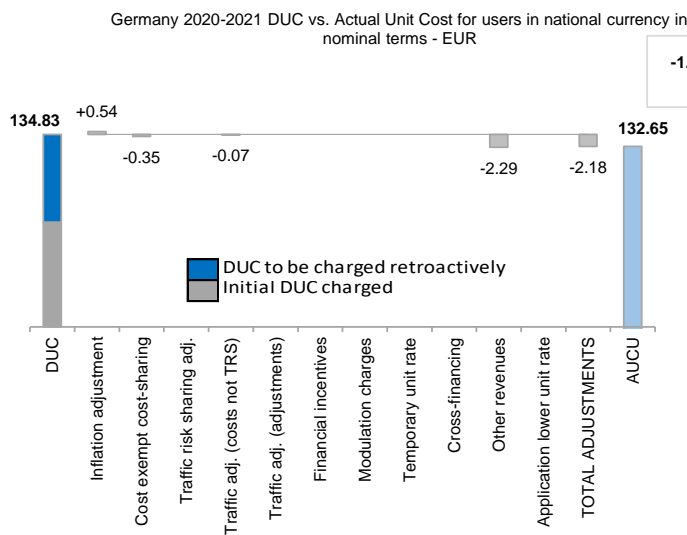
1. Contextual economic information: en route air navigation services						
Germany ECZ represents 14.0% of the SES en route ANS actual costs in 2019			FAB: FABEC			
National currency: EUR						
Performance Plan: RP3 draft performance plan dated 17 November 2021 and found inconsistent as per Commission Decision (EU) 2022/728 of 13 April 2022			FABEC has submitted a revised RP3 draft performance plan in July 2022, currently under assessment.			
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Germany: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)	956,694,163	978,664,247	1,935,358,410	977,377,632	1,010,116,017	1,033,552,160
Inflation %	0.4%	2.2%		1.1%	1.5%	1.7%
Inflation index (100 in 2017)	103.7	106.1		107.2	108.8	110.6
Real en route costs (EUR2017)	927,391,842	930,626,558	1,858,018,400	921,276,788	940,629,654	949,671,536
Total en route service units	6,792,043	7,562,500	14,354,543	13,643,500	14,862,500	15,857,500
<b>Real en route DUC per service unit (EUR2017)</b>	<b>136.54</b>	<b>123.06</b>	<b>129.44</b>	<b>67.52</b>	<b>63.29</b>	<b>59.89</b>
Germany: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)	956,694,163	920,107,769	1,876,801,932			
Inflation %	0.4%	3.2%				
Inflation index (100 in 2017)	103.7	107.1				
Real en route costs (EUR2017)	927,391,842	866,615,414	1,794,007,256			
Total en route service units	6,792,043	7,678,785	14,470,828			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>136.54</b>	<b>112.86</b>	<b>123.97</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)	in value 0	-58,556,478	-58,556,478			
	in % -	-6.0%	-3.0%			
Inflation %	in p.p. 0.0 p.p.	1.0 p.p.				
Inflation index (100 in 2017)	in p.p. 0.0 p.p.	1.0 p.p.				
Real en route costs (EUR2017)	in value 0	-64,011,144	-64,011,144			
	in % -	-6.9%	-3.4%			
Total en route service units	in value 0	116,285	116,285			
	in % -	+1.5%	+0.8%			
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value 0.00</b>	<b>-10.20</b>	<b>-5.46</b>			
	<b>in % -</b>	<b>-8.3%</b>	<b>-4.2%</b>			
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs. DUC</b>			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      +0.8%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
<p>In the combined year 2020-2021, the en route AUC was -4.2% (or -5.46€2017) lower than the planned DUC. This results from the combination of slightly higher than planned TSUs (+0.8%) and lower than planned en-route costs in real terms (-3.4%, or -64.0 M€2017).</p>			<p>Costs by nature for main ANSP (M€2017):</p>			
<p><b>En route service units</b></p> <p>The difference between actual and planned TSUs (+0.8%) falls within the ±2% dead band. Hence the resulting additional en-route revenue is kept by the ANSPs (see items 10 to 14).</p>			<p>Costs by entity at ECZ level (M€2017):</p>			
<p><b>En route costs by entity</b></p> <p>Actual real en route costs are -3.4% (-64.0 M€2017) lower than planned. This is driven by the main ANSP, DFS (-3.9%, or -60.8 M€2017), MUAC (-0.5%, or -0.7 M€2017), the MET service provider (+2.7%, or +0.7 M€2017) and the NSA/EUROCONTROL costs (-2.9%, or -3.1 M€2017).</p>						
<p><b>En route costs for the main ANSP (DFS) at charging zone level</b></p> <p>The lower than planned en route costs in real terms for DFS (-3.9%, or -60.8 M€2017) result from:</p> <ul style="list-style-type: none"> <li>- lower staff costs (-2.2%), due to "short-term measures to counter the effects of the Corona pandemic, such as suspension of new hires, partial suspension of operational training, and conclusion of a collective agreement to make personnel costs more flexible in the short term";</li> <li>- lower other operating costs (-4.7%), due to "a number of several smaller measures and components as travel-expense, education and training, allowance on receivables.;"</li> <li>- slightly higher depreciation (+0.1%); and</li> <li>- lower cost of capital (-68.2%), due to a positive financial result in 2021;</li> <li>- exceptional items corresponding to the IFRS conversion effects in line with the plan (-0.5%).</li> </ul> <p>Note: When expressed in €2017, the depreciation and cost of capital are not adjusted for inflation, in accordance with Article 26 of Regulation (EU) 2019/317.</p>						

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	73.32
DUC to be charged retroactively	61.51
<b>DUC</b>	<b>134.83</b>
Inflation adjustment	0.54
Cost exempt from cost-sharing	-0.35
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.07
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	-2.29
Application of lower unit rate	0.00
Total adjustments	-2.18
<b>AUCU</b>	<b>132.65</b>
<b>AUCU vs. DUC</b>	<b>-1.6%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

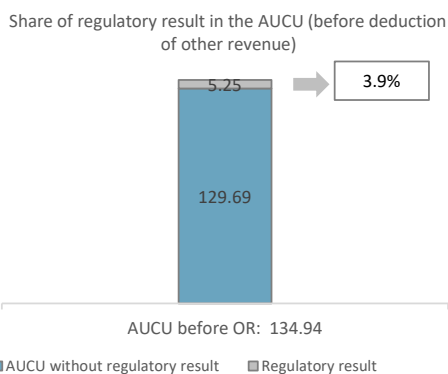
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-72	0.00
Competent authorities and qualified entities costs	-1,005	-0.07
Eurocontrol costs	-2,132	-0.15
Pension costs	-1,849	-0.13
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-5,058</b>	<b>-0.35</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level



ANSP(S)	EUR '000	EUR/SU
DFS	74,595	5.15
MUAC (Germany)	2,028	0.14
METSP(s)	EUR '000	EUR/SU
Germany MET	-697	-0.05
<b>Total charging zone</b>	<b>75,926</b>	<b>5.25</b>
<b>Actual cost for users***</b>	<b>1,952,728</b>	<b>134.94</b>
<b>Regulatory result (% AUCU)</b>	<b>3.9%</b>	<b>3.9%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (132.65€) is -1.6% lower than the nominal DUC (134.83€) which includes DUC initially charged: 73.32€; and to be charged: 61.51€. The difference between these two figures (-2.18€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.54€/SU);
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.35€/SU);
- the deduction of the traffic adjustment (-0.07€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years; and
- the deduction of the other revenues (-2.29€/SU).

The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 3.9%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

11. Net gain/loss for the main ANSP for the en route activity at charging zone level

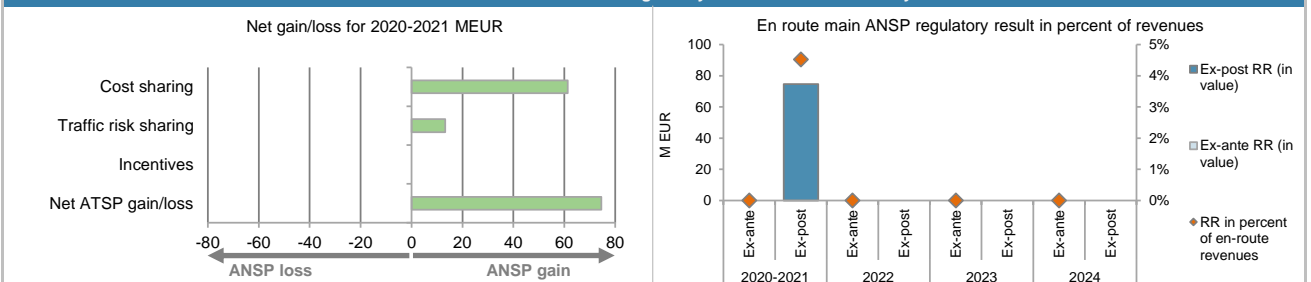
Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	56,222			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	6,928			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-1,775			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>61,374</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.8%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	1,631,964			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>13,220</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>74,595</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

DFS planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	1,917,579	1,894,676	3,812,255	2,091,544	1,980,301	1,847,188
Proportion of financing through equity (in %)	32%	27%	30%	39%	41%	51%
RoE pre-tax rate (in %)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
RoE (in value)	0	0	0	0	0	0
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Revenue for the en route charging zone</b>	<b>807,298</b>	<b>824,666</b>	<b>1,631,964</b>	<b>802,206</b>	<b>828,096</b>	<b>847,075</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
DFS actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	1,917,579	1,643,107	3,560,686			
Proportion of financing through equity (in %) - see note	32%	27%	30%			
RoE pre-tax rate (in %)	0.0%	0.0%	0.0%			
RoE (in value)	0	0	0			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	74,595	74,595			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>0</b>	<b>74,595</b>	<b>74,595</b>			
<b>Revenue for the en route charging zone</b>	<b>807,298</b>	<b>843,039</b>	<b>1,650,337</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>0.0%</b>	<b>8.8%</b>	<b>4.5%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>0.0%</b>	<b>16.6%</b>	<b>7.0%</b>			

Note: The proportion of financing through equity for 2021A should be corrected to reflect the actual share, in spite of the specific composition of the asset base and the negative cost of capital report due to a financial income from well performing commercial papers. For the purpose of the analysis, it has been set at the level of the 2021D presented in the revised draft performance plan.

13. Focus on the main ANSP regulatory result on en route activity



DFS net gain on activity in Germany en route charging zone in the combined year 2020-2021

DFS incurred a net gain of +74.6 M€, resulting from a gain of +61.4 M€ arising from the cost sharing mechanism and a gain of +13.2 M€ arising from the traffic risk sharing mechanism.

DFS overall regulatory results (RR) for the en route activity

Ex-post, the overall RR corresponds to the net gain from the en route activity mentioned above (+74.6 M€), as the RoE for DFS has been set to zero throughout RP3. The ex-post RR corresponds to 4.5% of the en route revenues). The resulting ex-post rate of return on equity is 7.0%, compared to 0% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
<b>MUAC (Germany) planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	83,201	87,695	170,896	106,543	112,535	116,251
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>MUAC (Germany) actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	2,028	2,028			
Revenue for the en route charging zone	83,201	89,724	172,925			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	2.3%	1.2%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Germany MET planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	12,493	13,112	25,605	12,750	12,115	12,209
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Germany MET actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	-697	-697			
Revenue for the en route charging zone	12,493	13,218	25,711			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	-5.3%	-2.7%			
Ex-post RoE pre-tax rate (in %)	0.0%	-8.7%	-4.5%			
<b>Total other ANSPs planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	95,694	100,808	196,502	119,292	124,650	128,460
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total other ANSPs actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	1,331	1,331			
Revenue for the en route charging zone	95,694	102,942	198,635			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	1.3%	0.7%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for the other ANSPs in Germany en route charging zone (MUAC and the METSP) corresponds to 0.7% of the en route revenues.						
The RoE cannot be calculated for MUAC, as it has no equity.						

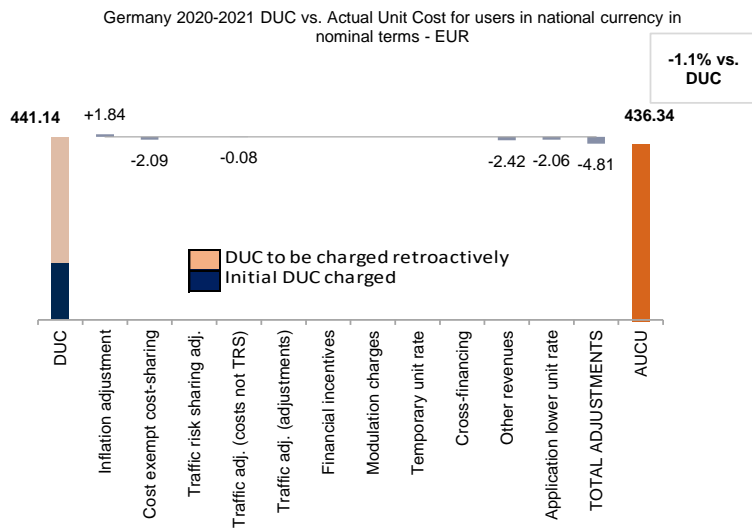
1. Contextual economic information: terminal air navigation services						
<ul style="list-style-type: none"> <li>Germany TCZ represents 17.8% of the SES terminal ANS actual costs in 2019</li> <li>Number of airports in charging zone in 2021: 16 of which:                             <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 8</li> <li>Airports with more than 80,000 IFR mvmts: 8</li> </ul> </li> <li>National currency: EUR</li> <li>Performance Plan: See item 1 for the en route charging zone(s).</li> </ul>						
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.</p>						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Germany: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal EUR)	286,347,609	297,289,961	583,637,570	294,376,034	304,847,292	326,799,431
Inflation %	0.4%	2.2%		1.1%	1.5%	1.7%
Inflation index (100 in 2017)	103.7	106.1		107.2	108.8	110.6
Real terminal costs (EUR2017)	277,117,296	282,222,850	559,340,146	276,938,178	283,248,502	299,291,923
Total terminal service units	630,014	693,000	1,323,014	1,280,000	1,426,000	1,498,000
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>439.86</b>	<b>407.25</b>	<b>422.78</b>	<b>216.36</b>	<b>198.63</b>	<b>199.79</b>
Germany: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal EUR)	286,347,609	289,414,789	575,762,397			
Inflation %	0.4%	3.2%				
Inflation index (100 in 2017)	103.7	107.1				
Real terminal costs (EUR2017)	277,117,296	271,829,077	548,946,373			
Total terminal service units	630,014	704,005	1,334,018			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>439.86</b>	<b>386.12</b>	<b>411.50</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal EUR)	in value 0	-7,875,172	-7,875,172			
	in % -	-2.6%	-1.3%			
Inflation %	in p.p. 0.0 p.p.	1.0 p.p.				
Inflation index (100 in 2017)	in p.p. 0.0 p.p.	1.0 p.p.				
Real terminal costs (EUR2017)	in value 0	-10,393,774	-10,393,774			
	in % -	-3.7%	-1.9%			
Total terminal service units	in value 0	11,005	11,005			
	in % -	+1.6%	+0.8%			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value 0.00</b>	<b>-21.13</b>	<b>-11.28</b>			
	<b>in % -</b>	<b>-5.2%</b>	<b>-2.7%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>					
	<b>in %</b>					
4. Focus on terminal DUC monitoring at charging zone level						
<p><b>DUC</b>                      The AUC for the combined year 2020-2021 is lower than the planned DUC (by -2.7%, or -11.28 €2017). This is due to the combination of higher than planned TNSUs (+0.8%) and lower than planned terminal costs in real terms (by -1.9%, or -10.4 M€2017).</p> <p><b>Terminal service units</b>                      The difference between actual and planned TSUs (+0.8%) falls within the ±2% dead band. Hence the resulting gain is kept by the ANSPs (see item 11).</p> <p><b>Terminal costs by entity at charging zone level</b>                      Actual real terminal costs for 2020-2021 are -1.9% (-10.4 M€2017) lower than planned. This result is driven by the main ANSP, DFS (-1.9%, or -10.5 M€2017), the METSP (+1.9%, or +0.2M€2017) and the NSA costs (-4.9%, or -0.1 M€2017).</p> <p><b>Terminal costs for the main ANSP (DFS) at charging zone level</b>                      Overall, the terminal costs in real terms for DFS in 2020-2021 were lower than the determined costs from the performance plan (by -1.9%, or -10.5 M€2017 lower). This results from:                      - slightly higher staff costs (+0.6%),                      - lower other operating costs (-1.6%), due "a number of several smaller measures and components as travel-expense, education and training, allowance on receivables."                      - lower depreciation (-4.3%);                      - lower cost of capital (-68.0%) due to a positive financial result in 2021; and                      - exceptional items corresponding to the IFRS conversion effects in line with the plan (-0.5%).</p> <p>Note: When expressed in €2017, the depreciation and cost of capital are not adjusted for inflation, in accordance with Article 26 of Regulation (EU) 2019/317.</p>						
			<p>2020-2021 actual vs. planned TNSUs</p>			
			<p>Costs by entity at TCZ level (M€2017):</p>			
			<p>Costs by nature for main ANSP (M€2017):</p>			

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	139.47
DUC to be charged retroactively	301.67
<b>DUC</b>	<b>441.14</b>
Inflation adjustment	1.84
Cost exempt from cost-sharing	-2.09
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.08
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	-2.42
Application of lower unit rate	-2.06
Total adjustments	-4.81
<b>AUCU</b>	<b>436.34</b>
<b>AUCU vs. DUC</b>	<b>-1.1%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

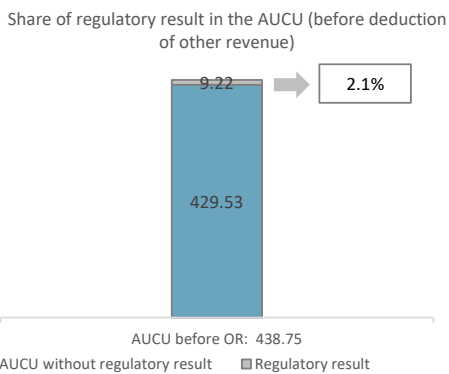
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-2049	-1.54
Competent authorities and qualified entities costs	-87	-0.07
Eurocontrol costs	0	0.00
Pension costs	-649	-0.49
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-2785</b>	<b>-2.09</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	EUR '000	EUR/SU
DFS	12,503	9.37
METSP(s)	EUR '000	EUR/SU
Germany-MET	-208	-0.16
<b>Total charging zone</b>	<b>12,294</b>	<b>9.22</b>
<b>Actual cost for users***</b>	<b>585,304</b>	<b>438.75</b>
<b>Regulatory result (% AUCU)</b>	<b>2.1%</b>	<b>2.1%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Germany terminal charging zone (436.34€) is -1.1% lower than the nominal DUC (441.14€) which includes DUC initially charged: 139.47€; and to be charged: 301.67€. The difference between these two figures (-4.81€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+1.84€/SU);
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-2.09€/SU);
- the deduction of the traffic adjustment (-0.08€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- the deduction of the other revenues (-2.42€/SU); and
- the application of a lower unit rate as foreseen in Art. 29(6) in year 2021 (-2.06€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 2.1%.

**10. Monitoring of the terminal ANSPs regulatory results (RR)**

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.
- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

**11. Net gain/loss for the main ANSP for the terminal activity at charging zone level**

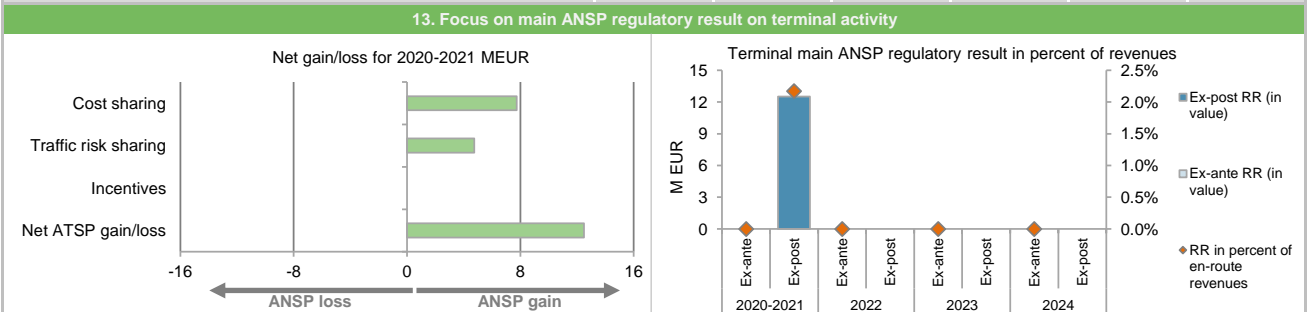
Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	8,040			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	2,410			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-2,697			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>7,753</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.8%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	571,068			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>4,750</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>12,503</b>			

**12. Regulatory result (RR) for the main ANSP at charging zone level**

DFS planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	548,894	637,510	1,186,404	823,605	786,495	704,148
Proportion of financing through equity (in %)	20%	1%	10%	24%	32%	30%
RoE pre-tax rate (in %)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
RoE (in value)	0	0	0	0	0	0
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Revenue for the terminal charging zone</b>	<b>280,236</b>	<b>290,831</b>	<b>571,068</b>	<b>287,917</b>	<b>298,433</b>	<b>320,312</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
DFS actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	548,894	674,656	1,223,550			
Proportion of financing through equity (in %) * see note	20%	0.8%	10%			
RoE pre-tax rate (in %)	0.0%	0.0%	0.0%			
RoE (in value)	0	0	0			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	12,503	12,503			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>0</b>	<b>12,503</b>	<b>12,503</b>			
<b>Revenue for the terminal charging zone</b>	<b>280,236</b>	<b>295,294</b>	<b>575,530</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>0.0%</b>	<b>4.2%</b>	<b>2.2%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>0.0%</b>	<b>231.6%</b>	<b>10.8%</b>			

Note: The proportion of financing through equity for 2021A should be corrected to reflect the actual share, in spite of the specific composition of the asset base and the negative cost of capital report due to a financial income from well performing commercial papers.

For the purpose of the analysis, it has been set at the level of the 2021D presented in the revised draft performance plan. As the equity is extremely low, the ex-post RoE is extremely high.



**DFS net gain on activity in Germany terminal charging zone in the combined year 2020-2021**

DFS incurred a net gain of +12.5 M€, resulting from a gain of +7.8 M€ arising from the cost sharing mechanism and a gain of +4.8 M€ arising from the traffic risk sharing mechanism.

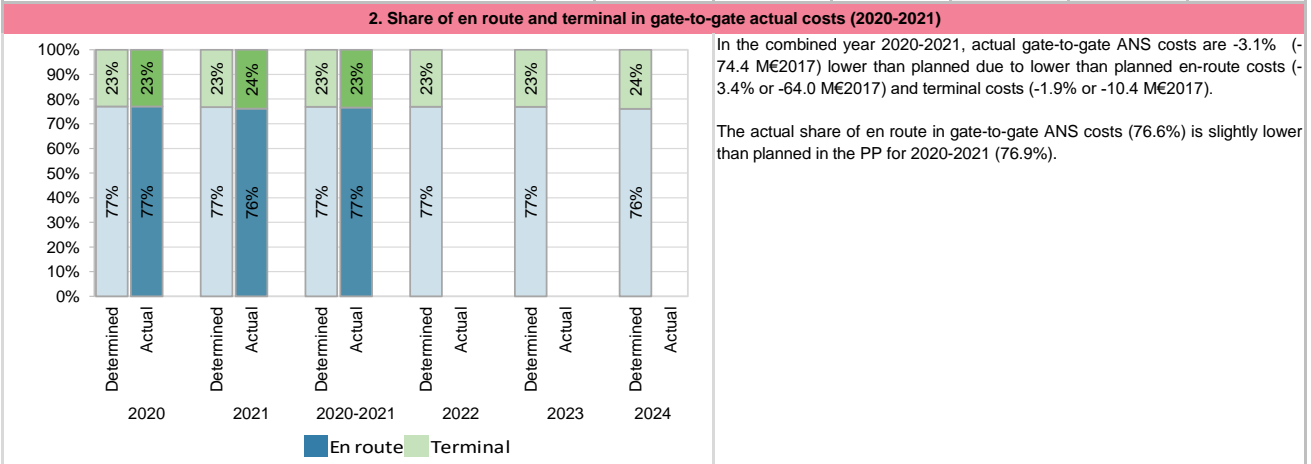
**DFS overall regulatory results (RR) for the terminal activity**

Ex-post, the overall RR corresponds to the net gain from the en route activity mentioned above (+12.5 M€) as the RoE for DFS has been set to zero throughout RP3. The ex-post RR corresponds to 2.2% of the en route revenues). The resulting ex-post rate of return on equity is 10.8%, compared to 0% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Germany-MET planned regulatory result (EUR '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	0	0	0	0	0	0
Revenue for the terminal charging zone	5,321	5,456	10,777	5,374	5,226	5,260
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Germany-MET actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	0	-208	-208			
Revenue for the terminal charging zone	5,321	5,500	10,821			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	-3.8%	-1.9%			
Ex-post RoE pre-tax rate (in %)	0.0%	-6.3%	-3.2%			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity</b>						
Ex-post, the overall RR for the other ANSP in Germany terminal charging zone (the METSP) corresponds to a loss of -1.9% of its revenues, as the actual costs for 2020-2021 were higher than planned. The resulting ex-post rate of return on equity for the METSP is negative at -3.2%, compared to 0% planned in the PP.						

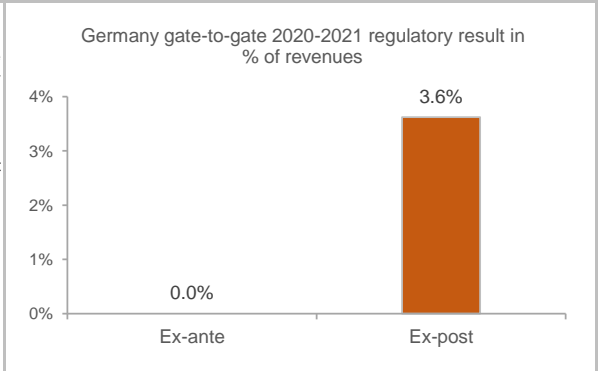


1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1: Germany		En route charging zone 2: N/A					
Terminal charging zone 1: Germany		Terminal charging zone 2:					
Germany: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		927,391,842	930,626,558	1,858,018,400	921,276,788	940,629,654	949,671,536
Real terminal costs (EUR2017)		277,117,296	282,222,850	559,340,146	276,938,178	283,248,502	299,291,923
Real gate-to-gate costs (EUR2017)		1,204,509,138	1,212,849,408	2,417,358,546	1,198,214,966	1,223,878,156	1,248,963,459
En route share (%)		77.0%	76.7%	76.9%	76.9%	76.9%	76.0%
Germany: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		927,391,842	866,615,414	1,794,007,256			
Real terminal costs (EUR2017)		277,117,296	271,829,077	548,946,373			
Real gate-to-gate costs (EUR2017)		1,204,509,138	1,138,444,490	2,342,953,629			
En route share (%)		77.0%	76.1%	76.6%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017) in value		0	-74,404,917	-74,404,917			
in %		0.0%	-6.1%	-3.1%			
En route share in p.p.		0.0 p.p.	-0.6 p.p.	-0.3 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
ANSP(S)	RR	Ex-ante			Ex-post		
		Revenues	RR % revenues	RR	Revenues	RR % revenues	
DFS	0	2,203,032	0.0%	87,097	2,225,867	3.9%	
MUAC (Germany)	0	170,896	0.0%	2,028	172,925	1.2%	
METSP(s)	RR	Revenues	RR % revenues	RR	Revenues	RR % revenues	
Germany MET	0	36,382	0.0%	-905	36,532	-2.5%	
<b>Total</b>	<b>0</b>	<b>2,410,311</b>	<b>0.0%</b>	<b>88,220</b>	<b>2,435,324</b>	<b>3.6%</b>	

For the ANSPs providing services in the en route and terminal charging zones of Germany, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +88.2 M€ (see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to +3.6% of gate-to-gate ANS revenues.  
This is higher than the return planned for the year included in the performance plan, which is set to zero.



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# **Annual Monitoring Report 2021**

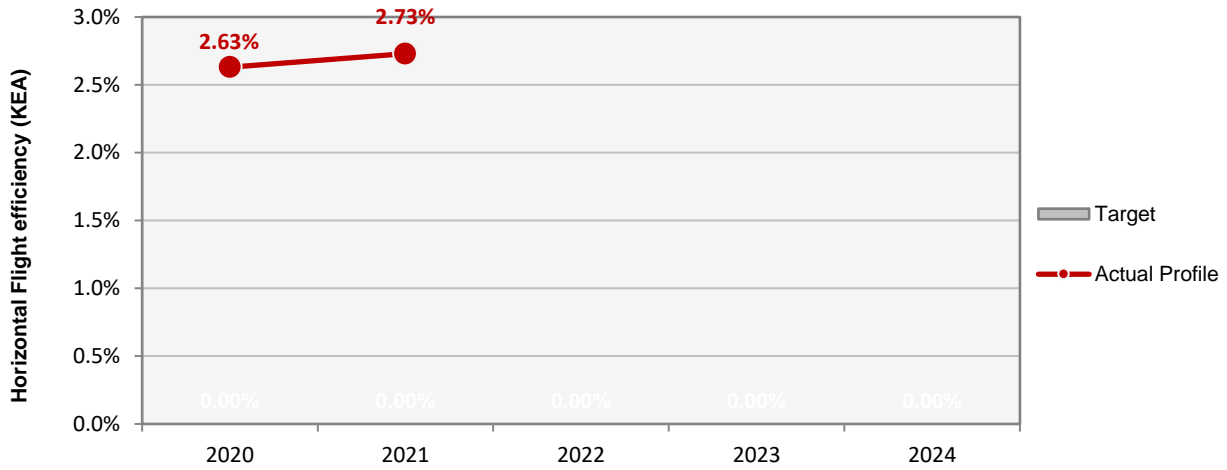
Local level view

Netherlands

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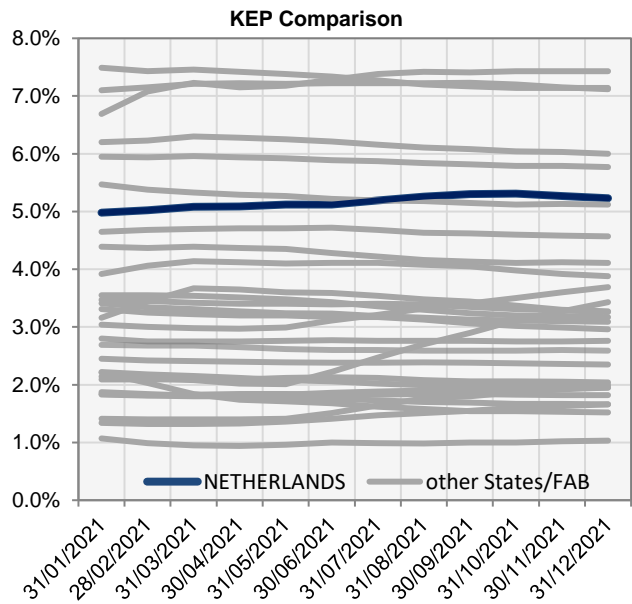
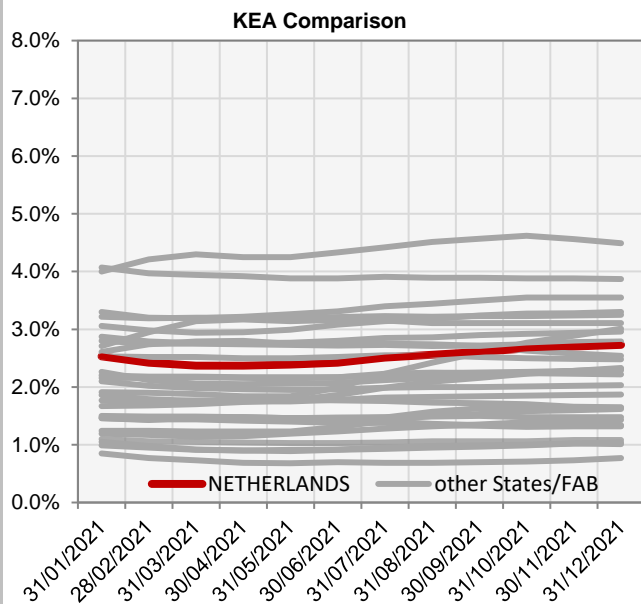
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
LVNL	95	C	C	D	C	C
<p>Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.</p>						
Observations						
<p>Improvements in maturity levels have been observed with respect 2020, reaching already the 2024 targtes in all components.</p> <p>IIMPORTANT: EASA/European Commission did not received the verified questionnaire from the NSA on time. This is an important step to receive confirmation that the self-evaluated questionnaire by the ANSP has been actually verified. It should be sent in due time to allow proper and timely drafting of the Monitoring Report.</p>						

KEA					
	2020	2021	2022	2023	2024
Target	n/a	n/a	n/a	n/a	n/a
Actual performance	2.63%	2.73%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	2.53%	2.42%	2.37%	2.37%	2.39%	2.42%	2.51%	2.56%	2.61%	2.67%	2.70%	2.73%
KEP	4.98%	5.02%	5.08%	5.09%	5.12%	5.12%	5.19%	5.26%	5.30%	5.31%	5.27%	5.23%
KES	4.66%	4.72%	4.80%	4.82%	4.86%	4.88%	4.96%	5.04%	5.09%	5.11%	5.08%	5.04%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**1. Overview**

For the Netherlands, the scope of the performance monitoring of terminal services under RP3 comprises a total of 4 airports. In accordance with IR (EU) 2019/317 and the traffic figures at these 4 airports, only Amsterdam must be monitored for additional taxi-out and ASMA times.

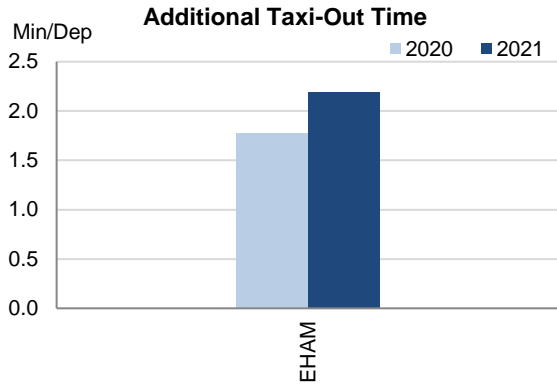
The Airport Operator Data Flow, necessary for the monitoring of the additional times, is correctly established where required and the monitoring of all environment indicators can be performed.

Traffic at these 4 airports decreased in 2021 was still 44% lower than in 2019 regardless the increase of 18% with respect to 2020.

At annual level, additional taxi out times deteriorated in comparison to 2020 while additional ASMA times improved further.

The share of CDO flights was 28.3% in 2021 which is slightly lower than the 2020 value of 29.0%.

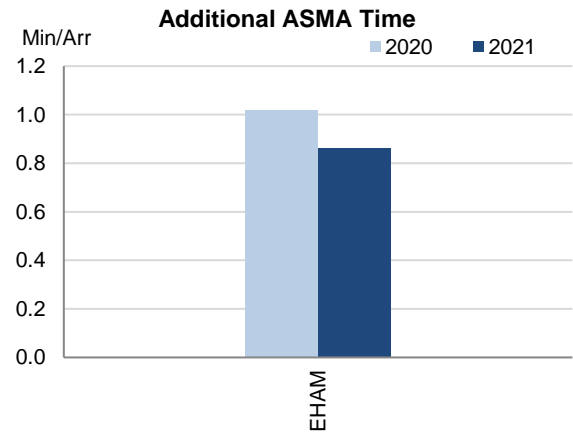
**2. Additional Taxi-Out Time**



Additional taxi-out times at Amsterdam (EHAM; 2019: 3.11 min/dep; 2020: 1.78 min/dep.; 2021: 2.19 min/dep.) were quite high in February and April, exceeding the 2019 levels. Alongside the traffic recovery, the additional times followed an increasing trend since May, ending the year with values very close to the performance in 2019.

According to FABEC monitoring report: *Taxi out times at Schiphol are expected to improve by the realisation of a dual taxiway over the A4 motorway in 2021, replacing the single taxiway Q. This reduces the number of conflicts due to opposite traffic in specific runway combinations. The dual taxiway also allows through-traffic to bypass aircraft waiting in line at the runway holding point. In both cases waiting times during taxiing decrease, and thus taxi out additional times.*

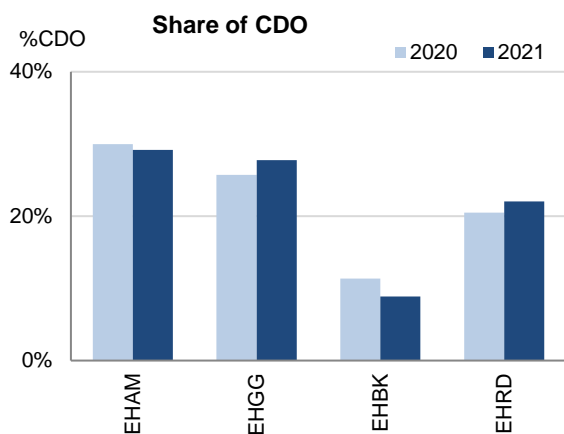
**3. Additional ASMA Time**



Additional times in the terminal airspace of Amsterdam (EHAM; 2019: 1.78 min/arr.; 2020: 1.02 min/arr.; 2021: 0.86 min/arr.) remained low in the first half of the year (averaging 0.42 min/arr.) but in the second half experienced a progressive increase reaching in December more than 1.5 min/arr, close to the performance in December 2019.

According to FABEC monitoring report: *Additional times in the Arrival Sequencing and Metering Area (ASMA) for Schiphol are expected to reduce when inbound traffic is handed over from Area Control to Approach Control with a high accuracy. Extended arrival management which will introduce a stepwise increase in the planning horizon for arrival traffic, allowing more efficient sequencing and a higher timeliness of delivery at the IAFs.*

#### 4. Share of arrivals applying CDO



Amsterdam, being the major airport in the Netherlands, has the highest share of CDO flights of the 4 airports: 29.2% which is a small decrease with respect to 2020 and which is a little below the overall RP3 value in 2021 (30.5%).

Groningen (EHGG) and Rotterdam (EHRD) both have a higher share of CDO flights than in 2020 while it has reduced at Maastricht-Aachen (EHBK) from 11.3% to 8.9% of CDO flights in 2021.

According to FABEC monitoring report: *For the Netherlands, the percentage of arrivals performing a CDO is similar in 2021 compared to 2020. Even with lower traffic levels arrivals have to fly a part of the approach in level flight e.g. due to procedures (vertical separation between parallel approaches, interception of glide slope from below). The average time in level flight, a different indicator, has significantly reduced, so a performance improvement was achieved in 2021.*

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Amsterdam Schiphol-EHAM	1.78	2.19				1.02	0.86				30%	29%			
Groningen Eelde-EHGG	-	-				-	-				26%	28%			
Maastricht - Aachen-EHBK	-	-				-	-				11%	9%			
Rotterdam-EHRD	-	-				-	-				20%	22%			



**1. Overview**

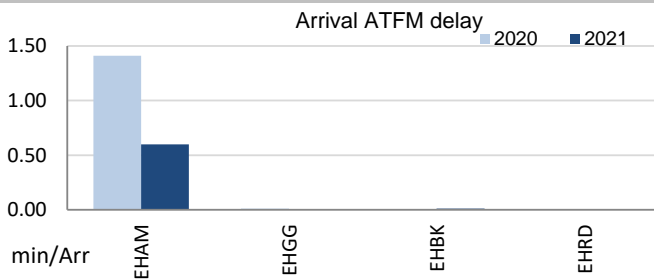
For the Netherlands, the scope of the performance monitoring of terminal services under RP3 comprises a total of 4 airports. In accordance with IR (EU) 2019/317 and the traffic figures at these 4 airports, only Amsterdam must be monitored for pre-departure delays.

The Airport Operator Data Flow is fully established at Amsterdam and the monitoring of pre-departure delays can be performed. Nevertheless, the quality of the reporting does not allow for the calculation of the ATC pre-departure delay, with more than 60% of the reported delay not allocated to any cause.

Traffic at these 4 airports decreased in 2021 was still 44% lower than in 2019 regardless the increase of 18% with respect to 2020.

Average arrival ATFM delays in 2021 was 0.54 min/arr, compared to 1.26 min/arr in 2020. ATFM slot adherence has improved (2021: 98.1%; 2020: 97.6%).

**2. Arrival ATFM Delay**

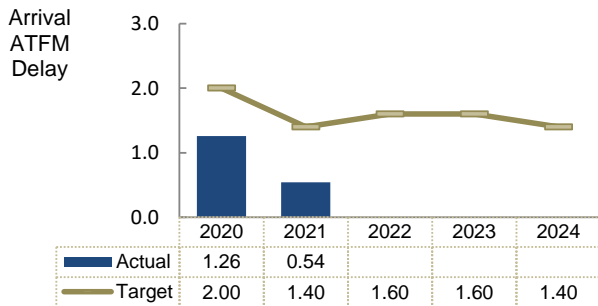


Amsterdam (EHAM: 2019: 4.23 min/arr.; 2020: 1.41 min/arr.; 2021: 0.60 min/arr.) further decreased the arrival ATFM delays compared to previous years. 93% of the registered delays were attributed to weather. The rest of Dutch airports registered zero or nearly zero arrival ATFM delays in 2021.

According to FABEC's monitoring report: *The terminal capacity target has been met, with actual performance in 2021 being significantly better than 2020. However, it is recognised that this is partly due to a shift of ATFM delay from the terminal zone to the en route zone, as described in more detail in response to the minor underperformance of LVNL with respect its contribution to the FABEC en route capacity target.*

*In 2022 planned runway maintenance at Schiphol may cause additional delays.*

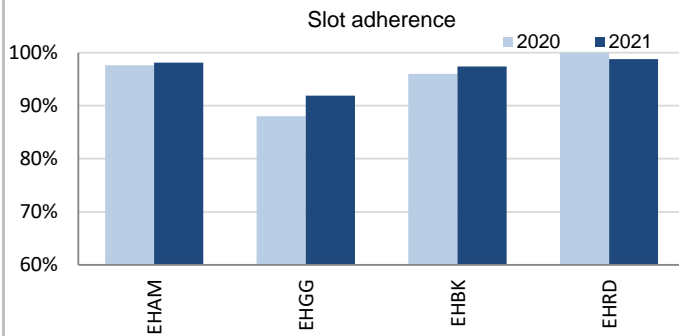
**3. Arrival ATFM Delay – National Target and Incentive Scheme**



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

#### 4. ATFM Slot Adherence



With the drastic drop in traffic, the share of regulated departures from Dutch airports virtually disappeared until July 2021. All four airports showed adherence above 91% and the national average was 98.1%, an improvement with respect to 2020 (97.6%). With regard to the 1.9% of flights that did not adhere, 0.6% was early and 1.3% was late.

#### 5. ATC Pre-departure Delay

The share of unidentified delay reported by Amsterdam (the only Dutch airport subject to monitoring of this indicator) in 2021 has been well above 40% for more than 2 months in the year, preventing the calculation of this indicator. The insufficient data quality provided by Amsterdam is a long standing issue prior to April 2020, but the situation worsened since April 2020. The unidentified delay after April 2020 was around 80% of all delays and with the traffic recovery as of June 2021 the reporting has slightly improved but the unidentified delays still account for more than 60% of the total delays.

#### 6. All Causes Pre-departure Delay

Amsterdam is the only Dutch airport subject to the monitoring of this indicator. The total (all causes) delay in the actual off block time at Amsterdam in 2021 was 20.40 min/dep. (almost 5 minutes higher than in 2020) which is the highest among the RP3 monitored airports. The highest delays per flight were observed in February, averaging almost 45 min/dep.

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Amsterdam Schiphol-EHAM	1.41	0.6				97.6%	98.1%				n/a	n/a				15.52	20.40			
Groningen Eelde-EHGG	0.01	0				88.0%	91.9%				-	-				-	-			
Maastricht - Aachen-EHBK	0	0.01				96.0%	97.4%				-	-				-	-			
Rotterdam-EHRD	0	0				100.0%	98.8%				-	-				-	-			

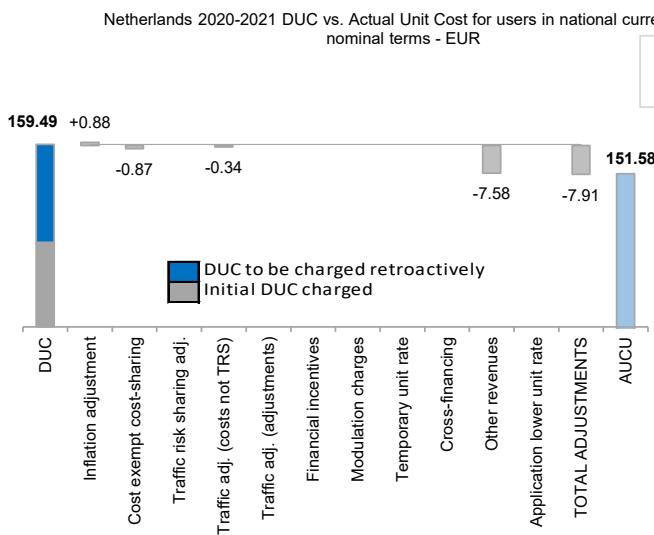
1. Contextual economic information: en route air navigation services							
· Netherlands ECZ represents 3.7% of the SES en route ANS actual costs in 2019			· FAB: FABEC				
· National currency: EUR							
· Performance Plan: RP3 draft performance plan dated 17 November 2021 and found inconsistent as per Commission Decision (EU) 2022/728 of 13 April 2022							
FABEC has submitted a revised RP3 draft performance plan in July 2022, currently under assessment.							
2. Monitoring of the en route determined unit cost (DUC) at charging zone level							
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.							
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.							
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)							
Netherlands: Data from RP3 Performance Plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)		243,029,947	234,579,497	477,609,444	246,424,037	253,428,073	259,058,008
Inflation %		1.1%	1.4%		1.5%	1.6%	1.6%
Inflation index (100 in 2017)		105.5	107.0		108.6	110.3	112.1
Real en route costs (EUR2017)		232,377,205	221,891,943	454,269,148	229,819,383	233,322,266	236,043,088
Total en route service units		1,479,593	1,515,000	2,994,593	2,593,000	3,081,000	3,294,000
<b>Real en route DUC per service unit (EUR2017)</b>		<b>157.05</b>	<b>146.46</b>	<b>151.70</b>	<b>88.63</b>	<b>75.73</b>	<b>71.66</b>
Netherlands: Actual data from Reporting Tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)		243,029,947	230,489,192	473,519,139			
Inflation %		1.1%	2.8%				
Inflation index (100 in 2017)		105.5	108.4				
Real en route costs (EUR2017)		232,377,205	215,411,703	447,788,907			
Total en route service units		1,479,593	1,565,320	3,044,913			
<b>Real en route AUC per service unit (EUR2017)</b>		<b>157.05</b>	<b>137.62</b>	<b>147.06</b>			
Difference between Actuals and Planned		2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)							
	in value	0	-4,090,304	-4,090,304			
	in %	-	-1.7%	-0.9%			
Inflation %							
	in p.p.	0.0 p.p.	1.4 p.p.				
Inflation index (100 in 2017)							
	in p.p.	0.0 p.p.	1.5 p.p.				
Real en route costs (EUR2017)							
	in value	0	-6,480,241	-6,480,241			
	in %	-	-2.9%	-1.4%			
Total en route service units							
	in value	0	50,320	50,320			
	in %	-	+3.3%	+1.7%			
<b>Real en route unit cost per service unit (EUR2017)</b>							
	in value	<b>0.00</b>	<b>-8.85</b>	<b>-4.64</b>			
	in %	-	<b>-6.0%</b>	<b>-3.1%</b>			
4. Focus on en route DUC monitoring at charging zone level							
<b>AUC vs. DUC</b> In the combined year 2020-2021, the AUC was -3.1% (or -4.64 €2017) lower than the planned DUC. This results from the combination of higher than planned TSUs (+1.7%) and lower than planned en route costs in real terms (-1.4%, or -6.5 M€2017).							
<b>En route service units</b> The difference between actual and planned TSUs (+1.7%) falls within the ±2% dead band. Hence the resulting additional en-route revenue is kept by the ANSPs (see items 10 to 14).							
<b>En route costs by entity at charging zone level</b> Actual real en route costs are -1.4% (-6.5 M€2017) lower than planned. This is driven by the lower costs across all the entities in the charging zone: main ANSP - LVNL (-1.1%, or -3.6 M€2017), other ANSP - MUAC (-0.6%, or -0.5 M€2017), MET service provider (-2.7%, or -0.5 M€2017) and NSA/EUROCONTROL (-4.6%, or -1.9 M€2017).							
<b>En route costs for the main ANSP (LVNL) at charging zone level</b> The lower than planned en route costs in real terms for LVNL (-1.1%, or -3.6 M€2017) result from: - lower staff costs (-1.5%) reflecting cost-containment measures relating to staff wages; - slightly higher other operating costs (+0.7%); - lower depreciation (-2.5%) reflecting delays in projects implementation due to the impact of Covid-19; - lower cost of capital (-15.1%) resulting from the lower than planned asset base and lower than planned average interest on debts; and, - slightly lower than planned deduction for VFR exempted flights (-0.7%).							

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	73.99
DUC to be charged retroactively	85.50
<b>DUC</b>	<b>159.49</b>
Inflation adjustment	0.88
Cost exempt from cost-sharing	-0.87
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.34
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	-7.58
Application of lower unit rate	0.00
Total adjustments	-7.91
<b>AUCU</b>	<b>151.58</b>
<b>AUCU vs. DUC</b>	<b>-5.0%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

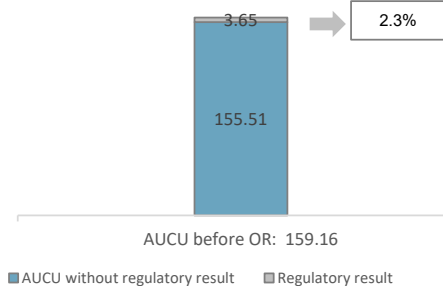
7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-800	-0.26
Competent authorities and qualified entities costs	-253	-0.08
Eurocontrol costs	-1,610	-0.53
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-2,663</b>	<b>-0.87</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	EUR '000	EUR/SU
LVNL	8,785	2.89
MUAC (Netherlands)	1,747	0.57
METSP(s)	EUR '000	EUR/SU
Netherlands MET	578	0.19
<b>Total charging zone</b>	<b>11,110</b>	<b>3.65</b>
<b>Actual cost for users***</b>	<b>484,629</b>	<b>159.16</b>
<b>Regulatory result (% AUCU)</b>	<b>2.3%</b>	<b>2.3%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (151.58€) is -5.0% lower than the nominal DUC (159.49€) which includes DUC initially charged: 73.99€; and to be charged: 85.50€. The difference between these two figures (-7.91€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.88€/SU);
- the impact of adjustments resulting from the costs exempt from cost-sharing mechanism (-0.87€/SU);
- the deduction of the traffic adjustment (-0.34€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years; and,
- the deduction of the other revenues (-7.58€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 2.3%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

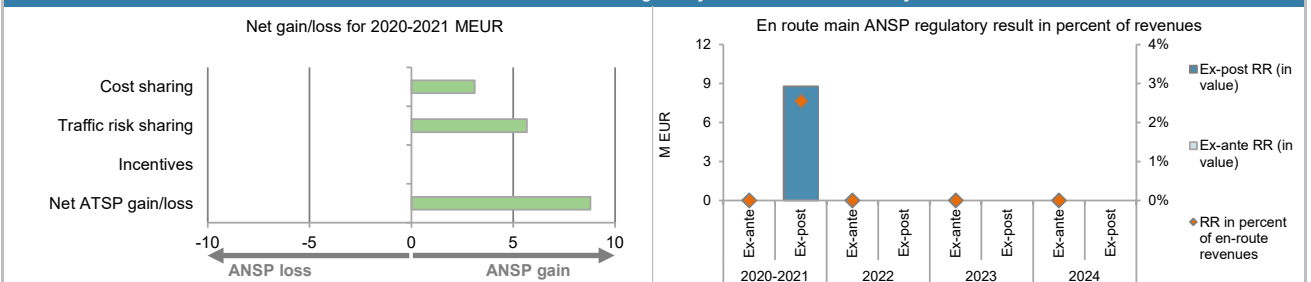
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	1,802			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	2,049			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-739			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>3,113</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	1.7%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	337,559			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>5,672</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>8,785</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

LVNL planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	219,254	273,087	492,340	300,237	312,756	317,083
Proportion of financing through equity (in %)	0%	0%	0%	0%	0%	0%
RoE pre-tax rate (in %)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
RoE (in value)	0	0	0	0	0	0
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Revenue for the en route charging zone</b>	<b>172,918</b>	<b>164,641</b>	<b>337,559</b>	<b>171,717</b>	<b>178,005</b>	<b>181,888</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
LVNL actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	219,254	241,476	460,730			
Proportion of financing through equity (in %)	0%	0%	0%			
RoE pre-tax rate (in %)	0.0%	0.0%	0.0%			
RoE (in value)	0	0	0			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	8,785	8,785			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>0</b>	<b>8,785</b>	<b>8,785</b>			
<b>Revenue for the en route charging zone</b>	<b>172,918</b>	<b>171,624</b>	<b>344,542</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>0.0%</b>	<b>5.1%</b>	<b>2.5%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>			

13. Focus on the main ANSP regulatory result on en route activity



LVNL net gain on activity in the Netherlands en route charging zone in the combined year 2020-2021

LVNL generated a net gain of +8.8 M€, resulting from a gain of +3.1 M€ arising from the cost sharing mechanism and a gain of +5.7 M€ arising from the traffic risk sharing mechanism.

LVNL overall regulatory results (RR) for the en route activity

Ex-post, the overall RR is equal to the net gain from the en route activity mentioned above (+8.8 M€) and corresponds to 2.5% of the en route revenues.

The RoE cannot be computed for LVNL, as its assets are entirely financed through debt.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
<b>MUAC (Netherlands) planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	42,081	36,524	78,605	45,512	46,027	47,611
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>MUAC (Netherlands) actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	1,747	1,747			
Revenue for the en route charging zone	42,081	38,271	80,353			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	4.6%	2.2%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Netherlands MET planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	9,627	11,065	20,692	11,536	11,652	11,770
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Netherlands MET actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	578	578			
Revenue for the en route charging zone	9,627	11,218	20,845			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	5.2%	2.8%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSPs planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	51,708	47,589	99,297	57,048	57,679	59,381
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total other ANSPs actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	2,325	2,325			
Revenue for the en route charging zone	51,708	49,489	101,197			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	4.7%	2.3%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSPs overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for the other ANSPs in the en route charging zone for the Netherlands (MUAC and MET service provider) corresponds to 2.3% of the en route revenues. Similarly to the main ANSP (LVNL), the RoE cannot be calculated for other ANSPs, as their assets are fully financed through loans.						

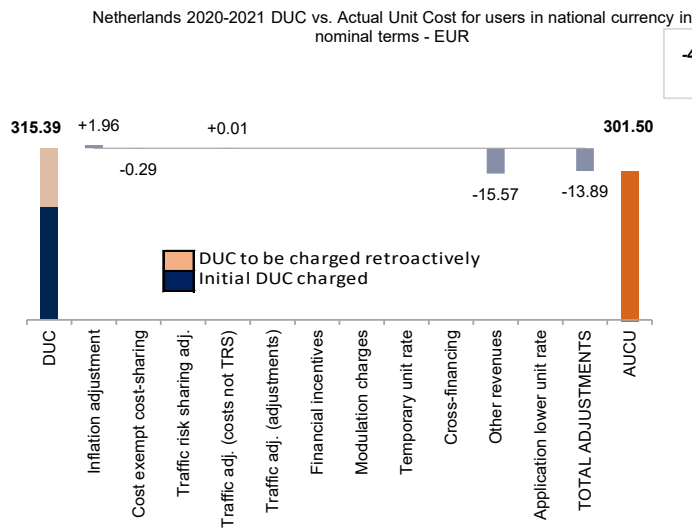
1. Contextual economic information: terminal air navigation services							
<ul style="list-style-type: none"> <li>Netherlands TCZ represents 6.2% of the SES terminal ANS actual costs in 2019</li> <li>Number of airports in charging zone in 2021: 4 of which:                             <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 3</li> <li>Airports with more than 80,000 IFR mvmts: 1</li> </ul> </li> <li>National currency: EUR</li> <li>Performance Plan: See item 1 for the en route charging zone(s).</li> </ul>							
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level							
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.</p>							
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)							
Netherlands: Data from RP3 Performance Plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal EUR)		72,301,444	71,092,604	143,394,048	74,772,706	77,867,459	79,526,060
Inflation %		1.1%	1.4%		1.5%	1.6%	1.6%
Inflation index (100 in 2017)		105.5	107.0		108.6	110.3	112.1
Real terminal costs (EUR2017)		68,854,896	66,892,674	135,747,570	69,422,076	71,324,542	72,133,235
Total terminal service units		210,653	244,000	454,653	313,300	376,000	401,000
<b>Real terminal DUC per service unit (EUR2017)</b>		<b>326.86</b>	<b>274.15</b>	<b>298.57</b>	<b>221.58</b>	<b>189.69</b>	<b>179.88</b>
Netherlands: Actual data from Reporting Tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal EUR)		72,301,444	69,238,119	141,539,563			
Inflation %		1.1%	2.8%				
Inflation index (100 in 2017)		105.5	108.4				
Real terminal costs (EUR2017)		68,854,896	64,343,347	133,198,243			
Total terminal service units		210,653	243,718	454,372			
<b>Real terminal AUC per service unit (EUR2017)</b>		<b>326.86</b>	<b>264.01</b>	<b>293.15</b>			
Difference between Actuals and Planned		2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal EUR)	in value	0	-1,854,485	-1,854,485			
	in %	-	-2.6%	-1.3%			
Inflation %	in p.p.	0.0 p.p.	1.4 p.p.				
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	1.5 p.p.				
Real terminal costs (EUR2017)	in value	0	-2,549,327	-2,549,327			
	in %	-	-3.8%	-1.9%			
Total terminal service units	in value	0	-282	-282			
	in %	-	-0.1%	-0.1%			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-10.14</b>	<b>-5.43</b>			
	<b>in %</b>	<b>-</b>	<b>-3.7%</b>	<b>-1.8%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>						
	<b>in %</b>						
4. Focus on terminal DUC monitoring at charging zone level							
<p><b>AUC vs. DUC</b>                      In the combined year 2020-2021, the AUC was -1.8% (or -5.43 €2017) lower than the planned DUC. This results from the combination of slightly lower than planned TNSUs (-0.1%) and lower than planned terminal costs in real terms (-1.9%, or -2.5 ME2017).</p> <p><b>Terminal service units</b>                      The difference between actual and planned TNSUs (-0.1%) falls within the ±2% dead band. Hence the resulting loss is borne by the ANSPs (see items 10 to 14).</p> <p><b>Terminal costs by entity at charging zone level</b>                      Actual real terminal costs for 2020-2021 are -1.9% (-2.5 ME2017) lower than planned. This result is driven by the main ANSP, LVNL (-1.9%, or -2.4 ME2017), while the MET service provider costs are -2.4% (or -0.1 ME2017) lower than planned.</p> <p><b>Terminal costs for the main ANSP (LVNL) at charging zone level</b>                      The lower than planned terminal costs in real terms for LVNL (-1.9%, or -2.4 ME2017) in 2020-2021 result from:                      - slightly higher staff costs (+0.7%);                      - lower other operating costs (-9.6%) as a result of cost-containment measures;                      - slightly lower depreciation (-1.4%); and,                      - lower cost of capital (-12.5%) reflecting lower than planned asset base and lower than planned average interest on debts.</p>				<p>2020-2021 actual vs. planned TNSUs</p>			
				<p>Costs by entity at TCZ level (ME2017):</p>			
				<p>Costs by nature for main ANSP (ME2017):</p>			

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	207.47
DUC to be charged retroactively	107.93
<b>DUC</b>	<b>315.39</b>
Inflation adjustment	1.96
Cost exempt from cost-sharing	-0.29
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	0.01
Traffic adj. (adjustments)*	0.00
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	0.00
Cross-financing	0.00
Other revenues	-15.57
Application of lower unit rate	0.00
Total adjustments	-13.89
<b>AUCU</b>	<b>301.50</b>
<b>AUCU vs. DUC</b>	<b>-4.4%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

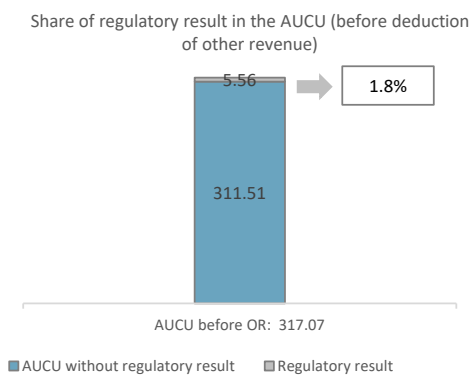
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-133	-0.29
Competent authorities and qualified entities costs	0	0.00
Eurocontrol costs	0	0.00
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-133</b>	<b>-0.29</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	EUR '000	EUR/SU
LVNL	2,414	5.31
METSP(s)	EUR '000	EUR/SU
Netherlands-MET	112	0.25
<b>Total charging zone</b>	<b>2,526</b>	<b>5.56</b>
<b>Actual cost for users***</b>	<b>144,066</b>	<b>317.07</b>
<b>Regulatory result (% AUCU)</b>	<b>1.8%</b>	<b>1.8%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (301.50€) is -4.4% lower than the nominal DUC (315.39€) which includes DUC initially charged: 207.47€; and to be charged: 107.93€. The difference between these two figures (-13.89€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+1.96€/SU);
- the impact of adjustments resulting from the costs exempt from cost-sharing mechanism (-0.29€/SU); and,
- the deduction of the other revenues (-15.57€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 1.8%.



10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

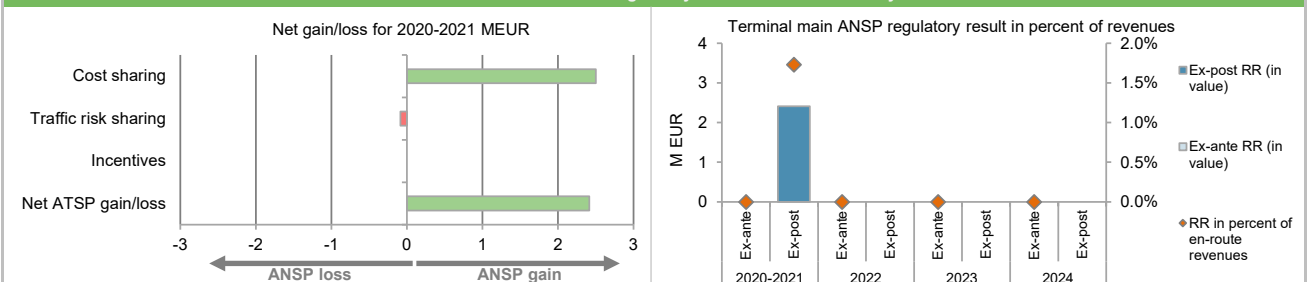
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	1,775			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	857			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-133			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>2,500</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	-0.1%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	138,866			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>-86</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>2,414</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

LVNL planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	44,956	59,661	104,617	60,569	63,048	64,612
Proportion of financing through equity (in %)	0%	0%	0%	0%	0%	0%
RoE pre-tax rate (in %)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
RoE (in value)	0	0	0	0	0	0
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Revenue for the terminal charging zone</b>	<b>70,188</b>	<b>68,678</b>	<b>138,866</b>	<b>72,258</b>	<b>75,328</b>	<b>76,961</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
LVNL actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	44,956	48,140	93,096			
Proportion of financing through equity (in %)	0%	0%	0%			
RoE pre-tax rate (in %)	0.0%	0.0%	0.0%			
RoE (in value)	0	0	0			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	2,414	2,414			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>0</b>	<b>2,414</b>	<b>2,414</b>			
<b>Revenue for the terminal charging zone</b>	<b>70,188</b>	<b>69,316</b>	<b>139,505</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>0.0%</b>	<b>3.5%</b>	<b>1.7%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>			

13. Focus on main ANSP regulatory result on terminal activity



LVNL net gain on activity in the Netherlands terminal charging zone in the combined year 2020-2021

LVNL generated a net gain of +2.4 M€, resulting from a gain of +2.5 M€ arising from the cost sharing mechanism and a loss of -0.09 M€ arising from the traffic risk sharing mechanism.

LVNL overall regulatory results (RR) for the terminal activity

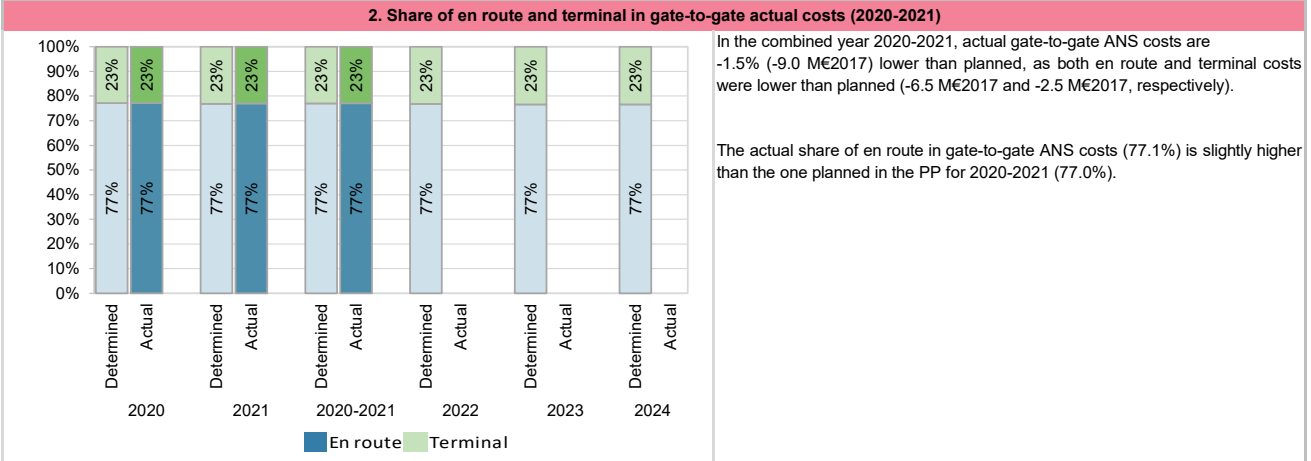
Ex-post, the overall RR is equal to the net gain from the terminal activity mentioned above (+2.4 M€) and corresponds to 1.7% of the terminal revenues.

The RoE cannot be computed for LVNL, as its assets are entirely financed through debt.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Netherlands-MET planned regulatory result (EUR '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	0	0	0	0	0	0
Revenue for the terminal charging zone	2,113	2,415	4,528	2,515	2,539	2,565
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Netherlands-MET actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	0	112	112			
Revenue for the terminal charging zone	2,113	2,448	4,561			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	4.6%	2.5%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			

**Overall regulatory results (RR) for the terminal activity for other ANSP in the charging zone**  
For KNMI (MET service provider), the overall ex-post regulatory result for the combined year 2020-2021 amounted to +0.1 M€, which represents 2.5% of the terminal revenues. Similarly to the main ANSP (LVNL), the RoE cannot be calculated for KNMI, as its assets are fully financed through loans.

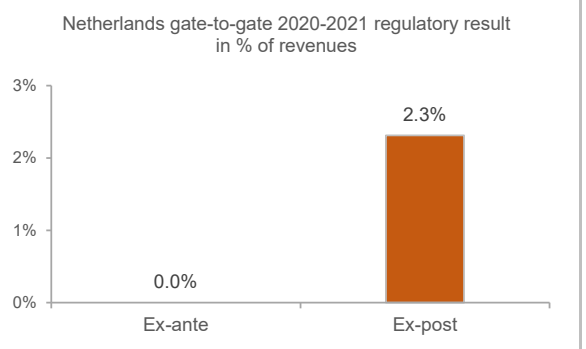
1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1: Netherlands		En route charging zone 2:					
Terminal charging zone 1: Netherlands		Terminal charging zone 2:					
Netherlands: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		232,377,205	221,891,943	454,269,148	229,819,383	233,322,266	236,043,088
Real terminal costs (EUR2017)		68,854,896	66,892,674	135,747,570	69,422,076	71,324,542	72,133,235
Real gate-to-gate costs (EUR2017)		301,232,100	288,784,617	590,016,718	299,241,459	304,646,809	308,176,323
En route share (%)		77.1%	76.8%	77.0%	76.8%	76.6%	76.6%
Netherlands: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		232,377,205	215,411,703	447,788,907			
Real terminal costs (EUR2017)		68,854,896	64,343,347	133,198,243			
Real gate-to-gate costs (EUR2017)		301,232,100	279,755,050	580,987,150			
En route share (%)		77.1%	77.0%	77.1%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017) in value		0	-9,029,567	-9,029,567			
in %		0.0%	-3.1%	-1.5%			
En route share in p.p.		0.0 p.p.	0.2 p.p.	0.1 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In EUR '000							
ANSP(S)	RR	Ex-ante			Ex-post		
		Revenues	RR % revenues	RR	Revenues	RR % revenues	
LVNL	0	476,425	0.0%	11,199	484,047	2.3%	
MUAC (Netherlands)	0	78,605	0.0%	1,747	80,353	2.2%	
METSP(s)		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
Netherlands MET		0	25,220	0.0%	690	25,406	2.7%
<b>Total</b>		<b>0</b>	<b>580,250</b>	<b>0.0%</b>	<b>13,636</b>	<b>589,805</b>	<b>2.3%</b>

For the ANSPs providing services in the en route and terminal charging zones of the Netherlands covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +13.6 M€ (+11.1 M€ for en route and +2.5 M€ for terminal charging zone - see boxes 10 to 14 for the detailed analysis at charging zones level), corresponding to 2.3% of gate-to-gate ANS revenues.

This is higher than the return planned for the year included in the performance plan (0.0%).



Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>MUAC</b>	93	C	C	D	C	C
<p>Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.</p> <p>MUAC oversight is exercised in a coordinated manner by the Four States' NSAs (Belgium, Germany, Luxembourg and the Netherlands) over which territories and airspace MUAC provides air traffic services. Safety performance of MUAC is reported separately of these four States as it has been assessed and agreed by the four NSAs.</p>						
Observations						
<p>Maturity levels have been maintained with respect to 2020. All five EoSM components of MUAC meet, or exceed, already the 2024 target level.</p> <p>IMPORTANT: EASA/European Commission did not received the verified questionnaire from the NSA on time. This is an important step to receive confirmation that the self-evaluated questionnaire by the ANSP has been actually verified. It should be sent in due time to allow proper and timely drafting of the Monitoring Report.</p>						

# **Annual Monitoring Report 2021**

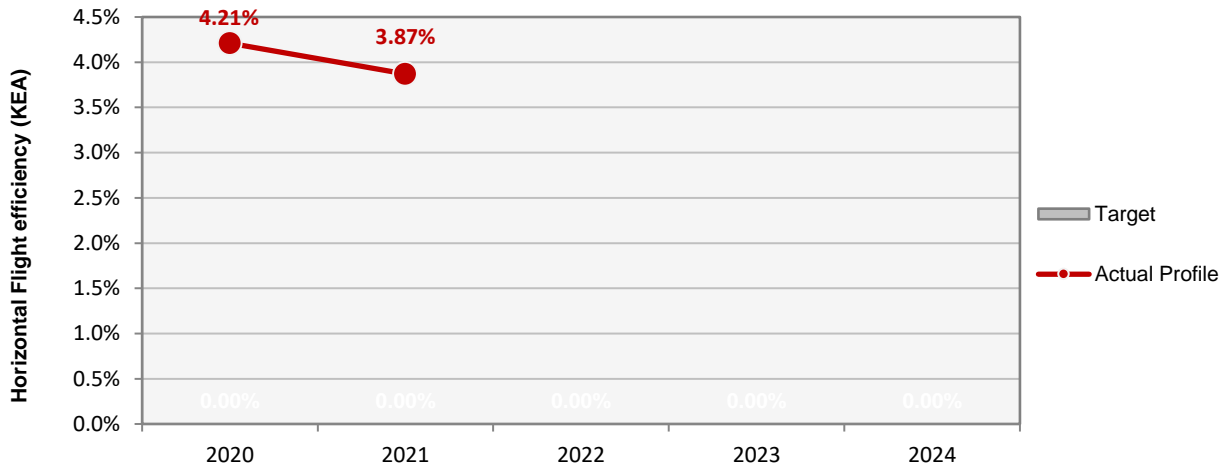
## Local level view

### Switzerland

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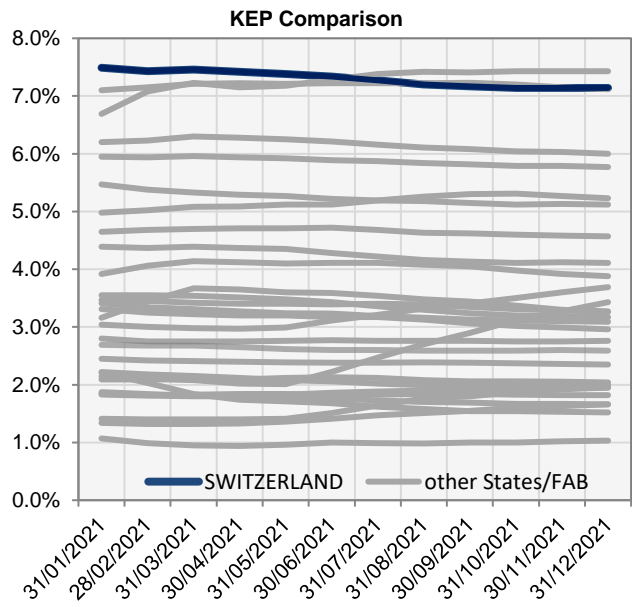
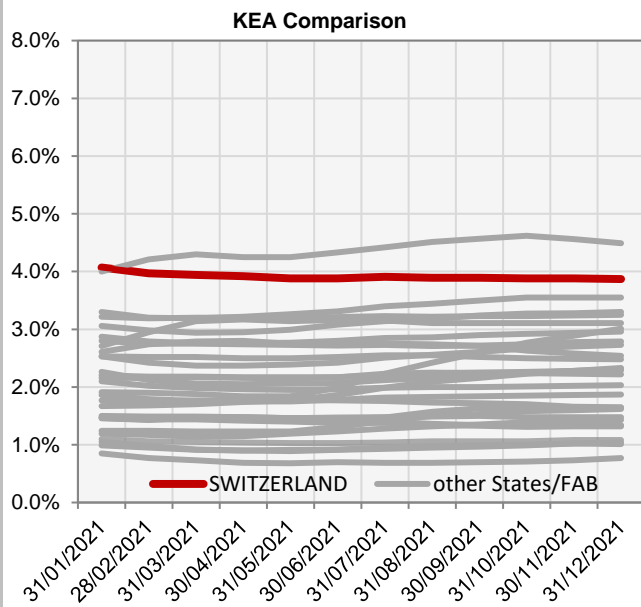
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>Skyguide</b>	89	C	C	C	C	C
<p>Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.</p>						
Observations						
<p>Maturity levels have been maintained with respect to 2020. Four out of five EoSM components of the ANSP meet already the 2024 target level. Only the component "Safety Risk Management" is below 2024 target level, at level C. Improvements in safety risk management are still expected during RP3 to achieve 2024 targets.</p>						

KEA					
	2020	2021	2022	2023	2024
Target	n/a	n/a	n/a	n/a	n/a
Actual performance	4.21%	3.87%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	4.07%	3.97%	3.94%	3.92%	3.88%	3.88%	3.91%	3.89%	3.89%	3.88%	3.88%	3.87%
KEP	7.49%	7.43%	7.46%	7.42%	7.38%	7.34%	7.27%	7.20%	7.17%	7.14%	7.14%	7.14%
KES	6.98%	6.89%	6.90%	6.89%	6.86%	6.82%	6.77%	6.73%	6.71%	6.70%	6.72%	6.74%



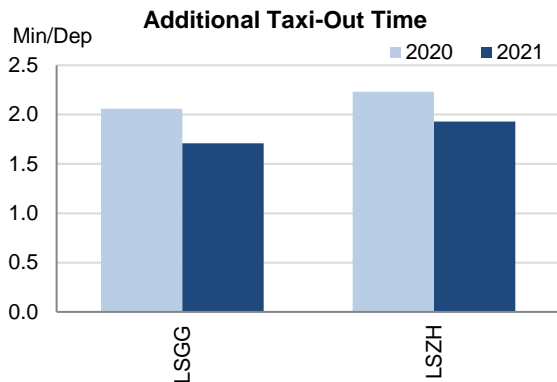
The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.



**1. Overview**

Switzerland identifies its two main airports Zurich (LSZH) and Geneva (LSGG) as subject to RP3 monitoring. Both airports have a fully implemented data flow that allows the proper monitoring of environmental indicators. Traffic in 2021 at these two airports was still 52% lower than in 2019, but recovered 18% with respect to 2020. Additional times drastically improved in 2020 and they have further improved in 2021 at annual level driven by the performance comparison during the first trimester. The share of CDO flights remained quite stable for the monitored Swiss airports around 20%.

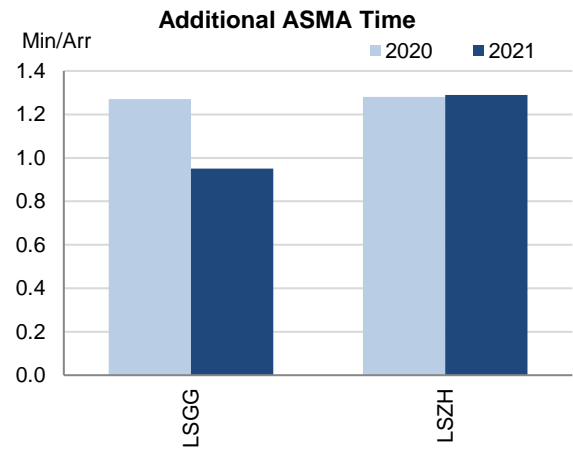
**2. Additional Taxi-Out Time**



Additional taxi-out times at both Swiss airports decreased in 2021. However, this reduction at annual level is the consequence of much lower additional times in the period January to March (compared to January- March 2020, before the COVID crisis) and then a progressive increase of the taxi-out times exceeding the 2020 levels for the rest of the year.

According to FABEC monitoring report: *In Switzerland, ground efficiency benefited from traffic reduction during summer 2021. Further improvements will stem from CP1 Airport Operation Plan deployment.*

**3. Additional ASMA Time**



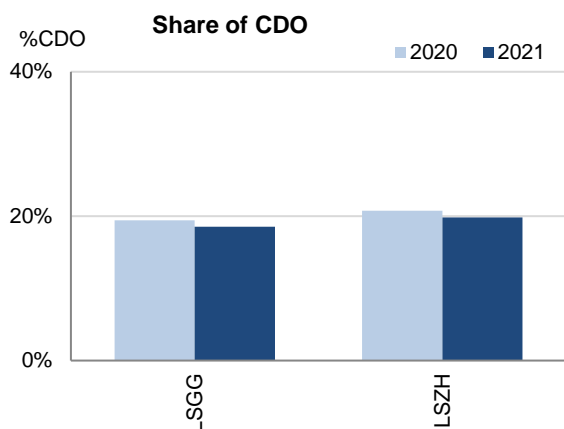
Additional times in the terminal area decreased at annual level at Geneva (LSGG; 2019: 1.78 min/arr.; 2020: 1.27 min/arr.; 2021: 0.95 min/arr.) while at Zurich they remained at the same level (LSZH; 2019: 2.91 min/arr.; 2020: 1.28 min/arr.; 2021: 1.29 min/arr.)

This annual value, like with the additional taxi-out times, is the result of much lower additional times in the period January to March (compared to January- March 2020, before the COVID crisis) and then a progressive increase of the ASMA times exceeding the 2020 levels for the rest of the year.

At the end of the year, and still with lower traffic, the additional ASMA times were close to the 2019 levels.

According to FABEC monitoring report: *In Switzerland, efficiency within the last 40NM (additional time in descent flight phase) around LSZH remained stable in 2021 despite traffic increase. Performance could have however been better, European top30 airports average performance being 20% better in 2021 than in 2020. LSGG performance shows such improvement. It is to be noted that unimpeded time within TMA increased, showing a more conservative way of flying during traffic ramp-up. XMAN and Leading Optimised Runway Delivery (LORD) projects should help improving performance. ECTL is developing its indicator to differentiate structural and operational inefficiencies. On this basis, an analysis was performed by ECTL in 2022 for LSZH and discussed with operational experts.*

#### 4. Share of arrivals applying CDO



The share of CDO flights has decreased 0.9 percentage points for both Geneva and Zurich. Both have around 20% of CDO flights which is below the overall RP3 value in 2021 (30.5%). The two airports have a similar monthly evolution of the share of CDO flights with lower monthly values in the second half of 2021.

According to FABEC monitoring report: *In Switzerland, vertical flight efficiency from Top of Descent remained stable in 2021 despite traffic increase. Trials were performed with Swiss in 2020 that could only be debriefed in 2022. They show interesting room for improvement. A FABEC workshop was organized in 2021 on Vertical Flight Efficiency bringing a lot of food for thoughts.*

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Geneva-LSGG	2.06	1.71				1.27	0.95				19%	19%			
Zurich-LSZH	2.23	1.93				1.28	1.29				21%	20%			

1. Overview

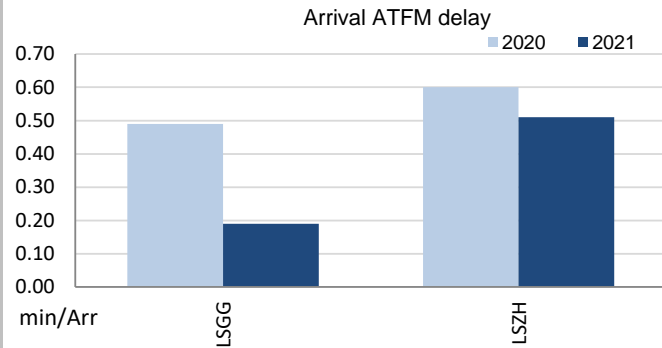
Switzerland identifies its two main airports Zurich (LSZH) and Geneva (LSGG) as subject to RP3 monitoring. Both airports have a fully implemented data flow that allows the proper monitoring of the pre-departure delays. Nevertheless, the quality of the reporting does not allow for the calculation of the ATC pre-departure delay at Geneva, with more than 60% of the reported delay not allocated to any cause.

Traffic in 2021 at these two airports was still 52% lower than in 2019, but recovered 18% with respect to 2020.

During 2021, arrival ATFM delays in Switzerland have decreased with respect to the previous year (2020: 0.55 min/arr, 2021: 0.37 min/arr)

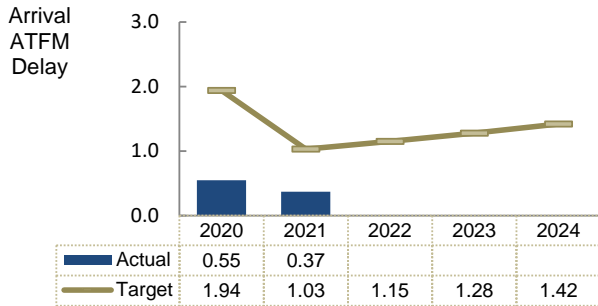
ATFM slot adherence has slightly improved (2021: 94.8%; 2020: 94.6%).

2. Arrival ATFM Delay



ATFM delays at both Swiss airports further decreased in 2021 and concentrated mostly in the second half of the year. At Zurich (LSZH: 2019: 1.99 min/arr.; 2020: 0.60 min/arr.; 2021: 0.51 min/arr.) 73% of these delays were attributed to weather and 13% to aerodrome capacity issues. At Geneva (LSGG: 2019: 1.04 min/arr.; 2020: 0.49 min/arr.; 2021: 0.19 min/arr.) 30% of the delays were attributed to weather, 29% to ATC staffing issues, 22% to ATC capacity and another 15% to aerodrome capacity.

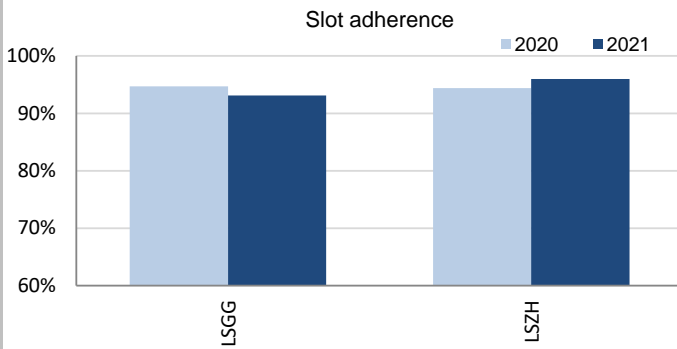
3. Arrival ATFM Delay – National Target and Incentive Scheme



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024. No bonus will be awarded to skyguide for 2021 achievement.

#### 4. ATFM Slot Adherence



With the drastic drop in traffic, the share of regulated departures from Zurich and Geneva virtually disappeared until July 2021. These airports showed adherence above 93% and the national average was 94.8%, similar to the performance in 2020 (94.6%). With regard to the 5.2% of flights that did not adhere, 4% was early and 1.2% was late.

#### 5. ATC Pre-departure Delay

Zurich is the only Swiss airport where this indicator can be calculated. The performance has further improved (LSZH; 2019: 1.63 min/dep.; 2020: 0.52 min/dep.; 2021: 0.39 min/dep.) and even if it increased in the second half of 2021, it was still much lower than the 2019 values.

The share of unidentified delay reported by Geneva in 2020 was above 40% every month between April 2020 and July 2021, preventing the calculation of this indicator, due to the special traffic composition. Geneva had proper reporting before the pandemic and it has improved with the traffic recovery.

#### 6. All Causes Pre-departure Delay

The total (all causes) delay in the actual off block time at both Geneva and Zurich increased in 2021 (LSZH: 2020: 7.55 min/dep.; 2021: 9.66 min/dep.; LSGG: 2020: 8.46 min/dep.; 2021: 9.03 min/dep.). The highest delays per flight at these airports were observed in Summer and increased again at some airports at towards the end of the year.

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Geneva-LSGG	0.49	0.19				94.7%	93.1%				n/a	n/a				8.46	9.03			
Zurich-LSZH	0.6	0.51				94.4%	96.0%				0.52	0.39				7.55	9.66			

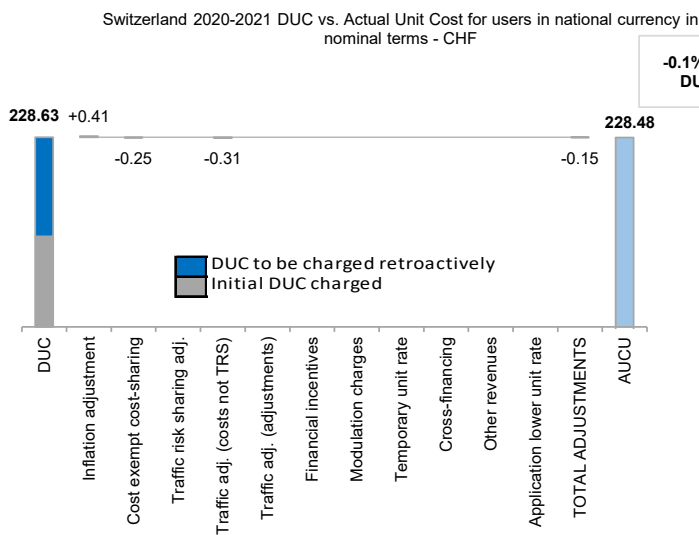
1. Contextual economic information: en route air navigation services						
Switzerland ECZ represents 2.4% of the SES en route ANS actual costs in 2019			FAB: FABEC			
National currency:	CHF	Exchange rates (1 EUR=)	2017: 1.11124 CHF	2020: 1.07001 CHF	2021: 1.08084 CHF	
Performance Plan:	RP3 draft performance plan dated 17 November 2021 and found inconsistent as per Commission Decision (EU) 2022/780 of 13 April 2022 FABEC has submitted a revised RP3 draft performance plan in July 2022, currently under assessment.					
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Switzerland: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal CHF)	161,562,792	188,122,841	349,685,633	185,025,300	178,132,412	177,797,629
Inflation %	0.0%	0.1%		0.3%	0.8%	0.9%
Inflation index (100 in 2017)	101.3	101.4		101.7	102.5	103.4
Real en route costs (CHF2017)	160,013,873	186,104,662	346,118,535	182,630,797	174,728,056	173,137,254
Total en route service units	650,488	879,000	1,529,488	1,593,957	1,688,954	1,810,951
<b>Real en route DUC per service unit (CHF2017)</b>	<b>245.99</b>	<b>211.72</b>	<b>226.30</b>	<b>114.58</b>	<b>103.45</b>	<b>95.61</b>
<b>Real en route DUC per service unit (EUR2017)</b>	<b>221.37</b>	<b>190.53</b>	<b>203.64</b>	<b>103.11</b>	<b>93.10</b>	<b>86.04</b>
Switzerland: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal CHF)	184,908,005	174,890,014	359,798,018			
Inflation %	0.0%	0.5%				
Inflation index (100 in 2017)	101.3	101.8				
Real en route costs (CHF2017)	183,058,673	172,471,948	355,530,622			
Total en route service units	650,488	897,288	1,547,776			
<b>Real en route AUC per service unit (CHF2017)</b>	<b>281.42</b>	<b>192.21</b>	<b>229.70</b>			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>253.25</b>	<b>172.97</b>	<b>206.71</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal CHF)	in value 23,345,213	-13,232,828	10,112,385			
	in % +14.45%	-7.0%	+2.9%			
Inflation %	in p.p. 0.0 p.p.	0.4 p.p.				
Inflation index (100 in 2017)	in p.p. 0.0 p.p.	0.4 p.p.				
Real en route costs (CHF2017)	in value 23,044,801	-13,632,714	9,412,086			
	in % +14.40%	-7.3%	+2.7%			
Total en route service units	in value 0	18,288	18,288			
	in % -	+2.1%	+1.2%			
<b>Real en route unit cost per service unit (CHF2017)</b>	<b>in value 35.43</b>	<b>-19.51</b>	<b>3.41</b>			
	<b>in % +14.40%</b>	<b>-9.2%</b>	<b>+1.5%</b>			
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value 31.88</b>	<b>-17.56</b>	<b>3.07</b>			
	<b>in % +14.40%</b>	<b>-9.2%</b>	<b>+1.5%</b>			
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs. DUC</b> In the combined year 2020-2021, the en route AUC was +1.5% (or +3.41 CHF2017, +3.07€2017) higher than the planned DUC. This results from the combination of slightly higher than planned TSUs (+1.2%) and higher than planned en-route costs in real terms in a greater proportion (+2.7%, or +9.4 MCHF2017, +8.5 M€2017).			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      +1.2%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
<b>En route service units</b> The difference between actual and planned TSUs (+1.2%) falls within the ±2% dead band. Hence the resulting additional en-route revenue is kept by the ANSPs (see items 10 to 14).						
<b>En route costs by entity</b> Actual real en route costs are +2.7% (+8.5 M€2017) higher than planned. This is driven by the main ANSP, Skyguide (+3.2%, or +8.7 M€2017), while the actual costs of the MET service provider and the NSA/EUROCONTROL are close to the determined costs (-0.3% and -0.7%, respectively).			<p>Costs by entity at ECZ level (M€2017):</p> <p>Main ANSP 3.2%</p> <p>Other ANSP(s) 0%</p> <p>METSP(s) -0.3%</p> <p>NSA/EUROCONTROL -0.7%</p> <p>Total CZ 2.7%</p>			
<b>En route costs for the main ANSP (Skyguide) at charging zone level</b> Actual en route costs in real terms are higher than planned by +3.2% overall (or +8.7 M€2017). However, the differences by nature of costs are distorted by two factors: a) The overall reported costs in each cost item are netted by the financing of the services provided by Skyguide outside the Swiss FIR; b) Skyguide's costs include significant amounts linked to the additional costs caused by the change in the capitalisation rule in 2021 (+10.2 M€2017) and to the reduced financing of delegated airspace in 2020 (+20.7 M€2017). However, in order for these amounts not to be billed to airspace users, they have also been reported as negative exceptional items in the determined costs, but not in the actual costs (-100% of negative exceptional costs, or +30.9 M€2017). - the remaining difference in staff costs (which is overall of -23.1 M€2017 or -10.1%), is mainly due to the postponement of the "provision for ATCO retirement age", which was contained in the 2021 determined costs.			<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs -10.1%</p> <p>Other operating costs 2.7%</p> <p>Depreciation -0.2%</p> <p>Cost of capital -1.5%</p> <p>Exceptional costs -100.0%</p> <p>VFR exempted flights -0.2%</p> <p>Total Main ANSP 3.2%</p>			

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	CHF/SU	EUR/SU
Initial DUC charged	108.99	101.27
DUC to be charged retroactively	119.64	111.24
<b>DUC</b>	<b>228.63</b>	<b>212.52</b>
Inflation adjustment	0.41	0.38
Cost exempt from cost-sharing	-0.25	-0.23
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	-0.31	-0.29
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	0.00	0.00
Application of lower unit rate	0.00	0.00
Total adjustments	-0.15	-0.14
<b>AUCU</b>	<b>228.48</b>	<b>212.38</b>
<b>AUCU vs. DUC</b>	<b>-0.1%</b>	<b>-0.1%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

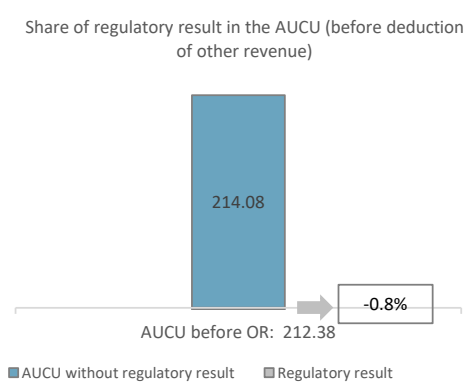
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. En route costs exempt from cost sharing

		CHF '000	EUR '000	CHF/SU	EUR/SU
by item	New and existing investments	-214	-198	-0.14	-0.13
	Competent authorities and qualified entities costs	0	0	0.00	0.00
	Eurocontrol costs	-175	-162	-0.11	-0.10
	Pension costs	0	0	0.00	0.00
	Interest on loans	0	0	0.00	0.00
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>-390</b>	<b>-360</b>	<b>-0.25</b>	<b>-0.23</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level



ANSP(S)	CHF '000	EUR '000	CHF/SU	EUR/SU
Skyguide	-2,679	-2,679	-1.73	-1.73
<b>METSP(s)</b>				
Switzerland MET	57	53	0.04	0.03
<b>Total charging zone</b>	<b>-2,622</b>	<b>-2,626</b>	<b>-1.69</b>	<b>-1.70</b>
<b>Actual cost for users***</b>	<b>353,631</b>	<b>328,713</b>	<b>228.48</b>	<b>212.38</b>
<b>Regulatory result (% AUCU)</b>	<b>-0.7%</b>	<b>-0.8%</b>	<b>-0.7%</b>	<b>-0.8%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (228.48CHF or 212.38€) is -0.1% lower than the nominal DUC (228.63CHF or 212.52€) which includes DUC initially charged: 108.99CHF or 101.27€; and to be charged: 119.64CHF or 111.24€. The difference between these two figures (-0.15CHF/SU or -0.14€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.41CHF/SU or +0.38€/SU);
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.25CHF/SU or -0.23€/SU); and
- the deduction of the traffic adjustment (-0.31CHF/SU or -0.29€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years.

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is negative (-0.7%).

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

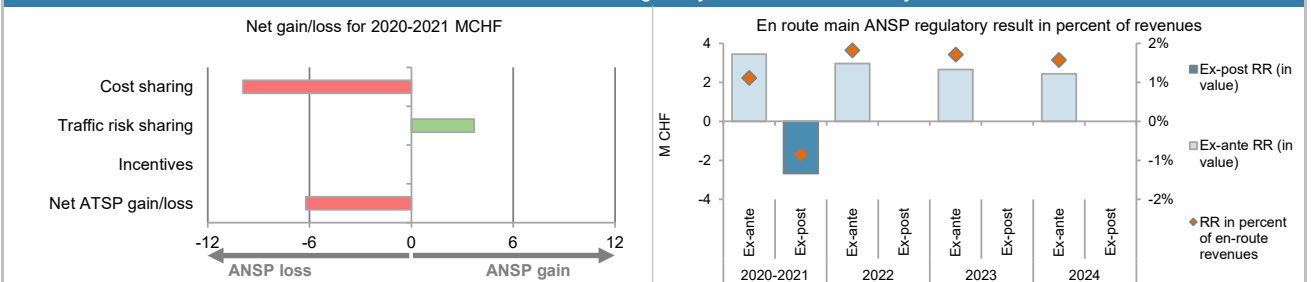
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (CHF '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	-10,309			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	604			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-214			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>-9,920</b>			
Traffic risk sharing (CHF '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	1.2%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	309,093			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>3,696</b>			
Incentives (CHF '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (CHF '000)</b>	<b>-6,224</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>-5,977</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

Skyguide planned regulatory result (CHF '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	147,653	130,663	278,316	130,292	116,062	105,902
Proportion of financing through equity (in %)	47%	22%	35%	18%	23%	29%
RoE pre-tax rate (in %)	2.8%	5.1%	3.5%	12.9%	9.9%	8.1%
RoE (in value)	1,939	1,500	3,439	2,968	2,661	2,443
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>1,939</b>	<b>1,500</b>	<b>3,439</b>	<b>2,968</b>	<b>2,661</b>	<b>2,443</b>
<b>Revenue for the en route charging zone</b>	<b>141,816</b>	<b>167,277</b>	<b>309,093</b>	<b>163,252</b>	<b>156,079</b>	<b>155,395</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>1.4%</b>	<b>0.9%</b>	<b>1.1%</b>	<b>1.8%</b>	<b>1.7%</b>	<b>1.6%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>2.8%</b>	<b>5.1%</b>	<b>3.5%</b>	<b>12.9%</b>	<b>9.9%</b>	<b>8.1%</b>
Skyguide actual regulatory result (CHF '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	147,653	126,571	274,224			
Proportion of financing through equity (in %)	47%	33%	40%			
RoE pre-tax rate (in %)	2.8%	3.8%	3.2%			
RoE (in value)	1,939	1,606	3,545			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	-6,224	-6,224			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>1,939</b>	<b>-4,618</b>	<b>-2,679</b>			
<b>Revenue for the en route charging zone</b>	<b>165,162</b>	<b>148,017</b>	<b>313,179</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>1.2%</b>	<b>-3.1%</b>	<b>-0.9%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>2.8%</b>	<b>-11.1%</b>	<b>-2.4%</b>			

13. Focus on the main ANSP regulatory result on en route activity



Skyguide net loss on activity in Switzerland en route charging zone in the combined year 2020-2021

Skyguide incurred a net loss of -6.2 MCHF (-6.0 M€), resulting from a loss of -9.9 M CHF arising from the cost sharing mechanism, partially compensated by a gain of +3.7 M CHF arising from the traffic risk sharing mechanism.

Skyguide overall regulatory results (RR) for the en route activity

Ex-post, the overall RR corresponding to the net loss from the en route activity mentioned above (-6.2 MCHF or -6.0 M€) and the RoE (+3.6 MCHF or +3.3 M€) amounts to a loss of -2.7 MCHF or -2.5 M€ (0.9% of the en route revenues). The resulting ex-post rate of return on equity is -2.4%, compared to 3.5% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
Switzerland MET planned regulatory result (CHF '000)	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	8,475	8,476	16,951	8,977	8,977	8,977
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Switzerland MET actual regulatory result (CHF '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	57	57			
Revenue for the en route charging zone	8,475	8,511	16,986			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	0.7%	0.3%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for the MET provider in the en route charging zone for Switzerland corresponds to 0.3% of the corresponding en route revenues.						



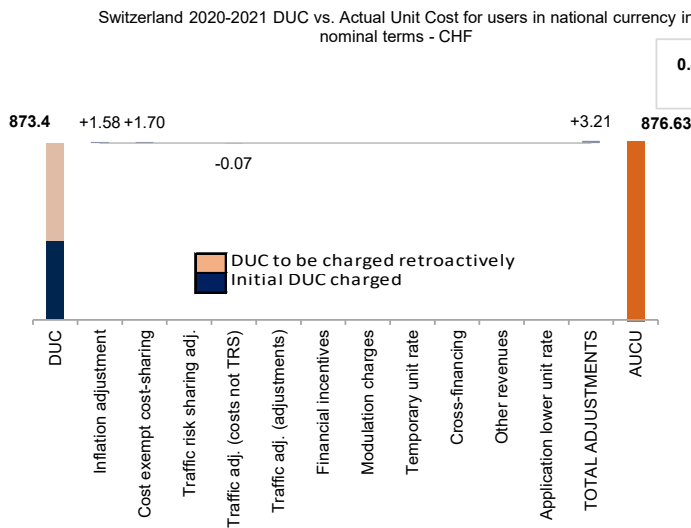
1. Contextual economic information: terminal air navigation services						
· Switzerland TCZ represents 6.9% of the SES terminal ANS actual costs in 2019 · Number of airports in charging zone in 2021: 2 of which: <ul style="list-style-type: none"> <li>· Airports with fewer than 80,000 IFR mvmts: 0</li> <li>· Airports with more than 80,000 IFR mvmts: 2</li> </ul>						
· National currency: CHF Exchange rates (1 EUR=) 2017: 1.11124 CHF 2020: 1.07001 CHF 2021: 1.08084 CHF						
· Performance Plan: See item 1 for the en route charging zone(s).						
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Switzerland: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal CHF)	99,524,185	109,930,021	209,454,206	105,207,116	104,121,837	105,326,817
Inflation %	0.0%	0.1%		0.3%	0.8%	0.9%
Inflation index (100 in 2017)	101.3	101.4		101.7	102.5	103.4
Real terminal costs (CHF2017)	98,540,501	108,730,912	207,271,413	103,867,436	102,170,228	102,622,408
Total terminal service units	111,807	128,000	239,807	245,791	267,772	279,762
<b>Real terminal DUC per service unit (CHF2017)</b>	<b>881.34</b>	<b>849.46</b>	<b>864.32</b>	<b>422.59</b>	<b>381.56</b>	<b>366.82</b>
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>793.11</b>	<b>764.43</b>	<b>777.80</b>	<b>380.28</b>	<b>343.36</b>	<b>330.10</b>
Switzerland: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal CHF)	99,524,185	101,058,818	200,583,003			
Inflation %	0.0%	0.5%				
Inflation index (100 in 2017)	101.3	101.8				
Real terminal costs (CHF2017)	98,540,501	99,651,423	198,191,924			
Total terminal service units	111,807	128,412	240,219			
<b>Real terminal AUC per service unit (CHF2017)</b>	<b>881.34</b>	<b>776.03</b>	<b>825.05</b>			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>793.11</b>	<b>698.35</b>	<b>742.45</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal CHF)	in value 0	-8,871,203	-8,871,203			
	in % -	-8.1%	-4.2%			
Inflation %	in p.p. 0.0 p.p.	0.4 p.p.				
Inflation index (100 in 2017)	in p.p. 0.0 p.p.	0.4 p.p.				
Real terminal costs (CHF2017)	in value 0	-9,079,489	-9,079,489			
	in % -	-8.4%	-4.4%			
Total terminal service units	in value 0	412	412			
	in % -	+0.3%	+0.2%			
<b>Real terminal unit cost per service unit (CHF2017)</b>	<b>in value 0.00</b>	<b>-73.43</b>	<b>-39.28</b>			
	<b>in % -</b>	<b>-8.6%</b>	<b>-4.5%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value 0.00</b>	<b>-66.08</b>	<b>-35.35</b>			
	<b>in % -</b>	<b>-8.6%</b>	<b>-4.5%</b>			
4. Focus on terminal DUC monitoring at charging zone level						
<b>AUC vs. DUC</b> In the combined year 2020-2021, the terminal AUC was -4.5% (or -39.28 CHF2017, -35.35 €2017) lower than the planned DUC. This results from the combination of slightly higher than planned TNSUs (+0.2%) and lower than planned en-route costs in real terms (-4.4%, or -9.1 MCHF2017, -8.2 M€2017).						
<b>Terminal service units</b> The difference between actual and planned TNSUs (+0.2%) falls within the ±2% dead band. Hence the resulting additional terminal revenue is kept by the ANSPs (see items 10 to 14).						
<b>Terminal costs by entity</b> Actual real terminal costs are -4.4% (-8.2 M€2017) lower than planned. This is driven by the main ANSP, Skyguide (-4.6%, or -8.2 M€2017), while the actual costs of the MET service provider and the NSA are in line with the determined costs (-0.03% and 0.0%, respectively).						
<b>Terminal costs for the main ANSP (Skyguide) at charging zone level</b> Actual terminal costs in real terms are lower than planned by -4.6% overall (or -8.2 M€2017). However, the differences by nature of costs are distorted by the presentation of the additional costs caused by the change in the capitalisation rule in 2021 (+5.3 M€2017). Indeed, in order for these amounts not to be billed to airspace users, they have also been reported as negative exceptional items in the determined costs, but not in the actual costs (-100% of negative exceptional costs, or +5.3 M€2017). - the significant difference in staff costs (which is overall of -12.7 M€2017 or -11.4%), is mainly due to the postponement of the "provision for ATCO retirement age", which was contained in the 2021 determined costs.						

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	CHF/SU	EUR/SU
Initial DUC charged	392.40	364.77
DUC to be charged retroactively	481.03	447.22
<b>DUC</b>	<b>873.43</b>	<b>811.99</b>
Inflation adjustment	1.58	1.46
Cost exempt from cost-sharing	1.70	1.57
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	-0.07	-0.07
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	0.00	0.00
Application of lower unit rate	0.00	0.00
Total adjustments	3.21	2.97
<b>AUCU</b>	<b>876.63</b>	<b>814.95</b>
<b>AUCU vs. DUC</b>	<b>0.4%</b>	<b>0.4%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

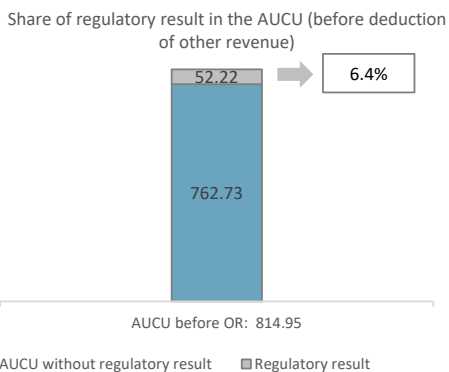
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

		CHF '000	EUR '000	CHF/SU	EUR/SU
by item	New and existing investments	407	377	1.70	1.57
	Competent authorities and qualified entities costs	0	0	0.00	0.00
	Eurocontrol costs	0	0	0.00	0.00
	Pension costs	0	0	0.00	0.00
	Interest on loans	0	0	0.00	0.00
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>407</b>	<b>377</b>	<b>1.70</b>	<b>1.57</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	CHF '000	EUR '000	CHF/SU	EUR/SU
Skyguide	13,536	12,541	56.35	52.21
METSP(s)	CHF '000	EUR '000	CHF/SU	EUR/SU
Switzerland-MET	3	3	0.01	0.01
<b>Total charging zone</b>	<b>13,539</b>	<b>12,544</b>	<b>56.36</b>	<b>52.22</b>
<b>Actual cost for users***</b>	<b>210,584</b>	<b>195,768</b>	<b>876.63</b>	<b>814.95</b>
<b>Regulatory result (% AUCU)</b>	<b>6.4%</b>	<b>6.4%</b>	<b>6.4%</b>	<b>6.4%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual unit cost incurred by airspace users (AUCU) in respect of terminal activities in the Switzerland terminal charging zone for the combined year 2020-2021 (876.63CHF or 814.95€) is +0.4% higher than the nominal DUC (873.43CHF or 811.99€) which includes DUC initially charged: 392.40CHF or 364.77€; and to be charged: 481.03CHF or 447.22€. The difference between these two figures +3.21CHF/SU or +2.97€/SU is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+1.58CHF/SU or +1.46€/SU);
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (+1.70CHF/SU or +1.57€/SU); and
- the deduction of the traffic adjustment (-0.07CHF/SU or -0.07€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years.

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 6.4%.

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

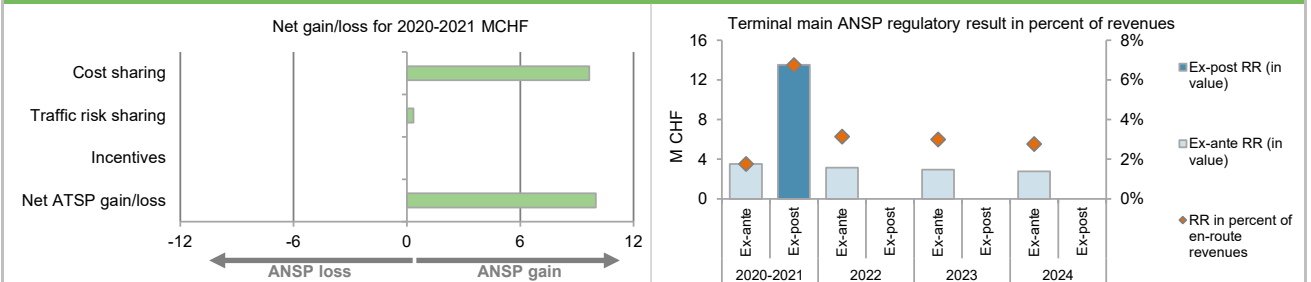
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (CHF '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	8,887			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	361			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	407			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>9,655</b>			
Traffic risk sharing (CHF '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.2%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	199,482			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>343</b>			
Incentives (CHF '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (CHF '000)</b>	<b>9,998</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>9,250</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

Skyguide planned regulatory result (CHF '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	142,645	143,487	286,132	138,028	129,237	120,278
Proportion of financing through equity (in %)	47%	22%	35%	18%	23%	29%
RoE pre-tax rate (in %)	2.8%	5.1%	3.6%	12.9%	9.9%	8.1%
RoE (in value)	1,874	1,647	3,521	3,144	2,963	2,775
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>1,874</b>	<b>1,647</b>	<b>3,521</b>	<b>3,144</b>	<b>2,963</b>	<b>2,775</b>
<b>Revenue for the terminal charging zone</b>	<b>94,537</b>	<b>104,944</b>	<b>199,482</b>	<b>99,876</b>	<b>98,791</b>	<b>99,996</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>2.0%</b>	<b>1.6%</b>	<b>1.8%</b>	<b>3.1%</b>	<b>3.0%</b>	<b>2.8%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>2.8%</b>	<b>5.1%</b>	<b>3.6%</b>	<b>12.9%</b>	<b>9.9%</b>	<b>8.1%</b>
Skyguide actual regulatory result (CHF '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	142,645	131,200	273,845			
Proportion of financing through equity (in %)	47%	33%	40%			
RoE pre-tax rate (in %)	2.8%	3.8%	3.2%			
RoE (in value)	1,874	1,664	3,538			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	9,998	9,998			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>1,874</b>	<b>11,663</b>	<b>13,536</b>			
<b>Revenue for the terminal charging zone</b>	<b>94,537</b>	<b>106,055</b>	<b>200,593</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>2.0%</b>	<b>11.0%</b>	<b>6.7%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>2.8%</b>	<b>26.9%</b>	<b>12.3%</b>			

13. Focus on main ANSP regulatory result on terminal activity



Skyguide net gain on activity in Switzerland terminal charging zone in the combined year 2020-2021

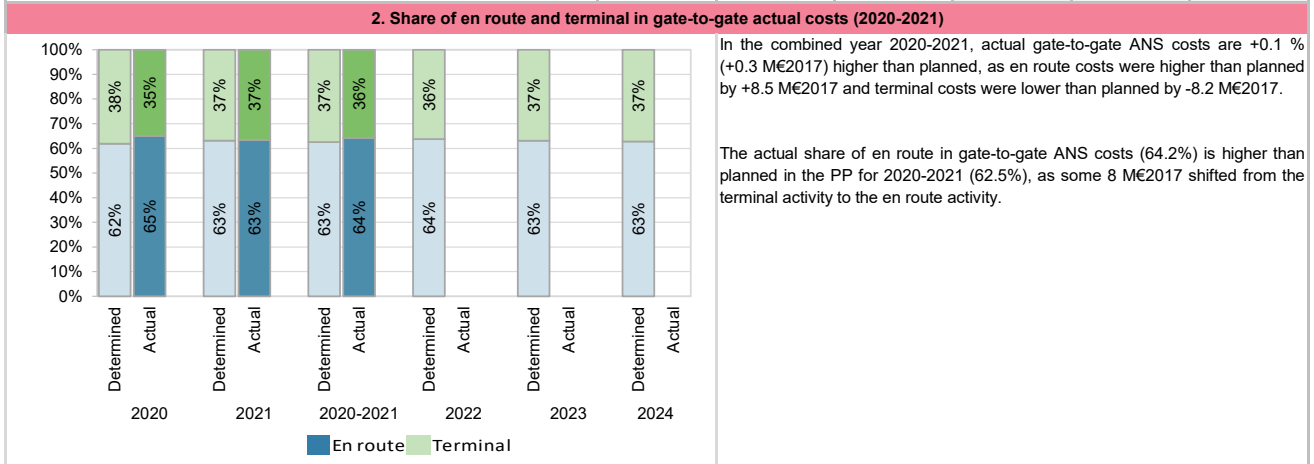
Skyguide incurred a net gain of +10.0 MCHF (+9.3 M€), combining a gain of +9.7 M CHF arising from the cost sharing mechanism and a gain of +0.3 M CHF arising from the traffic risk sharing mechanism.

Skyguide overall regulatory results (RR) for the terminal activity

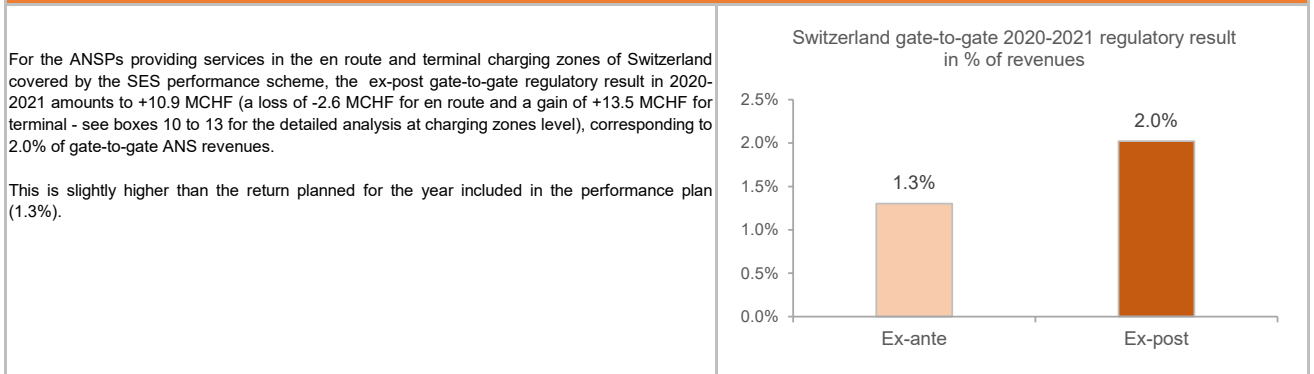
Ex-post, the overall RR corresponding to the net gain from the en route activity mentioned above (+10.0 MCHF) and the RoE (+3.5 MCHF) amounts to a gain of +13.5 MCHF (6.7% of the terminal revenues). The resulting ex-post rate of return on equity is 12.3%, compared to 3.6% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Switzerland-MET planned regulatory result (CHF '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	0	0	0	0	0	0
Revenue for the terminal charging zone	4,554	4,554	9,108	4,824	4,824	4,824
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Switzerland-MET actual regulatory result (CHF '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	0	3	3			
Revenue for the terminal charging zone	4,554	4,573	9,127			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	0.1%	0.03%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity</b>						
Ex-post, the overall RR for the MET provider in the terminal charging zone for Switzerland corresponds to 0.03% of the corresponding en route revenues.						

1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1:	Switzerland	En route charging zone 2:	N/A				
Terminal charging zone 1:	Switzerland	Terminal charging zone 2:					
Switzerland: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		143,995,782	167,474,769	311,470,551	164,348,653	157,237,011	155,805,455
Real terminal costs (EUR2017)		88,676,165	97,846,470	186,522,635	93,469,850	91,942,540	92,349,455
Real gate-to-gate costs (EUR2017)		232,671,946	265,321,239	497,993,186	257,818,503	249,179,551	248,154,910
En route share (%)		61.9%	63.1%	62.5%	63.7%	63.1%	62.8%
Switzerland: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		164,733,697	155,206,749	319,940,446			
Real terminal costs (EUR2017)		88,676,165	89,675,878	178,352,043			
Real gate-to-gate costs (EUR2017)		253,409,861	244,882,628	498,292,489			
En route share (%)		65.0%	63.4%	64.2%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017)	in value	20,737,915	-20,438,612	299,303			
	in %	8.9%	-7.7%	0.1%			
En route share	in p.p.	3.1 p.p.	0.3 p.p.	1.7 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In CHF '000	ANSP(S)	Ex-ante			Ex-post		
		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	Skyguide	6,960	508,575	1.4%	10,857	513,771	2.1%
METSP(s)		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	Switzerland MET	0	26,059	0.0%	60	26,114	0.2%
<b>Total</b>		<b>6,960</b>	<b>534,634</b>	<b>1.3%</b>	<b>10,918</b>	<b>539,885</b>	<b>2.0%</b>



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# **Annual Monitoring Report 2021**

## Local level view

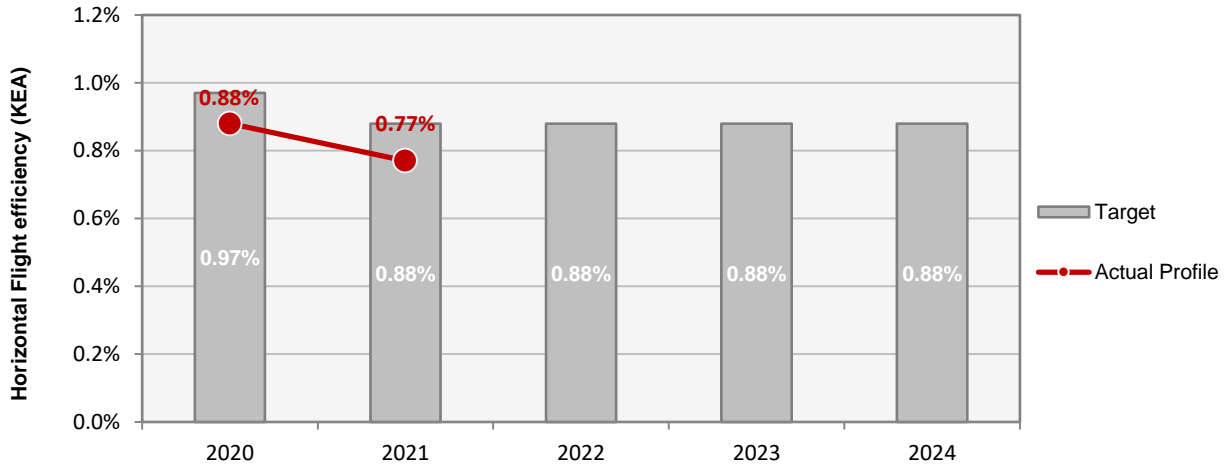
### Finland

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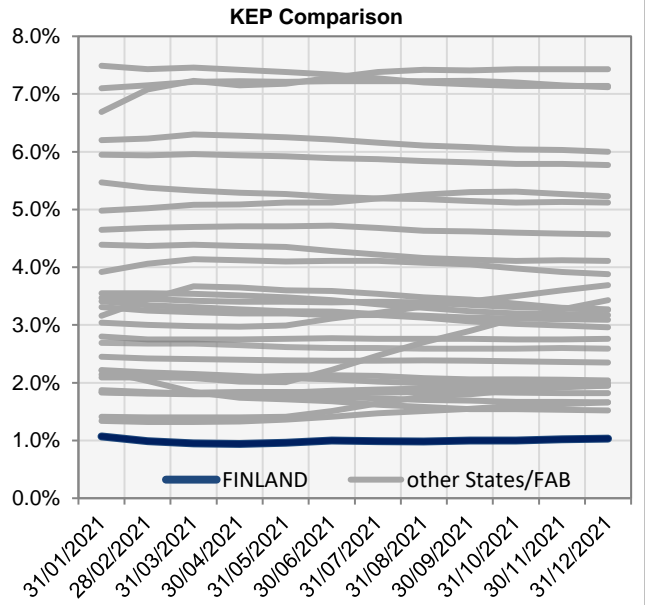
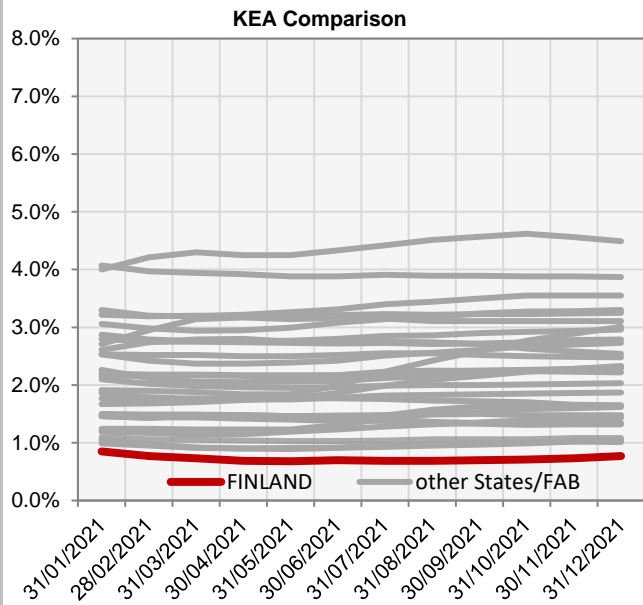
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>ANS</b>	86	C	C	C	C	C
Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.						
Observations						
Four out of five EoSM components of the ANSP meet already the 2024 target level. Slightly decrease has been observed with respect 2020, but only the component "Safety Risk Management" is below 2024 target level. Improvements in safety risk management are still expected during RP3 to achieve 2024 target.						

KEA					
	2020	2021	2022	2023	2024
Target	0.97%	0.88%	0.88%	0.88%	0.88%
Actual performance	0.88%	0.77%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	0.85%	0.77%	0.73%	0.69%	0.68%	0.70%	0.69%	0.69%	0.70%	0.71%	0.73%	0.77%
KEP	1.07%	0.99%	0.95%	0.94%	0.96%	1.00%	0.99%	0.98%	1.00%	1.00%	1.02%	1.03%
KES	0.97%	0.91%	0.88%	0.87%	0.90%	0.94%	0.93%	0.93%	0.94%	0.95%	0.97%	0.98%

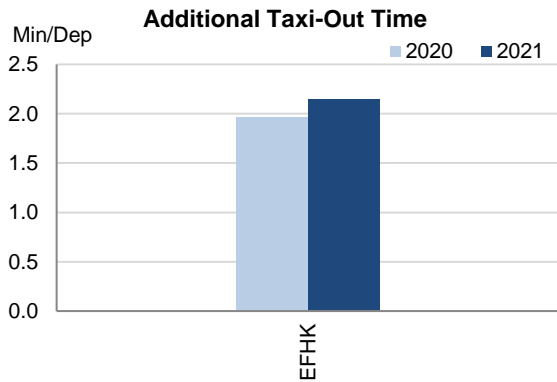


The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

1. Overview

Finland identifies only Helsinki airport as subject to RP3 monitoring. The Airport Operator Data Flow is fully established and the monitoring of all environmental indicators can be performed. Traffic at this airport in 2021 had decreased by 63% with respect to 2019, and it did not recover in 2021, showing similar figures than in 2020. Both additional time indicators improved in 2020 with respect to 2019. In 2021, additional ASMA times further reduced while additional taxi out times slightly increased. The share of CDO flights is in the higher range of all observed values in 2021.

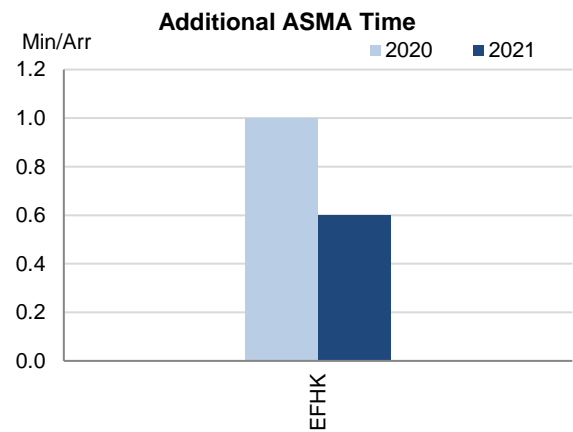
2. Additional Taxi-Out Time



Additional taxi-out times at Helsinki (EFHK; 2019: 3.04 min/dep.; 2020: 1.96 min/dep.; 2021: 2.15 min/dep.) are very influenced by the winter operations (winter maintenance and de-icing procedures), reaching above 6 min/dep in January and December of 2021. Additional taxi out times between April and October average well below 0.5 min/dep.

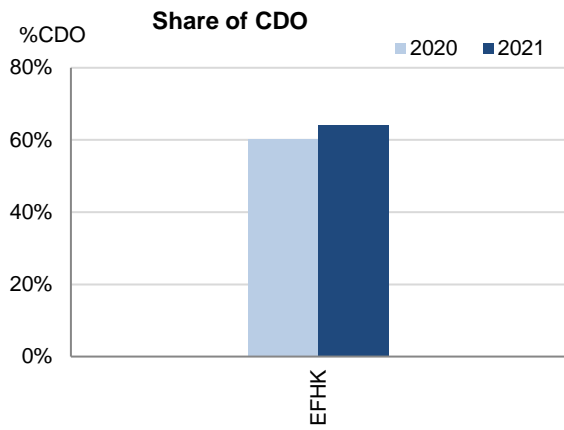
According to Finland's monitoring report: *No new initiatives or planned initiatives for additional taxi-out time PI. Additional taxi-out time is following the same pattern as in 2020, after the reduction of traffic due to COVID. Additional taxi-out time is rather low from April to October and higher in the winter months due to winter maintenance and de-icing procedures.*

3. Additional ASMA Time



The additional times in the terminal airspace have further decreased in 2021 (EFHK; 2019: 1.19 min/arr.; 2020: 1 min/arr.; 2021: 0.6 min/arr). Nevertheless at the end of the year, with the partial traffic recovery, we can observe again additional ASMA times above 1 min/dep, same levels as in 2019. According to Finland's monitoring report: *No implemented or planned initiatives for additional time in terminal airspace PI.*

#### 4. Share of arrivals applying CDO



The share of CDO flights at Helsinki (EFHK) has increased to 64.0% which is well above the overall RP3 value in 2021 (30.5%) and in the higher range of all observed values in 2021. However, in the second half of the year, the monthly values decreased from 73.4% in June to 54.2% in December.

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Helsinki-Vantaa-EFHK	1.96	2.15				1	0.6				60%	64%			

Update on Military dimension of the plan						
No comment provided.						
Military - related measures implemented or planned to improve capacity						
Nil						
PI#6 Effective use of reserved or segregated airspace - national level						
	Ratio PI#6	2020	2021	2022	2023	2024
	Finland	41%	44%			
PI#6 Effective use of reserved or segregated airspace (per ACC)						
	Ratio PI#6	2020	2021	2022	2023	2024
	Helsinki ACC	41%	44%			
Initiatives implemented or planned to improve PI#6						
No information provided.						
PI#7 Rate of planning via available airspace structures - national level						
	Ratio PI#7	2020	2021	2022	2023	2024
	Finland					
PI#7 Rate of planning via available airspace structures (per ACC)						
	Ratio PI#7	2020	2021	2022	2023	2024
	Helsinki ACC					
Initiatives implemented or planned to improve PI#7						
No information provided.						
PI#8 Rate of using available airspace structures - national level						
	Ratio PI#8	2020	2021	2022	2023	2024
	Finland					
PI#8 Rate of using available airspace structures (per ACC)						
	Ratio PI#8	2020	2021	2022	2023	2024
	Helsinki ACC					
Initiatives implemented or planned to improve PI#8						
No information provided.						

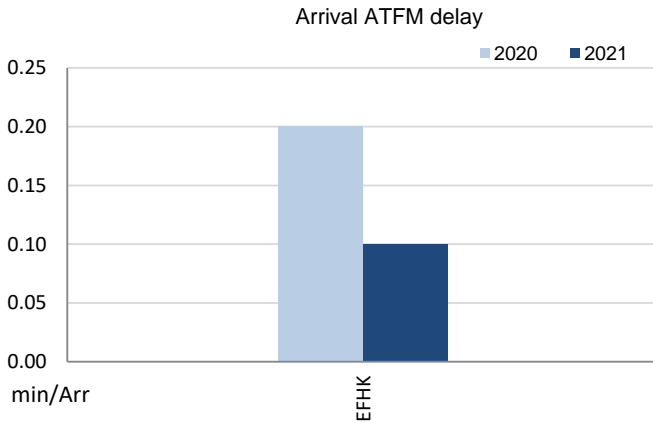
Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.09	0.03	0.05	0.05	0.05		
<b>Actual performance</b>	0.00	0.00					
NSA's assessment of capacity performance							
The traffic dropped significantly due to COVID-19 pandemic. The en-route ATFM delay has been 0 for many years. During RP3 planning, airspace user demand was to keep the delays as low as possible, and ANSP has achieved the target of this KPI.							
Monitoring process for capacity performance							
Review of the actual values from the NM dashboard.							
Capacity Planning							
En-route ATFM delay will remain low as the capacity is delivered due to user demand.							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned (Perf Plan)</b>	-	-	40	52	54	55	
<b>Actual</b>	51	43	31				
Application of Corrective Measures for Capacity (if applicable)							
Not applicable.							
Summary of capacity performance							
Finland experienced an increase in traffic from 119k flights in 2020 to 123k flights in 2021, with zero ATFM delay. However, traffic levels were still substantially below the 285k flights in 2019.							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.09	0.03	0.05	0.05	0.05		
<b>Deadband +/-</b>	-	-	[0-0.06]	[0-0.06]	[0-0.06]		
<b>Actual performance</b>	0.00	0.00					
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.							

1. Overview

Finland identifies only Helsinki airport as subject to RP3 monitoring. The Airport Operator Data Flow is fully established and the monitoring of all capacity indicators can be performed. Nevertheless, the quality of the reporting does not allow for the calculation of the ATC pre-departure delay, with more than 60% of the reported delay not allocated to any cause. Traffic at this airport in 2020 had decreased by 63% with respect to 2019, and it did not recover in 2021, showing similar figures than in 2020.

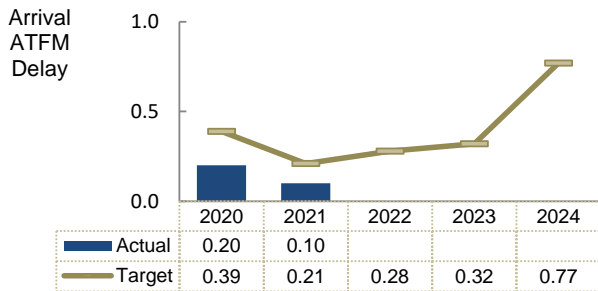
Average arrival ATFM delays in 2021 were 0.10 min/arr, compared to 0.20 min/arr in 2020. ATFM slot adherence has slightly deteriorated (2021: 93.1%; 2020: 93.6%).

2. Arrival ATFM Delay



Arrival ATFM delays at Helsinki in 2021 averaged 0,10 min/arr. (-0,11 below the target), and there were all attributed to weather reasons(198 minutes in October and 3341 minutes in December). Finland reports that *Helsinki airport was closed on December 10 for about 3 hours due to extremely severe runway conditions due to icing and freezing drizzle.*

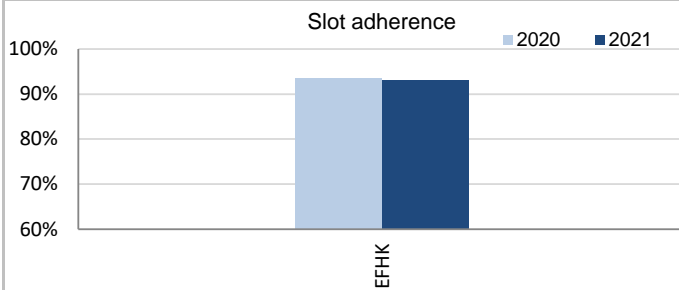
3. Arrival ATFM Delay – National Target and Incentive Scheme



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

#### 4. ATFM Slot Adherence



With the drastic drop in traffic, regulated departures from Helsinki virtually disappeared until July 2021. Helsinki's ATFM slot compliance was 93.1 %, similar to the performance in 2020 (93.6%). With regard to the 6.9% of flights that did not adhere, 1% was early and 5.9% was late.

#### 5. ATC Pre-departure Delay

The share of unidentified delay reported by Helsinki was above 40% for more than 2 months in the year, preventing the calculation of this indicator in 2021. This was due to the special traffic composition before the recovery. Helsinki had proper reporting before the pandemic and the reporting has improved since July 2021.

#### 6. All Causes Pre-departure Delay

The total (all causes) delay in the actual off block time at Helsinki increased in 2021 (EFHK: 2020: 7.76 min/dep.; 2021: 11.07 min/dep.). The highest delays per flight were observed in December, averaging more than 22 min/dep.

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Helsinki-Vantaa-EFHK	0.2	0.1				93.6%	93.1%				n/a	n/a				7.76	11.07			



1. Contextual economic information: en route air navigation services						
Finland ECZ represents 0.7% of the SES en route ANS actual costs in 2019			FAB: NEFAB			
National currency: EUR						
Performance Plan: RP3 draft performance plan dated 17 November 2021 and found consistent as per Commission Decision (EU) 2022/765 of 13 April 2022						
The final version of the plan was adopted and published on 30 June 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317.						
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Finland: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)	38,213,956	40,643,337	78,857,293	45,493,220	47,725,316	50,403,722
Inflation %	0.4%	1.4%		1.5%	1.6%	1.8%
Inflation index (100 in 2017)	102.7	104.2		105.7	107.4	109.3
Real en route costs (EUR2017)	37,408,395	39,370,777	76,779,172	43,474,245	45,038,050	46,941,389
Total en route service units	462,058	481,000	943,058	894,000	1,087,000	1,167,000
<b>Real en route DUC per service unit (EUR2017)</b>	<b>80.96</b>	<b>81.85</b>	<b>81.42</b>	<b>48.63</b>	<b>41.43</b>	<b>40.22</b>
Finland: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)	38,213,956	36,959,359	75,173,315			
Inflation %	0.4%	2.1%				
Inflation index (100 in 2017)	102.7	104.9				
Real en route costs (EUR2017)	37,408,395	35,618,896	73,027,291			
Total en route service units	462,058	494,854	956,912			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>80.96</b>	<b>71.98</b>	<b>76.32</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)						
in value	0	-3,683,979	-3,683,979			
in %	-	-9.1%	-4.7%			
Inflation %						
in p.p.	0.0 p.p.	0.7 p.p.				
Inflation index (100 in 2017)						
in p.p.	0.0 p.p.	0.7 p.p.				
Real en route costs (EUR2017)						
in value	0	-3,751,882	-3,751,882			
in %	-	-9.5%	-4.9%			
Total en route service units						
in value	0	13,854	13,854			
in %	-	+2.9%	+1.5%			
<b>Real en route unit cost per service unit (EUR2017)</b>						
in value	<b>0.00</b>	<b>-9.87</b>	<b>-5.10</b>			
in %	-	<b>-12.1%</b>	<b>-6.3%</b>			
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs DUC</b>						
In the combined year 2020-2021, the AUC was lower than the planned DUC (by -6.3%, or -5.10€2017). This results from the combination of higher than planned TSUs (+1.5%) and lower than planned en route costs in real terms (by -4.9%, or -3.8 M€2017).						
<b>En route service units</b>						
The difference between actual and planned TSUs (+1.5%) falls within the ±2% dead band. Hence the resulting additional revenue is kept by the ANSPs (see items 10 to 14).						
<b>En route costs by entity at charging zone level</b>						
Actual real en route costs for 2020-2021 are -4.9% (-3.8 M€2017) lower than planned. This result is driven by the main ANSP, Fintraffic ANS (-4.9%, or -3.2 M€2017), the MET service provider (-4.4% or -0.2 M€2017) and the NSA/EUROCONTROL (-4.7%, or -0.4 M€2017).						
<b>En route costs for the main ANSP (Fintraffic ANS) at charging zone level</b>						
Lower than planned en route costs in real terms for Fintraffic ANS in 2020-2021 (-4.9%, or -3.2 M€2017 lower) results from:						
- lower staff costs (-4.3%), "due to temporary lay-offs, lower head count, abandoning bonuses, lower pension costs, postponing recruiting and other savings in staff costs;"						
- lower other operating costs (-6.2%), "due to savings in many cost groups: voluntary staff costs (health cost, training, parking), travel costs and telecommunication and maintenance and spare parts expenses, less payments to airport operator (Finavia) due to new contracts related to HR and ICT, lower credit losses, purchases from military (ATCO) and LfV (ATCO service for Kvarken flights) were lower, costs of operative ICT services lower than planned";						
- lower depreciation (-2.6%), "due to postponing investments";						
- lower cost of capital (-14.9%), "due to postponing investments";						
- lower deduction for VFR exempted flights (-0.3%).						
			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      +1.5%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
			<p>Costs by entity at ECZ level (M€2017):</p> <p>Main ANSP -4.9%</p> <p>Other ANSP(s) -0.2%</p> <p>METSP(s) -4.4%</p> <p>NSA/EUROCONTROL -0.4%</p> <p>Total CZ -4.9%</p>			
			<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs -4.3%</p> <p>Other operating costs -6.2%</p> <p>Depreciation -2.6%</p> <p>Cost of capital -14.9%</p> <p>Exceptional costs -0.3%</p> <p>VFR exempted flights -0.3%</p> <p>Total Main ANSP -4.9%</p>			

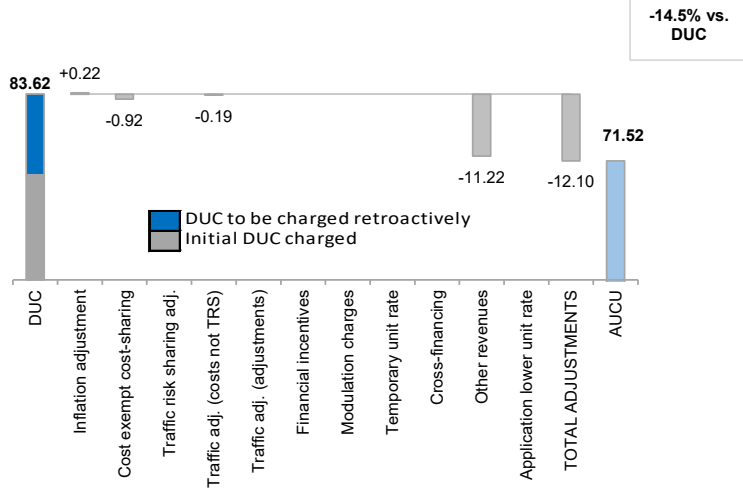
5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level

Finland 2020-2021 DUC vs. Actual Unit Cost for users in national currency in nominal terms - EUR



Components of the AUCU	EUR/SU
Initial DUC charged	47.25
DUC to be charged retroactively	36.37
<b>DUC</b>	<b>83.62</b>
Inflation adjustment	0.22
Cost exempt from cost-sharing	-0.92
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.19
Traffic adj. (adjustments)*	-
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	-
Cross-financing	0.00
Other revenues	-11.22
Application of lower unit rate	0.00
Total adjustments	-12.10
<b>AUCU</b>	<b>71.52</b>
<b>AUCU vs. DUC</b>	<b>-14.5%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

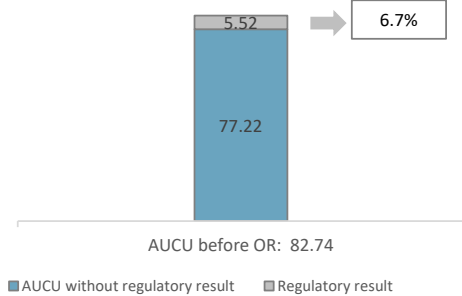
7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-424	-0.44
Competent authorities and qualified entities costs	0	0.00
Eurocontrol costs	-364	-0.38
Pension costs	-89	-0.09
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-878</b>	<b>-0.92</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	EUR '000	EUR/SU
Fintraffic ANS	5,070	5.30
METSP(s)	EUR '000	EUR/SU
Finland MET	215	0.22
<b>Total charging zone</b>	<b>5,285</b>	<b>5.52</b>
<b>Actual cost for users***</b>	<b>79,171</b>	<b>82.74</b>
<b>Regulatory result (% AUCU)</b>	<b>6.7%</b>	<b>6.7%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Finland en route charging zone (71.52€) is -14.5% lower than the nominal DUC (83.62€) which includes DUC initially charged: 47.25€, and to be charged: 36.37€. The difference between these two figures (-12.10€) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.22€), to be charged to the airspace users in future years;
- the deduction of the traffic adjustment (-0.19€) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- the deduction of the other revenues (-11.22€);
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.92€).

The share of regulatory result (see items 10 to 14) in the AUCU is 6.7%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

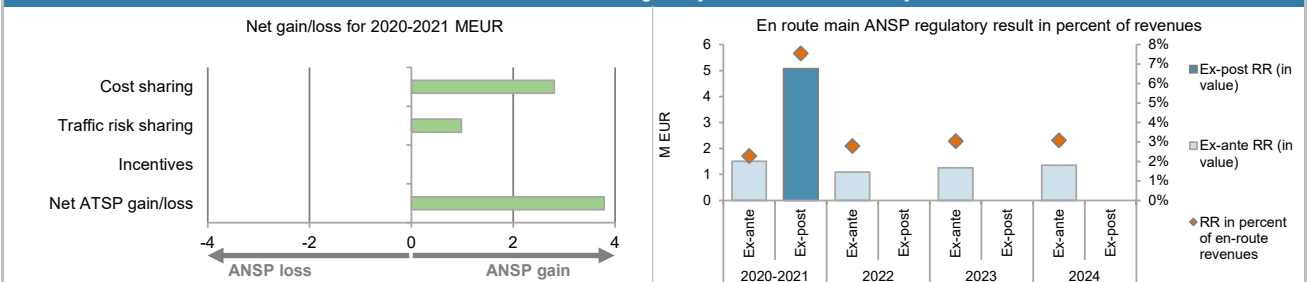
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	3,132			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	197			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-525			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>2,804</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	1.5%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	66,586			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>978</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>3,782</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

Fintraffic ANS planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	16,618	18,562	35,180	25,311	29,112	31,499
Proportion of financing through equity (in %)	100%	100%	100%	100%	100%	100%
RoE pre-tax rate (in %)	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%
RoE (in value)	715	798	1,513	1,088	1,252	1,354
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>715</b>	<b>798</b>	<b>1,513</b>	<b>1,088</b>	<b>1,252</b>	<b>1,354</b>
<b>Revenue for the en route charging zone</b>	<b>32,289</b>	<b>34,298</b>	<b>66,586</b>	<b>38,991</b>	<b>41,200</b>	<b>43,913</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>2.2%</b>	<b>2.3%</b>	<b>2.3%</b>	<b>2.8%</b>	<b>3.0%</b>	<b>3.1%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>4.3%</b>	<b>4.3%</b>	<b>4.3%</b>	<b>4.3%</b>	<b>4.3%</b>	<b>4.3%</b>
Fintraffic ANS actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	16,618	13,314	29,932			
Proportion of financing through equity (in %)	100%	100%	100%			
RoE pre-tax rate (in %)	4.3%	4.3%	4.3%			
RoE (in value)	715	573	1,288			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	3,782	3,782			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>715</b>	<b>4,355</b>	<b>5,070</b>			
<b>Revenue for the en route charging zone</b>	<b>32,289</b>	<b>34,947</b>	<b>67,236</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>2.2%</b>	<b>12.5%</b>	<b>7.5%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>4.3%</b>	<b>32.7%</b>	<b>16.9%</b>			

13. Focus on the main ANSP regulatory result on en route activity



Fintraffic ANS net gain on en route activity in the Finland charging zone in the combined year 2020-2021

Fintraffic ANS's net gain amounts to +3.8 M€, as a combination of a gain of +2.8 M€ arising from the cost sharing mechanism and a gain of +1.0 M€ arising from the traffic risk sharing mechanism.

Fintraffic ANS overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+3.8 M€) and the actual RoE (+1.3 M€) amounts to +5.1 M€ (7.5% of the en route revenues). The resulting ex-post rate of return on equity is 16.9%, which is higher than the 4.3% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
Finland MET planned regulatory result (EUR '000)	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	2,201	2,358	4,559	2,569	2,572	2,528
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Finland MET actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	215	215			
Revenue for the en route charging zone	2,201	2,386	4,587			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	9.0%	4.7%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for METSP in Finland en route charging zone corresponds to 4.7% of the en route revenues and in full represents the effect of cost sharing mechanism as Finnish METSP does not charge the cost of capital.						

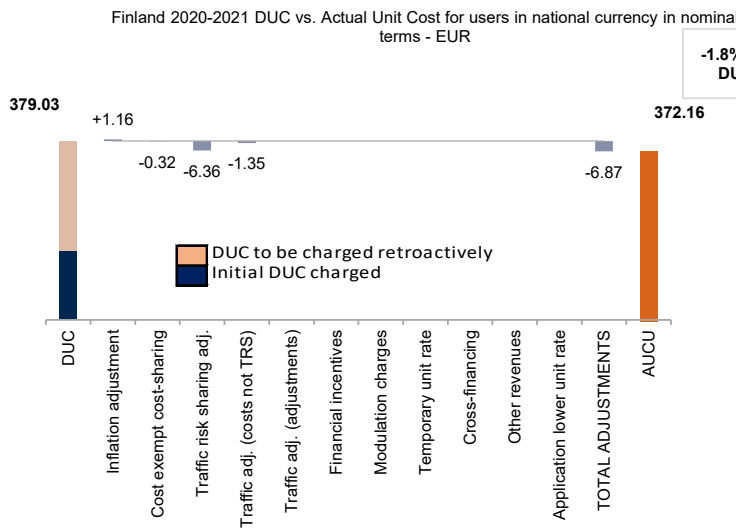
1. Contextual economic information: terminal air navigation services							
Finland TCZ represents 1.4% of the SES terminal ANS actual costs in 2019 Number of airports in charging zone in 2021: 1 of which: <ul style="list-style-type: none"> <li>· Airports with fewer than 80,000 IFR mvmts: 0</li> <li>· Airports with more than 80,000 IFR mvmts: 1</li> </ul>							
National currency: EUR							
Performance Plan: See item 1 for the en route charging zone(s).							
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level							
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.							
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.							
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)							
Finland: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D	
Terminal costs (nominal EUR)	15,238,356	15,496,155	30,734,511	17,905,260	18,937,693	20,132,958	
Inflation %	0.4%	1.4%		1.5%	1.6%	1.8%	
Inflation index (100 in 2017)	102.7	104.2		105.7	107.4	109.3	
Real terminal costs (EUR2017)	14,857,949	14,908,564	29,766,514	16,960,141	17,656,105	18,451,042	
Total terminal service units	44,088	37,000	81,088	108,000	121,000	129,000	
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>337.01</b>	<b>402.93</b>	<b>367.09</b>	<b>157.04</b>	<b>145.92</b>	<b>143.03</b>	
Finland: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A	
Terminal costs (nominal EUR)	15,238,356	14,468,174	29,706,530				
Inflation %	0.4%	2.1%					
Inflation index (100 in 2017)	102.7	104.9					
Real terminal costs (EUR2017)	14,857,949	13,835,328	28,693,277				
Total terminal service units	44,088	40,831	84,919				
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>337.01</b>	<b>338.85</b>	<b>337.89</b>				
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024	
Terminal costs (nominal EUR)	in value	0	-1,027,980	-1,027,980			
	in %	-	-6.6%	-3.3%			
Inflation %	in p.p.	0.0 p.p.	0.7 p.p.				
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	0.7 p.p.				
Real terminal costs (EUR2017)	in value	0	-1,073,237	-1,073,237			
	in %	-	-7.2%	-3.6%			
Total terminal service units	in value	0	3,831	3,831			
	in %	-	+10.4%	+4.7%			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-64.09</b>	<b>-29.20</b>			
	<b>in %</b>	<b>-</b>	<b>-15.9%</b>	<b>-8.0%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>						
	<b>in %</b>						
4. Focus on terminal DUC monitoring at charging zone level							
<b>AUC vs. DUC</b> In the combined year 2020-2021, the terminal AUC was -8.0% (or -29.20€2017) lower than the planned DUC. This results from the combination of higher than planned TNSUs (+4.7%) and lower than planned terminal costs in real terms (-3.6%, or -1.1 M€2017).							
<b>Terminal service units</b> The difference between actual and planned TNSUs (+4.7%) falls between the ±2% dead band, and the ±10% threshold. The resulting gain of additional terminal revenues is therefore shared between the ATSP and the airspace users, with the ATSP (Fintraffic ANS) retaining an amount of +0.8 M€2017.				<b>Costs by entity at TCZ level (M€2017):</b> 			
<b>Terminal costs by entity</b> Actual real terminal costs are -3.6% (-1.1 M€2017) lower than planned. This is driven by the main ANSP, Fintraffic ANS (-3.6%, or -1.0 M€2017) and the MET service provider (-4.4%, or -0.1 M€2017).				<b>Costs by nature for main ANSP (M€2017):</b> 			
<b>Terminal costs for the main ANSP (Fintraffic ANS) at charging zone level</b> The lower than planned terminal costs in real terms for Fintraffic ANS (-3.6%, or -1.0 M€2017) result from:							
<ul style="list-style-type: none"> <li>- lower staff costs (-4.5%), "due to temporary lay-offs, lower head count, abandoning bonuses, lower pension costs, postponing recruiting and other savings in staff costs";</li> <li>- lower other operating costs (-2.9%), "due to savings in many cost groups: voluntary staff costs (health cost, training, parking) and travel costs due to remote work, less payments to airport operator (Finavia) due to new contracts related to HR and ICT, lower telecommunication costs, lower credit losses, less purchases of equipment and spare parts, costs of operative ICT services lower than planned";</li> <li>- slightly higher depreciation (+1.2%); and</li> <li>- slightly lower cost of capital (-1.3%).</li> </ul>							

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	145.81
DUC to be charged retroactively	233.22
<b>DUC</b>	<b>379.03</b>
Inflation adjustment	1.16
Cost exempt from cost-sharing	-0.32
Traffic risk sharing adjustment	-6.36
Traffic adj. (costs not TRS)	-1.35
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-6.87
<b>AUCU</b>	<b>372.16</b>
<b>AUCU vs. DUC</b>	<b>-1.8%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

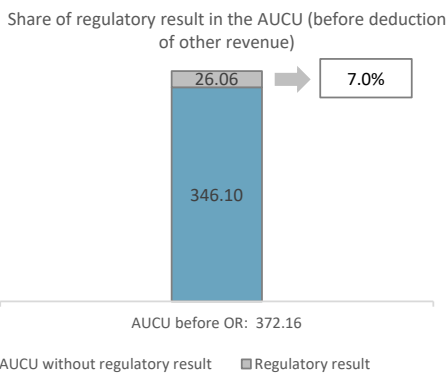
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	10	0.12
Competent authorities and qualified entities costs	0	0.00
Eurocontrol costs	0	0.00
Pension costs	-37	-0.44
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-27</b>	<b>-0.32</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	EUR '000	EUR/SU
Fintraffic ANS	2,106	24.80
METSP(s)	EUR '000	EUR/SU
Finland-MET	108	1.27
<b>Total charging zone</b>	<b>2,213</b>	<b>26.06</b>
<b>Actual cost for users***</b>	<b>31,603</b>	<b>372.16</b>
<b>Regulatory result (% AUCU)</b>	<b>7.0%</b>	<b>7.0%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Finland terminal charging zone (372.16€) is -1.8% lower than the nominal DUC (379.03€) which includes DUC initially charged: 145.81€; and to be charged: 233.22€. The difference between these two figures (-6.87€) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+1.16€), to be charged to the airspace users in future years;
- the deduction of the traffic risk sharing adjustments (-6.36€) to be reimbursed in future years;
- the deduction of the traffic adjustment (-1.35€) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.32€).

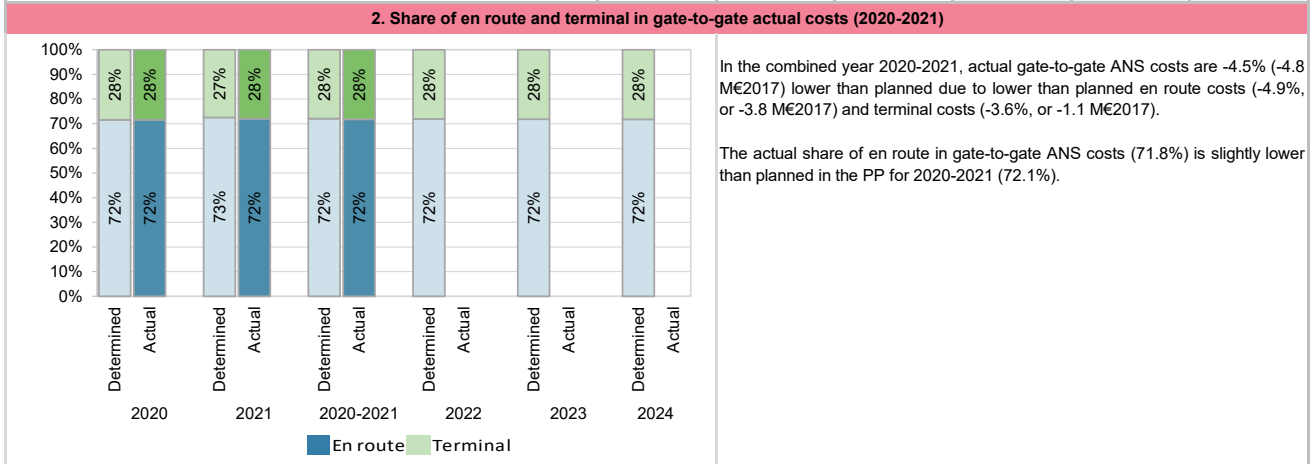
The share of regulatory result (see items 10 to 14) in the terminal AUCU is 7.0%.

10. Monitoring of the terminal ANSPs regulatory results (RR)						
<p>The <b>Regulatory Result (RR)</b> corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.</p> <p>The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.</p> <p>- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.                      - Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.</p> <p>The <b>net gain/loss</b> calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).</p> <p>The monitoring of the RR is carried out in national currency in nominal terms.</p>						
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level						
Cost sharing (EUR '000)	2020-2021	2022	2023	2024		
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	934					
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	90					
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-33					
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>991</b>					
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024		
Difference in total service units (actual vs PP) %	4.7%					
Determined costs subject to traffic risk sharing for the ANSP (PP)	28,311					
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>798</b>					
Incentives (EUR '000)	2020-2021	2022	2023	2024		
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>					
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>1,789</b>					
12. Regulatory result (RR) for the main ANSP at charging zone level						
Fintraffic ANS planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	4,419	3,050	7,469	2,811	2,800	2,812
Proportion of financing through equity (in %)	100%	100%	100%	100%	100%	100%
RoE pre-tax rate (in %)	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%
RoE (in value)	190	131	321	121	120	121
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>190</b>	<b>131</b>	<b>321</b>	<b>121</b>	<b>120</b>	<b>121</b>
<b>Revenue for the terminal charging zone</b>	<b>14,066</b>	<b>14,245</b>	<b>28,311</b>	<b>16,549</b>	<b>17,580</b>	<b>18,798</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>1.4%</b>	<b>0.9%</b>	<b>1.1%</b>	<b>0.7%</b>	<b>0.7%</b>	<b>0.6%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>4.3%</b>	<b>4.3%</b>	<b>4.3%</b>	<b>4.3%</b>	<b>4.3%</b>	<b>4.3%</b>
Fintraffic ANS actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	4,419	2,952	7,370			
Proportion of financing through equity (in %)	100%	100%	100%			
RoE pre-tax rate (in %)	4.3%	4.3%	4.3%			
RoE (in value)	190	127	317			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	1,789	1,789			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>190</b>	<b>1,916</b>	<b>2,106</b>			
<b>Revenue for the terminal charging zone</b>	<b>14,066</b>	<b>15,100</b>	<b>29,166</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>1.4%</b>	<b>12.7%</b>	<b>7.2%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>4.3%</b>	<b>64.9%</b>	<b>28.6%</b>			
13. Focus on main ANSP regulatory result on terminal activity						
<p><b>Fintraffic ANS net gain on activity in the Finland terminal charging zone in the combined year 2020-2021</b>                      Fintraffic ANS's net gain amounts to +1.8 ME€ due to gains of +1.0 ME€ from the cost sharing mechanism and of +0.8 ME€ from the traffic risk sharing mechanism.</p> <p><b>Fintraffic ANS overall regulatory results (RR) for the terminal charging zone activity</b>                      Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+1.8 ME€) and the actual RoE (+0.3 ME€) amounts to +2.1 ME€ (7.2% of the terminal revenues). The resulting ex-post rate of return on equity is 28.6%, which is higher than the 4.3% planned in the PP.</p>						

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Finland-MET planned regulatory result (EUR '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	0	0	0	0	0	0
Revenue for the terminal charging zone	1,100	1,179	2,279	1,285	1,286	1,263
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Finland-MET actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	0	108	108			
Revenue for the terminal charging zone	1,100	1,193	2,293			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	9.0%	4.7%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity</b>						
Ex-post, the overall RR for METSP in Finland terminal charging zone corresponds to 4.7% of the terminal revenues and in full represents the effect of cost sharing mechanism as Finnish METSP does not charge the cost of capital.						



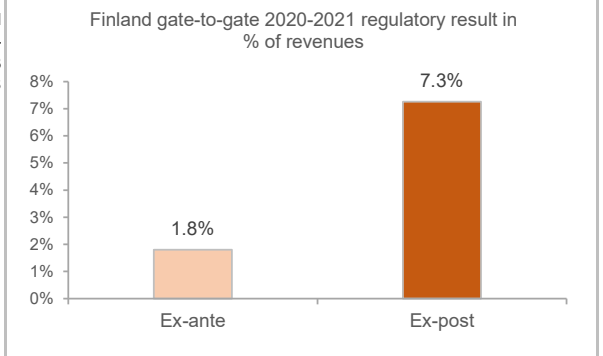
1. Monitoring of gate-to-gate ANS costs						
Charging zones concerned:						
En route charging zone 1: Finland		En route charging zone 2:				
Terminal charging zone 1: Finland		Terminal charging zone 2:				
Finland: data from RP3 performance plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)	37,408,395	39,370,777	76,779,172	43,474,245	45,038,050	46,941,389
Real terminal costs (EUR2017)	14,857,949	14,908,564	29,766,514	16,960,141	17,656,105	18,451,042
Real gate-to-gate costs (EUR2017)	52,266,344	54,279,342	106,545,686	60,434,386	62,694,155	65,392,431
En route share (%)	71.6%	72.5%	72.1%	71.9%	71.8%	71.8%
Finland: actual data from reporting tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)	37,408,395	35,618,896	73,027,291			
Real terminal costs (EUR2017)	14,857,949	13,835,328	28,693,277			
Real gate-to-gate costs (EUR2017)	52,266,344	49,454,223	101,720,568			
En route share (%)	71.6%	72.0%	71.8%			
Difference between actuals and planned (actuals vs. PP)	2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017)	in value	0	-4,825,118	-4,825,118		
	in %	0.0%	-8.9%	-4.5%		
En route share	in p.p.	0.0 p.p.	-0.5 p.p.	-0.3 p.p.		



3. Gate-to-gate regulatory result (RR) 2020-2021							
In EUR '000	ANSP(S)	Ex-ante			Ex-post		
		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	Fintraffic ANS	1,834	94,898	1.9%	7,175	96,402	7.4%
	<b>METSP(s)</b>						
	Finland MET	0	6,838	0.0%	323	6,880	4.7%
	<b>Total</b>	<b>1,834</b>	<b>101,736</b>	<b>1.8%</b>	<b>7,498</b>	<b>103,282</b>	<b>7.3%</b>

For the ANSPs providing services in the en route and terminal charging zones of Finland covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +7.5 M€ (+5.3 M€ for en route and +2.2 M€ for terminal - see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 7.3% of gate-to-gate ANS revenues.

This is higher than the return planned for the year (1.8%).



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# **Annual Monitoring Report 2021**

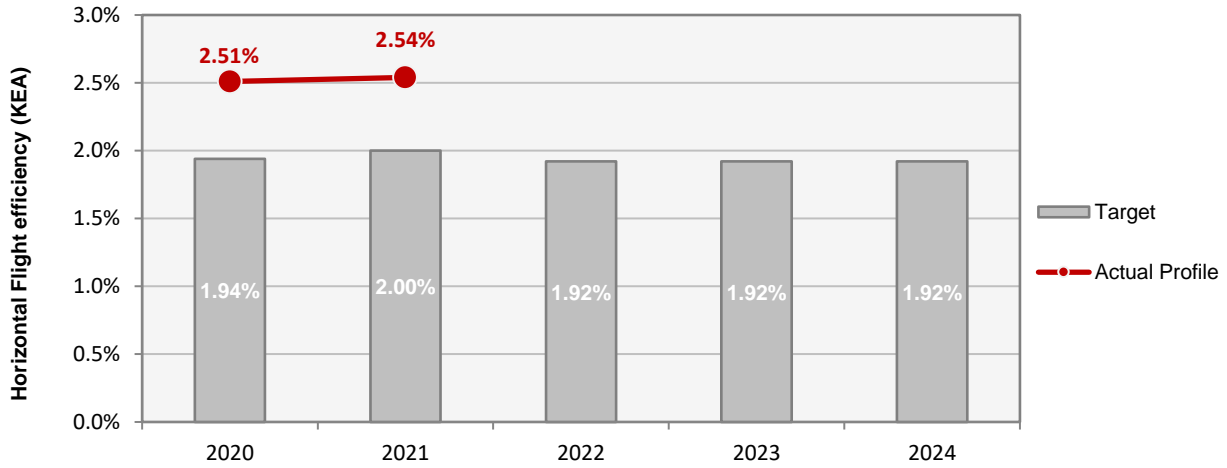
## Local level view

### Greece

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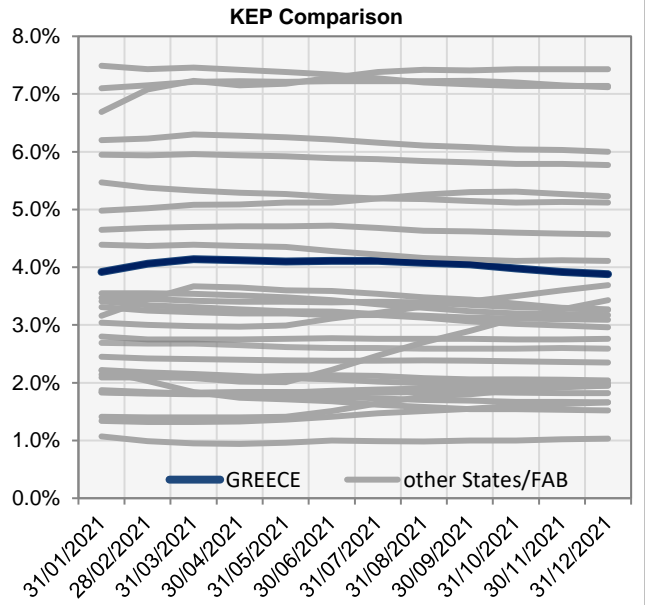
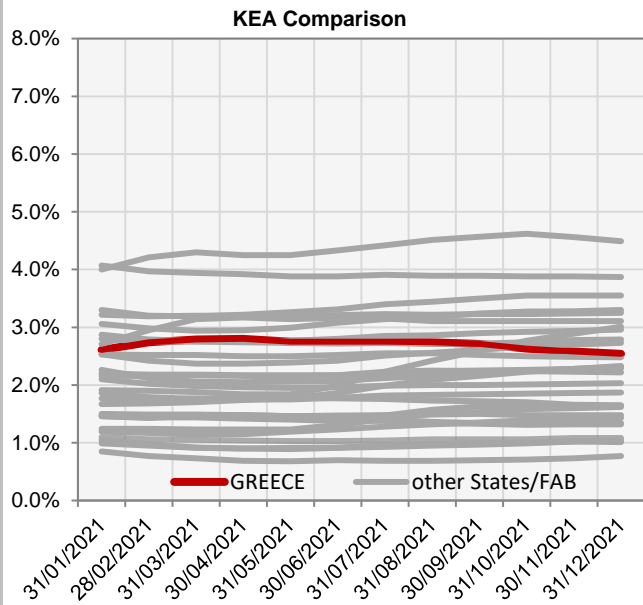
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>HANSP</b>	80	C	C	C	C	C
<p>Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.</p>						
Observations						
<p>Four out of five EoSM components of the ANSP meet the 2024 target level, namely "Safety Promotion". Improvements have been observed in maturity with respect to 2020 levels. Only safety risk management component is below 2024 target levels, which is expected to improve in the next years of RP3.</p>						

KEA					
	2020	2021	2022	2023	2024
Target	1.94%	2.00%	1.92%	1.92%	1.92%
Actual performance	2.51%	2.54%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	2.61%	2.74%	2.79%	2.80%	2.75%	2.75%	2.75%	2.74%	2.71%	2.63%	2.58%	2.54%
KEP	3.92%	4.06%	4.14%	4.12%	4.10%	4.11%	4.11%	4.08%	4.05%	3.98%	3.92%	3.88%
KES	3.26%	3.36%	3.40%	3.37%	3.37%	3.41%	3.43%	3.42%	3.41%	3.37%	3.33%	3.30%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**1. Overview**

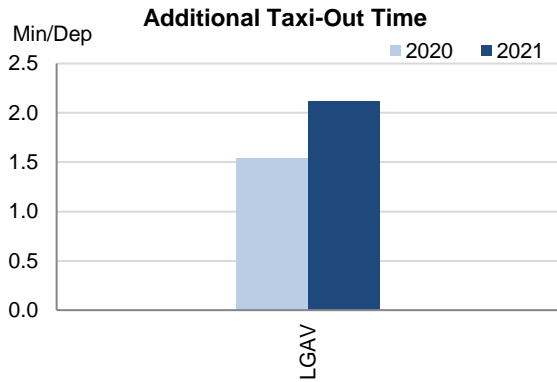
Operational ANS performance at airports is monitored for one airport in Greece (i.e. Athens (LGAV)), the only airport subject to RP3 monitoring. The Airport Operator Data Flow is fully established and the monitoring of all environmental indicators can be performed.

Traffic at Athens in 2021 decreased by still 31% with respect to 2019, even if the recovery at Athens has been significantly better than at other European airports.

Both additional time indicators improved with respect to 2019 in different proportion, but with the traffic recovery in 2021 there was a slight deterioration.

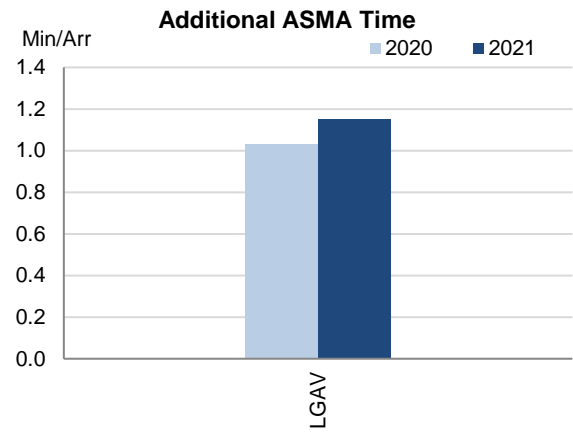
The share of CDO flights stayed relatively high compared to other airports monitored in RP3.

**2. Additional Taxi-Out Time**



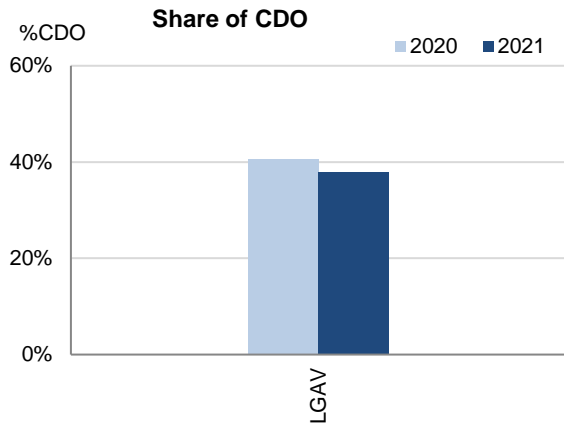
Additional taxi-out times at Athens (LGAV; 2019: 2.61 min/dep.; 2020: 1.54 min/dep.; 2021: 2.12 min/dep.) increased in line with the traffic recovery and were close to 2019 values in the second part of the year.

**3. Additional ASMA Time**



The additional times in the terminal airspace (LGAV; 2019: 1.30 min/arr.; 2020: 1.03 min/arr.; 2021: 1.15 min/arr.) slightly increased especially at the end of the year when they surpassed the values of 2019.

#### 4. Share of arrivals applying CDO



The share of CDO flights at Athinaï/Eleftherios Venizelos (LGAV) has decreased from 40.6% in 2020 to 38.0% in 2021 which is still above the overall RP3 value in 2021 (30.5%).

The monthly values decreased almost continuously as from May (May: 42.6%; December: 34.8%).

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Athens-LGAV	1.54	2.12				1.03	1.15				41%	38%			



**Update on Military dimension of the plan**

Airspace design reorganizes the airspace structure in order to decrease aircraft emissions and noise, therefore implementing certain airspace structures (FRA, TSA/TRA, torte case, etc) airspace connectivity, as well as certain regulations for controlling over the emissions (having in mind i.e. that the average age of the military fleet is 21 years versus 13 years for the commercial fleet) we try to affect and minimise the impact of military dimension on the environment KPA.

Airspace design provides a more integrated management of the airspace, without the limitations of national borders, in order to maximise capacity through initiatives such as Flexible Use of Airspace, harmonisation of airspace categories and free routing, starting with upper airspace above a certain altitude and continuing in stages to optimise capacity

**Military - related measures implemented or planned to improve capacity**

Classification of airspace , implementation of FRA, implementation of certain TSA/TRA for specific military use. Reorganization of airspace structures for capacity optimization.

**PI#6 Effective use of reserved or segregated airspace - national level**

Ratio PI#6	2020	2021	2022	2023	2024
Greece					

**PI#6 Effective use of reserved or segregated airspace (per ACC)**

Ratio PI#6	2020	2021	2022	2023	2024
Athens ACC					
Makedonia ACC					

**Initiatives implemented or planned to improve PI#6**

No information provided.

**PI#7 Rate of planning via available airspace structures - national level**

Ratio PI#7	2020	2021	2022	2023	2024
Greece					

**PI#7 Rate of planning via available airspace structures (per ACC)**

Ratio PI#7	2020	2021	2022	2023	2024
Athens ACC					
Makedonia ACC					

**Initiatives implemented or planned to improve PI#7**

No information provided

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Greece					

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Athens ACC					
Makedonia ACC					

**Initiatives implemented or planned to improve PI#8**

No information provided.

Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.34	0.32	0.14	0.19	0.19		
<b>Actual performance</b>	0.02	0.43					
NSA's assessment of capacity performance							
<p>Greece experienced capacity gap due to ATC capacity and staffing. The feasibility of capacity enhancement measures is still questionable. The plan is heavily sensitive to the implementation of the new ATM system and to the recruitment plan for new ATCOs.</p> <p>The enroute performance was negatively affected by staff shortages caused by the amendment of HASP' s recruitment plans due to the covid -19 crisis. More specifically, the majority of the imposed restrictions during summer season of 2021, at a rate of more than 80%, were caused by these shortages (reason ATC STAFFING - S). Moreover the delay in the implementation of the investment plan due to covid-19 crisis resulted in delayed procedures for the procurement of a new ATM/CNS DPS.</p>							
Monitoring process for capacity performance							
In 2021 monitoring was implemented by HANSA.							
Capacity Planning							
PP Capacity target (0.32) was not consistent with the national reference value (0.10) and the actual value was even greater (0.43)							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned 2021 Perf Plan</b>	-	-	200	270	285	285	
<b>Planned 2022 Perf Plan</b>				230	275	285	
<b>Actual</b>	214	194	190				
Application of Corrective Measures for Capacity (if applicable)							
<p>Recommendations made to the ANSP to improve the situation include: Implementation of capacity enhancement measures such as new ATM system, Enhanced Mode S Radar network, new voice communication system, airspace reorganisation, recruitment of ACC ATCOs, ATFM procedures.</p> <p>There is doubt whether the planned increase of ATCOs will be finally feasible.</p>							
Summary of capacity performance							
<p>Greece experienced an increase in traffic from 383k flights in 2020 to 569k flights in 2021. However, traffic levels were still substantially below the 884k flights in 2019.</p> <p>In 2021, Greece had 245k minutes of ATFM delay - with the highest number of minutes of delay occurring in August (135k). There were 95k flights in August 2021. For comparison, in September 2019 there were 66k minutes of delay for just over 99k flights.</p>							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.34	0.32	0.14	0.15	0.15		
<b>Deadband +/-</b>	-	-	[0,12-0,16]	[0.13-0.17]	[0.13-0.17]		
<b>Actual performance</b>	0.02	0.43					
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.							

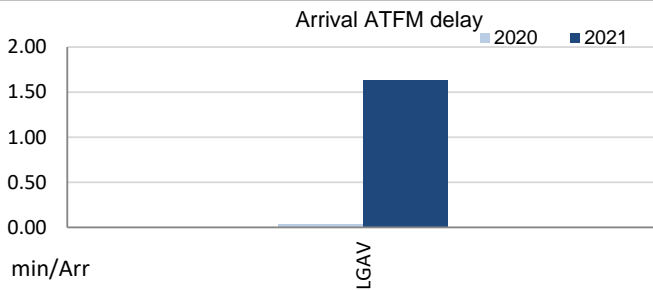
**1. Overview**

Operational ANS performance at airports is monitored for one airport in Greece (i.e. Athens (LGAV)), the only airport subject to RP3 monitoring. The Airport Operator Data Flow is fully established and the monitoring of all capacity indicators can be performed. Nevertheless, the quality of the reporting does not allow for the calculation of the ATC pre-departure delay, with more than 60% of the reported delay not allocated to any cause.

Traffic at Athens in 2020 decreased is still 31% respect to 2019, even if the recovery at Athens has been significantly better than at other European airports.

Average arrival ATFM delays in 2021 was 1.63 min/arr, compared to 0.04 min/arr in 2020. ATFM slot adherence has deteriorated (2021: 93.9%; 2020: 94.5%).

**2. Arrival ATFM Delay**



Average arrival ATFM delays at Athens (LGAV: 2019: 3.57 min/arr.; 2020: 0.04 min/arr.; 2021: 1.63 min/arr.) were the highest observed in the SES area in 2021. 95% of these delays were attributed to ATC capacity and they concentrated in the Summer.

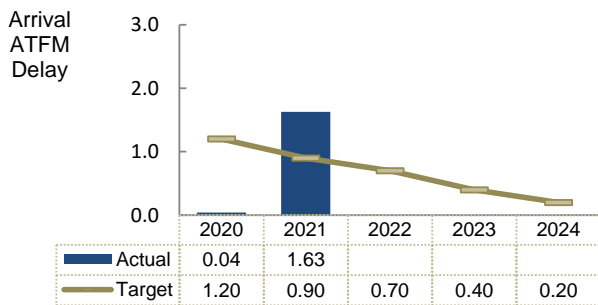
According to the Greek monitoring report: *The performance was negatively affected by staff shortages caused by the amendment of HASP's recruitment plans due to the covid -19 crisis. It was also caused by some airport infrastructure issues.*

The NSA identifies staff shortage and operational procedures as underlying reasons for the performance target not being met.

Recommendations to the ANSP include: *Staff recruitment, CDM, A-SMGCS, PBN procedures, redesign of Athens TMA and new ATM surveillance system.*

The NSA reports however that *the measures that are foreseen do not guarantee a short term improvement.*

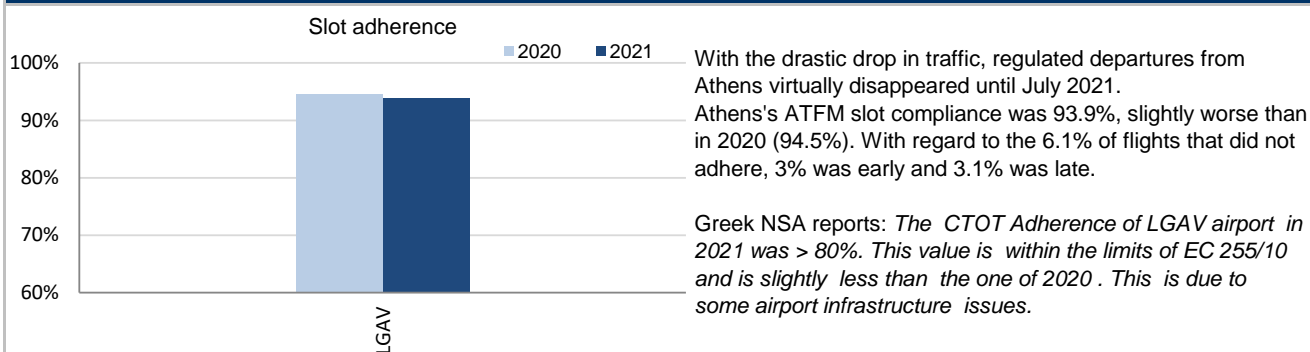
**3. Arrival ATFM Delay – National Target and Incentive Scheme**



The provisional national target on arrival ATFM delay in 2021 was not met, with actual arrival ATFM delays at 1.63 min/arr. in average, and the national target set at 0.90 min/arr.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

#### 4. ATFM Slot Adherence



#### 5. ATC Pre-departure Delay

The quality of the airport data reported by Athens airport is too low, preventing the calculation of this indicator.

The calculation of the ATC pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF) which is properly implemented at Athens.

However, there are several quality checks before EUROCONTROL can produce the final value which is established as the average minutes of pre-departure delay (delay in the actual off block time) associated to the IATA delay code 89 (through the APDF, for each delayed flight, the reasons for that delay have to be transmitted and coded according to IATA delay codes.

However, sometimes the airport operator has no information concerning the reasons for the delay in the off block, or they cannot convert the reasons to the IATA delay codes. In those cases, the airport operator might:

- Not report any information about the reasons for the delay for that flight (unreported delay)
- Report a special code to indicate they do not have the information (code ZZZ)
- Report a special code to indicate they do not have the means to collect and/or translate the information (code 999)

To be able to calculate with a minimum of accuracy the PI for a given month, the minutes of delay that are not attributed to any IATA code reason should not exceed 40% of the total minutes of pre-departure delay observed at the airport.

Finally, to be able to produce the annual figure, at least 10 months of valid data is requested by EUROCONTROL.

The share of unidentified delay reported by Athens has been above 40% since April 2020, preventing the calculation of this indicator. Even with the traffic recovery the reporting has not improved, although Athens had proper reporting before the pandemic.

The Greek NSA reported last year that this issue was under consultation with the Provider and that further information would be provided in due time, after the collection and evaluation of all relevant data. However the Greek monitoring report of this year does not provide any information nor comment about this.

#### 6. All Causes Pre-departure Delay

The total (all causes) delay in the actual off block time at Athens increased in 2021 (LGAV: 2020: 8 min/dep.; 2021: 12.90 min/dep.). The highest delays per flight were observed in July and August, averaging more than 20 min/dep.

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Athens-LGAV	0.04	1.63				94.5%	93.9%				n/a	n/a				8.00	12.90			

1. Contextual economic information: en route air navigation services																					
Greece ECZ represents 2.3% of the SES en route ANS actual costs in 2019 National currency: EUR Performance Plan: RP3 draft performance plan dated 17 November 2021 and found inconsistent as per Commission Decision (EU) 2022/728 of 13 April 2022 Greece has submitted a revised RP3 draft performance plan in July 2022, currently under assessment.			FAB: BLUE MED FAB																		
2. Monitoring of the en route determined unit cost (DUC) at charging zone level																					
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.																					
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.																					
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)																					
Greece: Data from RP3 Performance Plan		2020D	2021D	2020-2021D	2022D	2023D	2024D														
En route costs (nominal EUR)		122,534,049	154,588,521	277,122,571	172,346,612	189,163,549	204,267,726														
Inflation %		0.0%	0.2%		4.5%	1.3%	1.6%														
Inflation index (100 in 2017)		101.3	101.5		106.5	107.9	109.7														
Real en route costs (EUR2017)		121,238,035	152,694,948	273,932,983	163,297,589	177,513,878	189,760,728														
Total en route service units		2,755,521	3,973,099	6,728,620	5,861,000	6,584,000	6,781,000														
<b>Real en route DUC per service unit (EUR2017)</b>		<b>44.00</b>	<b>38.43</b>	<b>40.71</b>	<b>27.86</b>	<b>26.96</b>	<b>27.98</b>														
Greece: Actual data from Reporting Tables		2020A	2021A	2020-2021A	2022A	2023A	2024A														
En route costs (nominal EUR)		122,534,049	134,557,887	257,091,936																	
Inflation %		0.0%	0.6%																		
Inflation index (100 in 2017)		101.3	101.9																		
Real en route costs (EUR2017)		121,238,035	132,409,771	253,647,806																	
Total en route service units		2,755,521	4,048,217	6,803,737																	
<b>Real en route AUC per service unit (EUR2017)</b>		<b>44.00</b>	<b>32.71</b>	<b>37.28</b>																	
Difference between Actuals and Planned		2020	2021	2020-2021	2022	2023	2024														
En route costs (nominal EUR)		in value	0	-20,030,634	-20,030,634																
		in %	-	-13.0%	-7.2%																
Inflation %		in p.p.	0.0 p.p.	0.4 p.p.																	
Inflation index (100 in 2017)		in p.p.	0.0 p.p.	0.4 p.p.																	
Real en route costs (EUR2017)		in value	0	-20,285,177	-20,285,177																
		in %	-	-13.3%	-7.4%																
Total en route service units		in value	0	75,118	75,118																
		in %	-	+1.9%	+1.1%																
<b>Real en route unit cost per service unit (EUR2017)</b>		<b>in value</b>	<b>0.00</b>	<b>-5.72</b>	<b>-3.43</b>																
		<b>in %</b>	<b>-</b>	<b>-14.9%</b>	<b>-8.4%</b>																
4. Focus on en route DUC monitoring at charging zone level																					
<b>AUC vs. DUC</b> The AUC for the combined year 2020-2021 corresponds to 37.28€2017 and was lower by -8.4% (or -3.43€2017) from DUC (40.71€2017). This results from the combination of slightly higher than planned TSUs (+1.1%) and lower than planned en route costs in real terms (by -7.4%, or -20.3 M€2017).																					
<b>En route service units</b> The difference between actual and planned TSUs (+1.1%) falls within the ±2% dead band. Hence the resulting gain is kept by the ANSPs (see item 11).				<b>Costs by entity at ECZ level (M€2017):</b> <table border="1"> <tr> <td>Main ANSP</td> <td>-7.4%</td> </tr> <tr> <td>Other ANSP(s)</td> <td></td> </tr> <tr> <td>METSP(s)</td> <td>-6.2%</td> </tr> <tr> <td>NSA/EUROCONTROL</td> <td>-7.7%</td> </tr> <tr> <td>Total CZ</td> <td>-7.4%</td> </tr> </table>				Main ANSP	-7.4%	Other ANSP(s)		METSP(s)	-6.2%	NSA/EUROCONTROL	-7.7%	Total CZ	-7.4%				
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<b>En route costs by entity at charging zone level</b> Actual real en route costs for 2020-2021 are -7.4% (-20.3 M€2017) lower than planned. This result is driven by the main ANSP (HCAA, now HASP) with the costs lower by -7.4% (-16.1 M€2017), NSA/EUROCONTROL with costs lower by -7.7% (-3.1 M€2017) and the METSP with a costs decrease of -6.2% (-1.1 M€2017).				<b>Costs by nature for main ANSP (M€2017):</b> <table border="1"> <tr> <td>Staff costs</td> <td>-8.3%</td> </tr> <tr> <td>Other operating costs</td> <td></td> </tr> <tr> <td>Depreciation</td> <td>-3.1%</td> </tr> <tr> <td>Cost of capital</td> <td>0.0%</td> </tr> <tr> <td>Exceptional costs</td> <td>0.0%</td> </tr> <tr> <td>VFR exempted flights</td> <td>-7.9%</td> </tr> <tr> <td>Total Main ANSP</td> <td>-7.4%</td> </tr> </table>				Staff costs	-8.3%	Other operating costs		Depreciation	-3.1%	Cost of capital	0.0%	Exceptional costs	0.0%	VFR exempted flights	-7.9%	Total Main ANSP	-7.4%
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<b>En route costs for the main ANSP (HCAA/HASP) at charging zone level</b> Overall, the en route costs in real terms for HCAA (now HASP) in 2020-2021 were lower by -7.4% (-16.1 M€2017) comparing with the determined costs from the performance plan. This is mainly the result of: - lower staff costs (-8.3% or -15.2 M€2017) reflecting the amendments to the recruitment plan implemented during COVID-19 crisis; - lower other operating costs (-3.1% or -0.9 M€2017) due to costs savings in 2021; and - lower deduction of the costs of exempted VFR flights (-7.9%) No difference is observed for the cost of capital and depreciation for HCAA (HASP) in combined year 2020-2021.																					

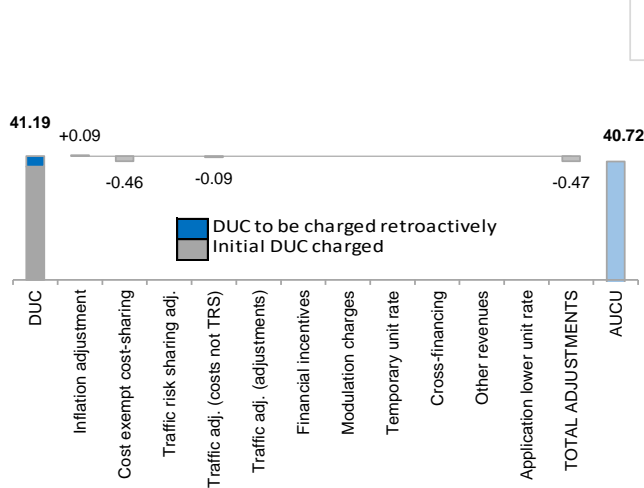
5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level

Greece 2020-2021 DUC vs. Actual Unit Cost for users in national currency in nominal terms - EUR



Components of the AUCU	EUR/SU
Initial DUC charged	37.73
DUC to be charged retroactively	3.46
<b>DUC</b>	<b>41.19</b>
Inflation adjustment	0.09
Cost exempt from cost-sharing	-0.46
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.09
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-0.47
<b>AUCU</b>	<b>40.72</b>
<b>AUCU vs. DUC</b>	<b>-1.1%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

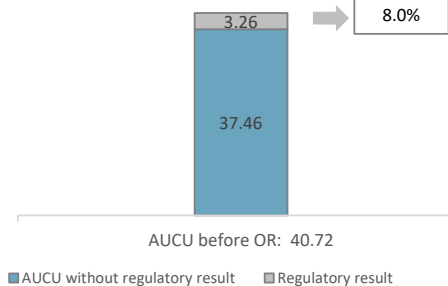
7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	0	0.00
Competent authorities and qualified entities costs	-2,553	-0.38
Eurocontrol costs	-553	-0.08
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-3,106</b>	<b>-0.46</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	EUR '000	EUR/SU
HASP	20,744	3.05
METSP(s)	EUR '000	EUR/SU
Greece MET	1,458	0.21
<b>Total charging zone</b>	<b>22,201</b>	<b>3.26</b>
<b>Actual cost for users***</b>	<b>277,050</b>	<b>40.72</b>
<b>Regulatory result (% AUCU)</b>	<b>8.0%</b>	<b>8.0%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (40.72€) is -1.1% lower than the nominal DUC (41.19€), which includes DUC initially charged: 37.73€; and DUC to be charged: 3.46€. The difference between these two figures (-0.47€/SU) arising from:

- the positive inflation adjustment resulting from higher than planned inflation (+0.09€/SU);
- the deduction of the adjustment for costs exempt from cost-sharing (-0.46€/SU), to be reimbursed to the airspace users in future years; and
- the deduction of traffic adjustments (-0.09€/SU), for the costs not subject to traffic risk sharing to be reimbursed to the airspace users in future years.

The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 8.0%.

10. Monitoring of the en route ANSPs regulatory results (RR)																																				
<p>The <b>Regulatory Result (RR)</b> corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.</p> <p>The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.</p> <ul style="list-style-type: none"> <li>- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.</li> <li>- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.</li> </ul> <p>The <b>net gain/loss</b> calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).</p> <p>The monitoring of the RR is carried out in national currency in nominal terms.</p>																																				
11. Net gain/loss for the main ANSP for the en route activity at charging zone level																																				
Cost sharing (EUR '000)	2020-2021	2022	2023	2024																																
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	15,870																																			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	544																																			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	0																																			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>16,414</b>																																			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024																																
Difference in total service units (actual vs PP) %	1.1%																																			
Determined costs subject to traffic risk sharing for the ANSP (PP)	219,549																																			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>2,451</b>																																			
Incentives (EUR '000)	2020-2021	2022	2023	2024																																
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>																																			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>18,865</b>																																			
12. Regulatory result (RR) for the main ANSP at charging zone level																																				
HASP planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D																														
Total asset base	29,195	5,072	34,267	3,788	49,711	96,151																														
Proportion of financing through equity (in %)	100%	100%	100%	100%	100%	100%																														
RoE pre-tax rate (in %)	5.6%	4.6%	5.5%	4.6%	4.6%	4.6%																														
RoE (in value)	1,644	235	1,879	175	2,302	4,452																														
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>1,644</b>	<b>235</b>	<b>1,879</b>	<b>175</b>	<b>2,302</b>	<b>4,452</b>																														
<b>Revenue for the en route charging zone</b>	<b>95,244</b>	<b>124,304</b>	<b>219,549</b>	<b>141,481</b>	<b>159,357</b>	<b>174,398</b>																														
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>1.7%</b>	<b>0.2%</b>	<b>0.9%</b>	<b>0.1%</b>	<b>1.4%</b>	<b>2.6%</b>																														
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>5.6%</b>	<b>4.6%</b>	<b>5.5%</b>	<b>4.6%</b>	<b>4.6%</b>	<b>4.6%</b>																														
HASP actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A																														
Total asset base	29,195	5,072	34,267	<b>Note 1:</b> Ex-post RoE cannot be correctly calculated due to a very low total asset base, due to 1) the exclusion of net current assets from the calculation of the total asset base starting from 2021, 2) a very low net book value of fixed assets (as these are nearly fully depreciated).																																
Proportion of financing through equity (in %)	100%	100%	100%																																	
RoE pre-tax rate (in %)	5.6%	4.6%	5.5%																																	
RoE (in value)	1,644	235	1,879																																	
Net ANSP gain(+)/loss(-) for the en route charging zone	0	18,865	18,865																																	
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>1,644</b>	<b>19,100</b>	<b>20,744</b>																																	
<b>Revenue for the en route charging zone</b>	<b>95,244</b>	<b>127,300</b>	<b>222,544</b>																																	
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>1.7%</b>	<b>15.0%</b>	<b>9.3%</b>																																	
<b>Ex-post RoE pre-tax rate (in %) see Note 1</b>	<b>5.6%</b>	<b>N/A</b>	<b>N/A</b>																																	
13. Focus on the main ANSP regulatory result on en route activity																																				
<p><b>Net gain/loss for 2020-2021 MEUR</b></p> <table border="1"> <tr><th>Category</th><th>Net gain/loss (MEUR)</th></tr> <tr><td>Cost sharing</td><td>+16.414</td></tr> <tr><td>Traffic risk sharing</td><td>+2.451</td></tr> <tr><td>Incentives</td><td>0</td></tr> <tr><td>Net ATSP gain/loss</td><td>+18.865</td></tr> </table> <p><b>En route main ANSP regulatory result in percent of revenues</b></p> <table border="1"> <tr><th>Year</th><th>Ex-ante RR (in value)</th><th>Ex-post RR (in value)</th><th>RR in percent of en-route revenues</th></tr> <tr><td>2020-2021</td><td>1.7%</td><td>1.7%</td><td>1.7%</td></tr> <tr><td>2022</td><td>0.2%</td><td>15.0%</td><td>15.0%</td></tr> <tr><td>2023</td><td>0.9%</td><td>9.3%</td><td>9.3%</td></tr> <tr><td>2024</td><td>1.4%</td><td>-</td><td>-</td></tr> </table>							Category	Net gain/loss (MEUR)	Cost sharing	+16.414	Traffic risk sharing	+2.451	Incentives	0	Net ATSP gain/loss	+18.865	Year	Ex-ante RR (in value)	Ex-post RR (in value)	RR in percent of en-route revenues	2020-2021	1.7%	1.7%	1.7%	2022	0.2%	15.0%	15.0%	2023	0.9%	9.3%	9.3%	2024	1.4%	-	-
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2020-2021	1.7%	1.7%	1.7%																																	
2022	0.2%	15.0%	15.0%																																	
2023	0.9%	9.3%	9.3%																																	
2024	1.4%	-	-																																	
<p><b>HCAA (now HASP) net gain on activity in the en route charging zone in the combined year 2020-2021</b>                  HCAA's net gain amounts to +18.9 M€ mainly due to gains of +16.4 M€ from the cost sharing mechanism, and gains of +2.5 M€ from the traffic risk sharing mechanism.</p> <p><b>HCAA (now HASP) overall regulatory results (RR) for the en route activity</b>                  Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+18.9 M€) and the actual RoE (+1.9 M€) amounts to +20.7 M€ (9.3% of the en route revenues).</p>																																				



14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
<b>Greece MET planned regulatory result (EUR '000)</b>	<b>2020D</b>	<b>2021D</b>	<b>2020-2021D</b>	<b>2022D</b>	<b>2023D</b>	<b>2024D</b>
Ex-ante regulatory result (+/-) for the en route charging zone	192	195	387	195	196	192
Revenue for the en route charging zone	8,611	8,825	17,435	8,356	9,662	9,625
Ex-ante regulatory result (+/-) in percent of revenues	2.2%	2.2%	2.2%	2.3%	2.0%	2.0%
Ex-ante RoE pre-tax rate (in %)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
<b>Greece MET actual regulatory result (EUR '000)</b>	<b>2020A</b>	<b>2021A</b>	<b>2020-2021A</b>	<b>2022A</b>	<b>2023A</b>	<b>2024A</b>
Ex-post regulatory result (+/-) for the en route charging zone	192	1,265	1,458			
Revenue for the en route charging zone	8,611	8,863	17,474			
Ex-post regulatory result (+/-) in percent of revenues	2.2%	14.3%	8.3%			
Ex-post RoE pre-tax rate (in %)	2.0%	14.7%	8.0%			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
For other ANSP (METSP - HNMS) the overall ex-post regulatory result amounted to +1.5 M€ which represents 8.3% of their actual en route revenues for the combined 2020-2021. This result is higher ex-post RoE at the level of 8.0%, comparing to planned 2.0%.						

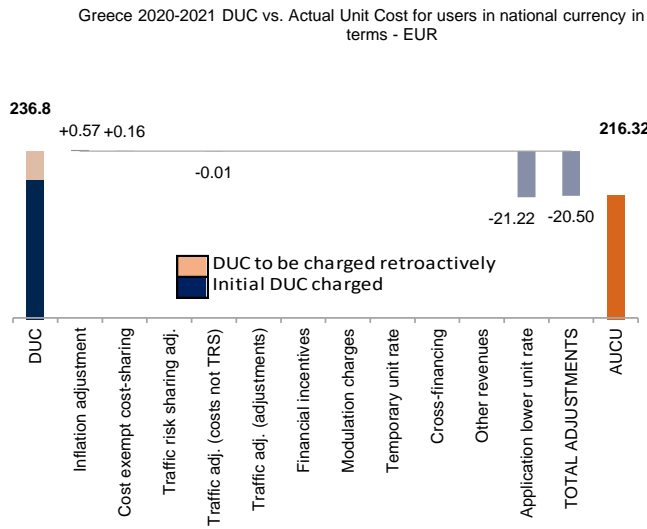
1. Contextual economic information: terminal air navigation services																					
<ul style="list-style-type: none"> <li>Greece TCZ represents 1.6% of the SES terminal ANS actual costs in 2019</li> <li>Number of airports in charging zone in 2021: 1 of which:                             <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 0</li> <li>Airports with more than 80,000 IFR mvmts: 1</li> </ul> </li> <li>National currency: EUR</li> <li>Performance Plan: See item 1 for the en route charging zone(s).</li> </ul>																					
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level																					
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.</p>																					
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)																					
Greece: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D															
Terminal costs (nominal EUR)	15,654,397	19,092,162	34,746,559	20,693,722	25,207,051	28,639,822															
Inflation %	0.0%	0.2%		4.5%	1.3%	1.6%															
Inflation index (100 in 2017)	101.3	101.5		106.5	107.9	109.7															
Real terminal costs (EUR2017)	15,457,426	18,818,671	34,276,097	19,462,644	23,501,099	26,460,501															
Total terminal service units	59,000	87,720	146,720	125,000	129,000	133,000															
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>261.99</b>	<b>214.53</b>	<b>233.62</b>	<b>155.70</b>	<b>182.18</b>	<b>198.95</b>															
Greece: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A															
Terminal costs (nominal EUR)	15,654,397	14,605,437	30,259,834																		
Inflation %	0.0%	0.6%																			
Inflation index (100 in 2017)	101.3	101.9																			
Real terminal costs (EUR2017)	15,457,426	14,333,997	29,791,423																		
Total terminal service units	59,000	87,915	146,915																		
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>261.99</b>	<b>163.04</b>	<b>202.78</b>																		
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024															
Terminal costs (nominal EUR)	in value	0	-4,486,725	-4,486,725																	
	in %	-	-23.5%	-12.9%																	
Inflation %	in p.p.	0.0 p.p.	0.4 p.p.																		
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	0.4 p.p.																		
Real terminal costs (EUR2017)	in value	0	-4,484,674	-4,484,674																	
	in %	-	-23.8%	-13.1%																	
Total terminal service units	in value	0	195	195																	
	in %	-	+0.2%	+0.1%																	
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-51.49</b>	<b>-30.84</b>																	
	<b>in %</b>	<b>-</b>	<b>-24.0%</b>	<b>-13.2%</b>																	
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>																				
	<b>in %</b>																				
4. Focus on terminal DUC monitoring at charging zone level																					
<p><b>AUC vs. DUC</b>                      The AUC for the combined year 2020-2021 corresponds to 202.78 €2017 and was lower by -13.2%, or -30.84€2017 from DUC (233.62€2017). This results mainly from the lower by -13.1% (-4.5 M€2017) terminal costs with the traffic was at the same level as planned (+0.1%).</p> <p><b>Terminal service units</b>                      The actual TNSUs reached the planned level (+0.1%), what falls within the ±2% dead band. Hence the resulting gain is kept by the ANSPs (see item 11).</p> <p><b>Terminal costs by entity at charging zone level</b>                      Actual real terminal costs for 2020-2021 are -13.1% (-4.5 M€2017) lower than planned. This result is driven by the main ANSP (HCAA, now HASP) with the costs lower by -12.7% (-4.2 M€2017), METSP (HNMS) with a costs decrease of -36.9% (-0.3 M€2017) and NSA with the costs higher by +15.5%.</p> <p><b>Terminal costs for the main ANSP (HCAA/HASP) at charging zone level</b>                      Overall, the terminal costs in real terms for HCAA (now HASP) in 2020-2021 were lower by -12.7% (-4.2 M€2017) comparing to the determined costs from the performance plan. This is mainly the result of:                      - lower staff costs (-15.4% or -3.7 M€2017) reflects the amendments to the recruitment plan implemented during COVID-19 crisis;                      - lower other operating costs (-5.5% or -0.5 M€2017) due to costs savings in 2021; and                      - slightly lower deduction of the costs of exempted VFR flights (-3.8%).                      No difference is observed for the cost of capital and depreciation costs for HCAA (HASP) in combined year 2020-2021.</p>				<p>Threshold -10%      Threshold +10%</p> <p>2020-2021 actual vs. planned TNSUs: +0.1%</p> <p>Dead-band -2%      Dead-band +2%</p>																	
				<p><b>Costs by entity at TCZ level (M€2017):</b></p> <table border="1"> <tr><td>Main ANSP</td><td>-12.7%</td></tr> <tr><td>Other ANSP(s)</td><td></td></tr> <tr><td>METSP(s)</td><td>-36.9%</td></tr> <tr><td>NSA</td><td>15.5%</td></tr> <tr><td>Total CZ</td><td>-13.1%</td></tr> </table>				Main ANSP	-12.7%	Other ANSP(s)		METSP(s)	-36.9%	NSA	15.5%	Total CZ	-13.1%				
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Total CZ	-13.1%																				
				<p><b>Costs by nature for main ANSP (M€2017):</b></p> <table border="1"> <tr><td>Staff costs</td><td>-15.4%</td></tr> <tr><td>Other operating costs</td><td>-5.5%</td></tr> <tr><td>Depreciation</td><td>0.0%</td></tr> <tr><td>Cost of capital</td><td>0.0%</td></tr> <tr><td>Exceptional costs</td><td></td></tr> <tr><td>VFR exempted flights</td><td>-3.8%</td></tr> <tr><td>Total Main ANSP</td><td>-12.7%</td></tr> </table>				Staff costs	-15.4%	Other operating costs	-5.5%	Depreciation	0.0%	Cost of capital	0.0%	Exceptional costs		VFR exempted flights	-3.8%	Total Main ANSP	-12.7%
Staff costs	-15.4%																				
Other operating costs	-5.5%																				
Depreciation	0.0%																				
Cost of capital	0.0%																				
Exceptional costs																					
VFR exempted flights	-3.8%																				
Total Main ANSP	-12.7%																				

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	205.25
DUC to be charged retroactively	31.57
<b>DUC</b>	<b>236.82</b>
Inflation adjustment	0.57
Cost exempt from cost-sharing	0.16
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.01
Traffic adj. (adjustments)*	-0.01
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	0.00
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	-21.22
Total adjustments	-20.50
<b>AUCU</b>	<b>216.32</b>
<b>AUCU vs. DUC</b>	<b>-8.7%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

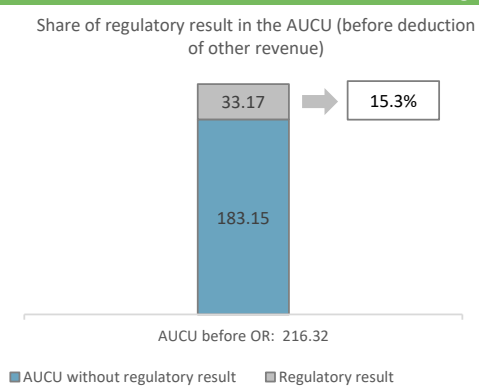
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	0	0.00
Competent authorities and qualified entities costs	24	0.16
Eurocontrol costs	0	0.00
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>24</b>	<b>0.16</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	EUR '000	EUR/SU
HASP	4,584	31.20
METSP(s)	EUR '000	EUR/SU
Greece-MET	288	1.96
<b>Total charging zone</b>	<b>4,873</b>	<b>33.17</b>
<b>Actual cost for users***</b>	<b>31,781</b>	<b>216.32</b>
<b>Regulatory result (% AUCU)</b>	<b>15.3%</b>	<b>15.3%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (216.32€) is -8.7% lower than the nominal DUC (236.82€), which includes DUC initially charged: 205.25€; and to be charged: 31.57€. The difference between these two figures (-20.50€/SU) arising from:

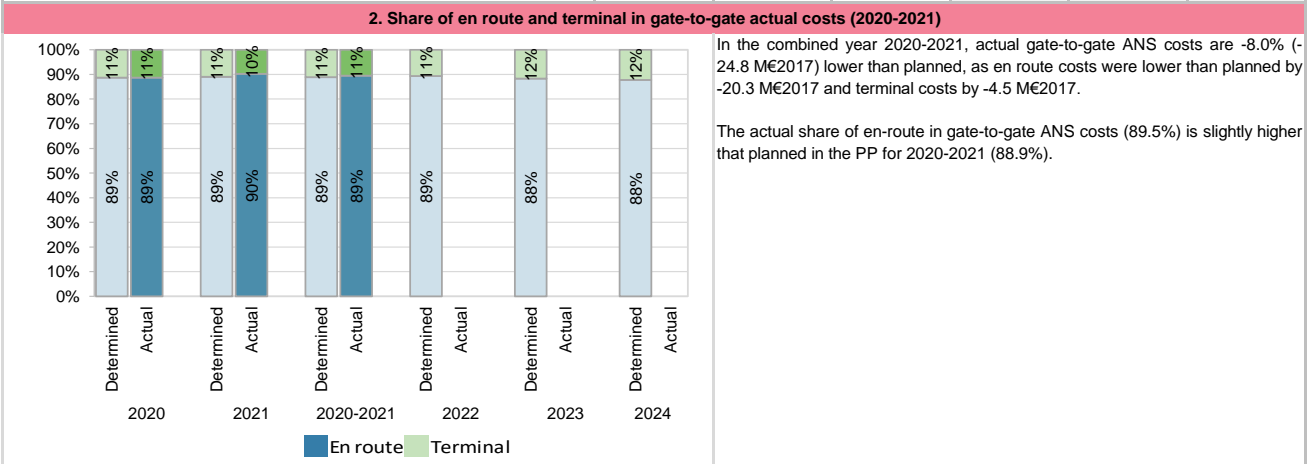
- the positive inflation adjustment resulting from higher than planned inflation (+0.57€/SU);
- the positive adjustment of +0.16€/SU for costs exempt from cost-sharing;
- the deduction of traffic adjustment (-0.01€/SU), for the costs not subject to traffic risk sharing to be reimbursed to airspace users in future years;
- the deduction of -21.22€/SU resulting from the application of the lower unit rate arising from the decision of the Greek Government to subsidize a part of the terminal navigation unit rate at Athens Airport (LGAV) for 2020 and 2021, as communicated by Greece in September 2022.

The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 15.3% (see Note 1 box 12)

10. Monitoring of the terminal ANSPs regulatory results (RR)						
<p>The <b>Regulatory Result (RR)</b> corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.</p> <p>The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.</p> <ul style="list-style-type: none"> <li>- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.</li> <li>- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.</li> </ul> <p>The <b>net gain/loss</b> calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).</p> <p>The monitoring of the RR is carried out in national currency in nominal terms.</p>						
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level						
Cost sharing (EUR '000)	2020-2021	2022	2023	2024		
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP <b>see Note 1</b>	4,224					
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	82					
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	0					
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>4,306</b>					
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024		
Difference in total service units (actual vs PP) %	0.1%					
Determined costs subject to traffic risk sharing for the ANSP (PP)	33,411					
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>44</b>					
Incentives (EUR '000)	2020-2021	2022	2023	2024		
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>					
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>4,351</b>					
12. Regulatory result (RR) for the main ANSP at charging zone level						
HASP planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	4,006	177	4,183	2,362	2,444	13,050
Proportion of financing through equity (in %)	100%	100%	100%	100%	100%	100%
RoE pre-tax rate (in %)	5.6%	4.6%	5.6%	4.6%	4.6%	4.6%
RoE (in value)	226	8	234	109	113	604
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>226</b>	<b>8</b>	<b>234</b>	<b>109</b>	<b>113</b>	<b>604</b>
<b>Revenue for the terminal charging zone</b>	<b>15,295</b>	<b>18,521</b>	<b>33,816</b>	<b>20,069</b>	<b>23,276</b>	<b>26,709</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>1.5%</b>	<b>0.0%</b>	<b>0.7%</b>	<b>0.5%</b>	<b>0.5%</b>	<b>2.3%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>5.6%</b>	<b>4.6%</b>	<b>5.6%</b>	<b>4.6%</b>	<b>4.6%</b>	<b>4.6%</b>
HASP actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	4,006	177	4,183			
Proportion of financing through equity (in %)	100%	100%	100%			
RoE pre-tax rate (in %)	5.6%	4.6%	5.6%			
RoE (in value)	226	8	234			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	4,351	4,351			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>226</b>	<b>4,359</b>	<b>4,584</b>			
<b>Revenue for the terminal charging zone</b>	<b>15,295</b>	<b>18,648</b>	<b>33,942</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues see Note 1</b>	<b>1.5%</b>	<b>23.4%</b>	<b>13.5%</b>			
<b>Ex-post RoE pre-tax rate (in %) see Note 2</b>	<b>5.6%</b>	<b>N/A</b>	<b>N/A</b>			
<p><b>Note 1:</b> RR does not take into account the application of the lower unit rate as per Art. 29.6 (loss in revenues corresponds to 1.1 M€ for 2020 and 2.0 M€ for 2021).</p> <p><b>Note 2:</b> Ex-post RoE cannot be correctly calculated due to a very low total asset base, due to 1) the exclusion of net current assets from the calculation of the total asset base starting from 2021, 2) a very low net book value of fixed assets (as these are nearly fully depreciated).</p>						
13. Focus on main ANSP regulatory result on terminal activity						
<p>The first chart, 'Net gain/loss for 2020-2021 MEUR', shows three categories: Cost sharing (positive gain of ~4.3), Traffic risk sharing (positive gain of ~0.04), and Incentives (zero). The total net gain is ~4.35 MEUR. The second chart, 'Terminal main ANSP regulatory result in percent of revenues', shows ex-ante results (1.5% in 2020-2021, 0.0% in 2021, 0.7% in 2020-2021A, 0.5% in 2022, 0.5% in 2023, 2.3% in 2024) and ex-post results (1.5% in 2020-2021, 23.4% in 2021, 13.5% in 2020-2021A, 0% in 2022, 0% in 2023, 13.5% in 2024).</p>						
<p><b>HCAA (now HASP) net gain on activity in the terminal charging zone in the combined year 2020-2021</b>  HCAA's net gain amounts to +4.4 M€ mainly due to gains of +4.3 M€ from the cost sharing mechanism, and gains of +0.04 M€ from the traffic risk sharing mechanism.</p> <p><b>HCAA (now HASP) overall regulatory results (RR) for the terminal activity</b>  Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+4.4 M€) and the actual RoE (+0.2 M€) amount to +4.6 M€ (13.5% of the terminal revenues).</p>						

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Greece-MET planned regulatory result (EUR '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	0	0	0	0	0	0
Revenue for the terminal charging zone	272	506	778	506	506	506
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Greece-MET actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	0	288	288			
Revenue for the terminal charging zone	272	508	780			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	56.7%	36.9%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity</b>						
For other ANSP (1 METSP - HNMS) the overall ex-post regulatory results amounted to +0.3 M€ which represents 36.9% of their actual terminal revenues for the combined 2020-2021.						

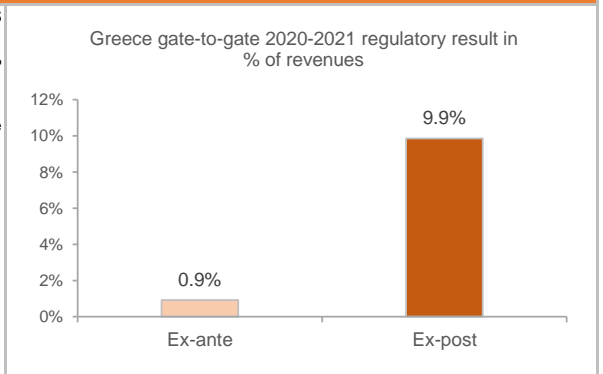
1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1: Greece		En route charging zone 2: N/A					
Terminal charging zone 1: Greece		Terminal charging zone 2:					
Greece: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		121,238,035	152,694,948	273,932,983	163,297,589	177,513,878	189,760,728
Real terminal costs (EUR2017)		15,457,426	18,818,671	34,276,097	19,462,644	23,501,099	26,460,501
Real gate-to-gate costs (EUR2017)		136,695,461	171,513,619	308,209,080	182,760,234	201,014,977	216,221,229
En route share (%)		88.7%	89.0%	88.9%	89.4%	88.3%	87.8%
Greece: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		121,238,035	132,409,771	253,647,806			
Real terminal costs (EUR2017)		15,457,426	14,333,997	29,791,423			
Real gate-to-gate costs (EUR2017)		136,695,461	146,743,768	283,439,229			
En route share (%)		88.7%	90.2%	89.5%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017) in value		0	-24,769,851	-24,769,851			
in %		0.0%	-14.4%	-8.0%			
En route share in p.p.		0.0 p.p.	1.2 p.p.	0.6 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In EUR '000							
ANSP(S)	RR	Ex-ante			Ex-post		
		Revenues	RR % revenues	RR	Revenues	RR % revenues	
HASP	2,112	253,365	0.8%	25,328	256,487	9.9%	
METSP(s)							
Greece MET	RR	Ex-ante			Ex-post		
		Revenues	RR % revenues	RR	Revenues	RR % revenues	
Greece MET	387	18,214	2.1%	1,746	18,254	9.6%	
<b>Total</b>	<b>2,499</b>	<b>271,578</b>	<b>0.9%</b>	<b>27,074</b>	<b>274,741</b>	<b>9.9%</b>	

For the ANSPs providing services in the charging zones of Greece covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +27.1 M€ (see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 9.9% of gate-to-gate ANS revenues.

This is higher than the planned RR for the combined 2020-2021 year included in the performance plan (0.9%).



# **Annual Monitoring Report 2021**

## Local level view

### Hungary

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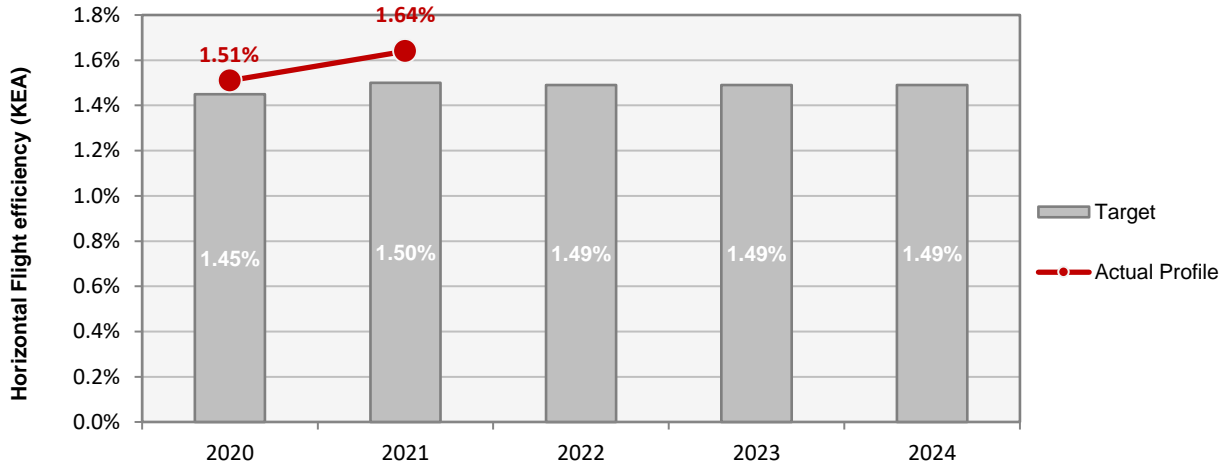
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>Hungarocontrol</b>	99	C	D	D	D	D

Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.

**Observations**

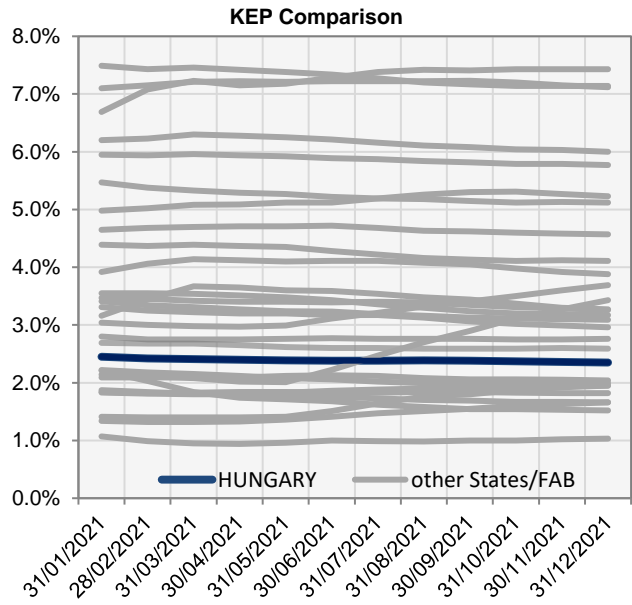
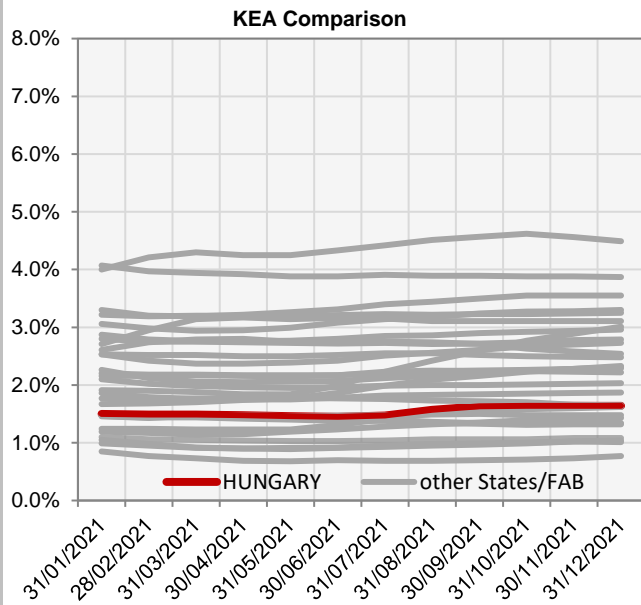
All five EoSM components of the ANSP meet, or exceed, already the 2024 target level.

KEA					
	2020	2021	2022	2023	2024
Target	1.45%	1.50%	1.49%	1.49%	1.49%
Actual performance	1.51%	1.64%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	1.50%	1.49%	1.49%	1.48%	1.46%	1.45%	1.47%	1.57%	1.63%	1.64%	1.64%	1.64%
KEP	2.45%	2.42%	2.41%	2.40%	2.39%	2.38%	2.38%	2.39%	2.38%	2.37%	2.36%	2.35%
KES	2.10%	2.06%	2.04%	2.05%	2.05%	2.06%	2.08%	2.11%	2.13%	2.14%	2.14%	2.14%

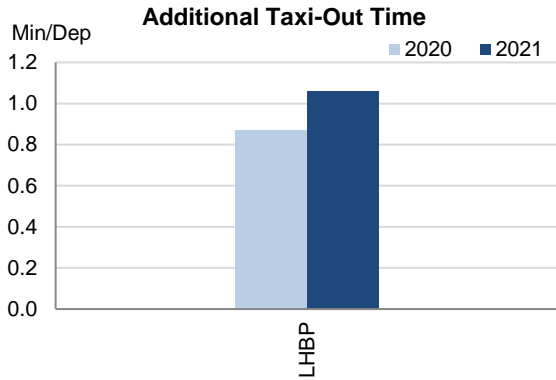


The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**1. Overview**

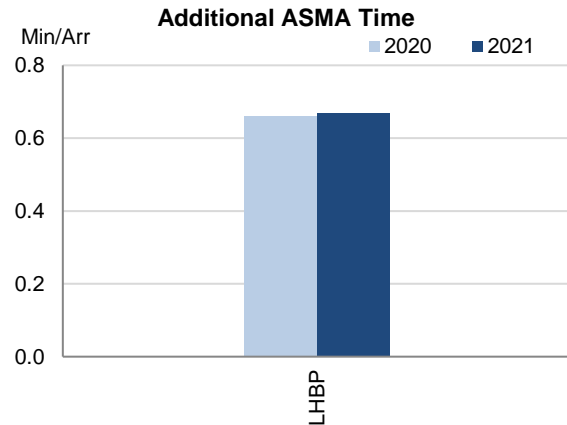
Hungary identified only its main airport Budapest as subject to RP3 monitoring. The Airport Operator Data Flow is correctly established and all environmental indicators can be monitored. Traffic at Budapest airport in 2021 was still by 55% lower compared to 2019, with an important recovery in the second half of the year. Both additional time indicators slightly increased in 2021 but remained significantly lower than the 2019 values. The share of CDO flights is slightly above the overall RP3 value in 2021.

**2. Additional Taxi-Out Time**



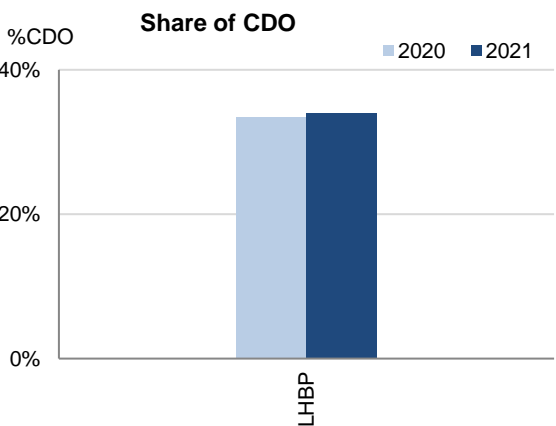
Additional taxi-out times at Budapest (LHBP; 2019: 1.63 min/dep.; 2020: 0.87 min/dep.; 2021: 1.06 min/dep.) increased with respect to 2020 but remained below 1.5 min/dep. even in the second part of the year when traffic recovered. According to the Hungarian monitoring report: *As the actual value of this PI is satisfactory, no additional initiatives are needed.*

**3. Additional ASMA Time**



The additional times in the terminal airspace in 2021 were similar to the values in 2020 (LHBP; 2019: 0.85 min/arr.; 2020: 0.66 min/arr.; 2021: 0.67 min/arr.) Nevertheless, in August these values exceeded the worst values in 2019, averaging 2.24 min/arr. According to the Hungarian monitoring report: *As the actual value of this PI is satisfactory similar to the previous year's value no additional initiatives are needed.*

**4. Share of arrivals applying CDO**



The share of CDO flights for Budapest has slightly increased from 33.4% in 2020 to 34.0% in 2021. This value is slightly above the overall RP3 value in 2021 (30.5%). Between June and November, the monthly values decreased significantly with the lowest value in August (25.9%). According to the Hungarian monitoring report: *As the actual value of this PI is very good no additional initiatives are needed.*

**5. Appendix**

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Budapest/Ferihegy-LHBP	0.87	1.06				0.66	0.67				33%	34%			

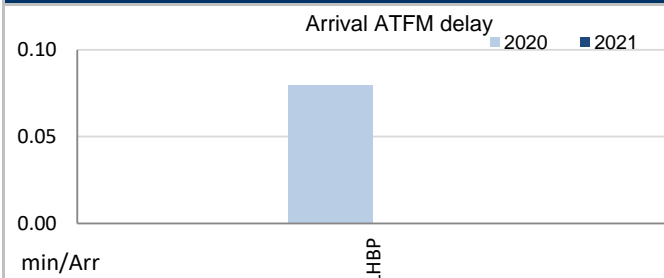
Update on Military dimension of the plan					
The impact of military operations to civil traffic was irrelevant in 2021. The airspace design and procedures are in line with FUA policies.					
Military - related measures implemented or planned to improve capacity					
None					
PI#6 Effective use of reserved or segregated airspace - national level					
Ratio PI#6	2020	2021	2022	2023	2024
Hungary	55%	59%			
PI#6 Effective use of reserved or segregated airspace (per ACC)					
Ratio PI#6	2020	2021	2022	2023	2024
Budapest ACC	55%	59%			
Initiatives implemented or planned to improve PI#6					
A more efficient design process has helped to improve the efficiency rate.					
PI#7 Rate of planning via available airspace structures - national level					
Ratio PI#7	2020	2021	2022	2023	2024
Hungary					
PI#7 Rate of planning via available airspace structures (per ACC)					
Ratio PI#7	2020	2021	2022	2023	2024
Budapest ACC					
Initiatives implemented or planned to improve PI#7					
With the implementation of free route airspace in Hungary in 2015 all the ATS routes have been eliminated. Since that the entire CDR route concept is not applicable anymore in Hungary.					
PI#8 Rate of using available airspace structures - national level					
Ratio PI#8	2020	2021	2022	2023	2024
Hungary					
PI#8 Rate of using available airspace structures (per ACC)					
Ratio PI#8	2020	2021	2022	2023	2024
Budapest ACC					
Initiatives implemented or planned to improve PI#8					
With the implementation of free route airspace in Hungary in 2015 all the ATS routes have been eliminated. Since that the entire CDR route concept is not applicable anymore in Hungary.					

Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.90	0.06	0.11	0.11	0.11		
<b>Actual performance</b>	0.00	0.01					
NSA's assessment of capacity performance							
<p>During the 2nd year of COVID pandemic the traffic level was still very low in Hungary, therefore to reach 0 minutes delay per flight was achievable. HungaroControl has put the focus on how to ensure the service continuity while minimizing the spread of virus among the operational personnel.</p>							
Monitoring process for capacity performance							
<p>In 2021 regular online meetings were organised between the ANSP and the NSA focusing on the issues like how to maintain the ATCOs proficiency. As the traffic demand was well below the planned capacity, capacity was not an issue.</p>							
Capacity Planning							
<p>In 2021 the delay target was met, capacity planning was appropriate.</p>							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned (2019 Perf Plan)</b>	97	101	108	114	121	128	*Hungary has previously reported 97 & 93 FTE operational ATCOs in 2019 and 2020 respectively for LHCC ACC.
<b>Planned (2021 Perf Plan)</b>	-	-	111	119	116	119	
<b>Actual</b>	106*	101*	111				
Application of Corrective Measures for Capacity (if applicable)							
<p>Not applicable</p>							
Summary of capacity performance							
<p>Hungary experienced an increase in traffic from 381k flights in 2020 to 491k flights in 2021, with practically zero ATFM delays. However, traffic levels were still substantially below the 892k flights in 2019.</p>							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.90	0.06	0.11	0.11	0.11		
<b>Deadband +/-</b>	-	-	[0.083-0.138]	[0.083-0.138]	[0.083-0.138]		
<b>Actual performance</b>	0.00	0.01					
<p>In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.</p>							

1. Overview

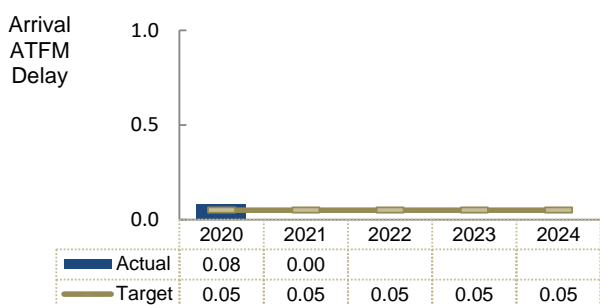
Hungary identified only its main airport Budapest as subject to RP3 monitoring. The Airport Operator Data Flow is correctly established and all capacity indicators can be monitored. Traffic at Budapest airport in 2021 was still by 55% lower compared to 2019, with an important recovery in the second half of the year. Average arrival ATFM delays in 2021 was 0 min/arr, compared to 0.08 min/arr in 2020. ATFM slot adherence has deteriorated (2021: 96.0%; 2020: 96.2%).

2. Arrival ATFM Delay



No arrival ATFM delays were observed in the entire 2021 at Budapest (LHBP: 2019: 0.03 min/arr.; 2020: 0.08 min/arr.; 2021: 0 min/arr.)

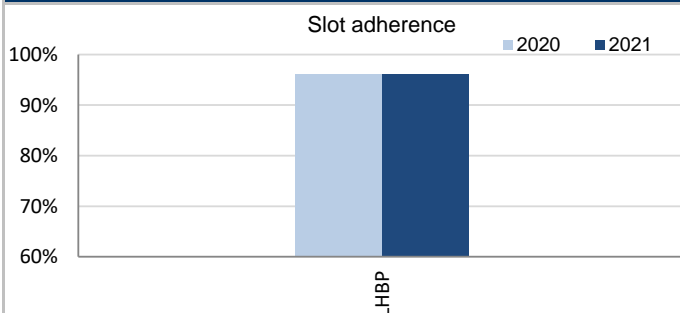
3. Arrival ATFM Delay – National Target and Incentive Scheme



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

4. ATFM Slot Adherence



With the drastic drop in traffic, regulated departures from Budapest virtually disappeared until July 2021. Budapest's ATFM slot compliance was 96.0%, very similar to the performance in 2020 (96.2%). With regard to the 4% of flights that did not adhere, 2.4% was early and 1.6% was late.

5. ATC Pre-departure Delay

The performance in terms of ATC pre-departure delay at Budapest has further improved with respect to the previous years (LHBP; 2019: 0.30 min/dep.; 2020: 0.16 min/dep.; 2021: 0.14 min/dep.) Nevertheless, at monthly level the ATC pre-departure delay in second half of 2021 is getting closer to the 2019 values.

6. All Causes Pre-departure Delay

The total (all causes) delay in the actual off block time at Budapest increased in 2021 (LHBP: 2020: 12.58 min/dep.; 2021: 15.61 min/dep.). The highest delays per flight were observed in February, averaging almost 25 min/dep.

7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Budapest/Ferihegy-LHBP	0.08	0				96.2%	96.0%				0.16	0.14				12.58	15.61			

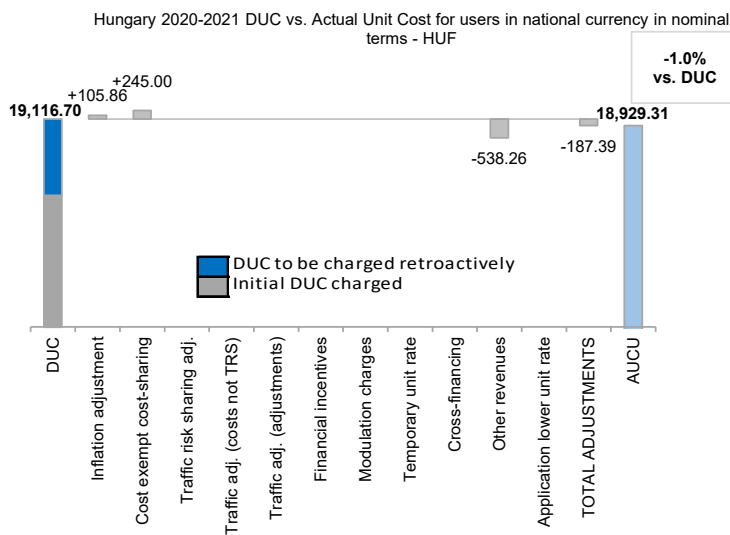
1. Contextual economic information: en route air navigation services							
Hungary ECZ represents 1.6% of the SES en route ANS actual costs in 2019			FAB: FAB CE				
National currency:	HUF	Exchange rates (1 EUR=)	2017: 308.993 HUF	2020: 350.891 HUF	2021: 358.113 HUF		
Performance Plan:	RP3 draft performance plan dated 21 February 2022 and found consistent as per Commission Decision (EU) 2022/775 of 13 April 2022 The final version of the plan was adopted and published on 28 July 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317.						
2. Monitoring of the en route determined unit cost (DUC) at charging zone level							
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.							
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.							
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)							
Hungary: Data from RP3 Performance Plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal HUF)		29,197,333,644	31,014,608,143	60,211,941,787	38,458,992,221	39,239,032,047	40,877,334,912
Inflation %		3.4%	3.6%		3.5%	3.3%	3.0%
Inflation index (100 in 2017)		110.0	114.0		118.0	121.9	125.5
Real en route costs (HUF2017)		27,211,963,371	28,310,064,723	55,522,028,094	34,177,552,178	34,118,483,949	34,826,054,863
Total en route service units		1,423,059	1,726,646	3,149,705	2,419,349	2,881,187	3,181,615
<b>Real en route DUC per service unit (HUF2017)</b>		<b>19,122.17</b>	<b>16,395.99</b>	<b>17,627.69</b>	<b>14,126.76</b>	<b>11,841.82</b>	<b>10,946.03</b>
<b>Real en route DUC per service unit (EUR2017)</b>		<b>61.89</b>	<b>53.06</b>	<b>57.05</b>	<b>45.72</b>	<b>38.32</b>	<b>35.42</b>
Hungary: Actual data from Reporting Tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal HUF)		29,197,333,644	29,890,098,035	59,087,431,679			
Inflation %		3.4%	5.2%				
Inflation index (100 in 2017)		110.0	115.7				
Real en route costs (HUF2017)		27,211,963,371	27,022,897,051	54,234,860,422			
Total en route service units		1,423,059	1,726,646	3,149,705			
<b>Real en route AUC per service unit (HUF2017)</b>		<b>19,122.17</b>	<b>15,650.51</b>	<b>17,219.03</b>			
<b>Real en route AUC per service unit (EUR2017)</b>		<b>61.89</b>	<b>50.65</b>	<b>55.73</b>			
Difference between Actuals and Planned		2020	2021	2020-2021	2022	2023	2024
En route costs (nominal HUF)	in value	0	-1,124,510,108	-1,124,510,108			
	in %	-	-3.6%	-1.9%			
Inflation %	in p.p.	0.0 p.p.	1.6 p.p.				
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	1.7 p.p.				
Real en route costs (HUF2017)	in value	0	-1,287,167,672	-1,287,167,672			
	in %	-	-4.5%	-2.3%			
Total en route service units	in value	0	0	0			
	in %	-	-0.0%	-			
<b>Real en route unit cost per service unit (HUF2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-745.47</b>	<b>-408.66</b>			
	<b>in %</b>	<b>-</b>	<b>-4.5%</b>	<b>-2.3%</b>			
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-2.41</b>	<b>-1.32</b>			
	<b>in %</b>	<b>-</b>	<b>-4.5%</b>	<b>-2.3%</b>			
4. Focus on en route DUC monitoring at charging zone level							
<b>AUC vs DUC</b> In the combined year 2020-2021, the AUC was lower than planned in DUC (by -2.3%, or -408.66HUF2017, or -1.32€2017). This results from the lower than planned en route costs in real terms (by -2.3%, or -1,287.2 MHUF2017, or -4.2 M€2017).							
<b>En route service units</b> Actual total en route service units are in line with planned TSUs, as plan was presented in February 2022.							
<b>En route costs by entity at charging zone level</b> Actual real en route costs for 2020-2021 are -2.3% (-1,287.2 MHUF2017, or -4.2 M€2017) lower than planned. This result is driven by main ANSP, HungaroControl (-2.3%, or -3.6 M€2017), the MET service provider (-2.9%, or -0.1 M€2017) and NSA/EUROCONTROL costs (-2.5%, or -0.5 M€2017).							
<b>En route costs for the main ANSP (HungaroControl) at charging zone level</b> The lower than planned en route costs in real terms for HungaroControl in 2020-2021 (-2.3%, or -3.6 M€2017 lower) results from: - lower staff costs (-4.1%), due to "decrease in headcount (mainly in non-ATCO business functions), restructuring of ATCO wage system (more traffic dependent), consequently savings in payroll taxes/contributions;" - slightly higher other operating costs (+0.1%); - lower depreciation (-0.7%), "due to assets placed in service later than planned, revision of some assets' useful life;" - higher cost of capital (+0.7%), due to increase in net current assets.							

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	HUF/SU	EUR/SU
Initial DUC charged	12,121.09	34.15
DUC to be charged retroactively	6,995.60	19.76
<b>DUC</b>	<b>19,116.70</b>	<b>53.91</b>
Inflation adjustment	105.86	0.30
Cost exempt from cost-sharing	245.00	0.68
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	0.00	0.00
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	-538.26	-1.52
Application of lower unit rate	0.00	0.00
Total adjustments	-187.39	-0.54
<b>AUCU</b>	<b>18,929.31</b>	<b>53.38</b>
<b>AUCU vs. DUC</b>	<b>-1.0%</b>	<b>-1.0%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

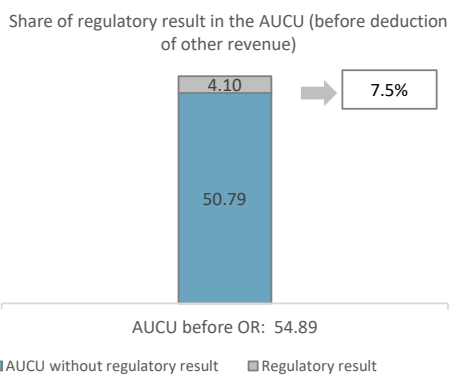
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. En route costs exempt from cost sharing

by item		HUF '000	EUR '000	HUF/SU	EUR/SU
		New and existing investments	920,634	2,571	292.29
Competent authorities and qualified entities costs	84,392	236	26.79	0.07	
Eurocontrol costs	-233,337	-652	-74.08	-0.21	
Pension costs	0	0	0.00	0.00	
Interest on loans	0	0	0.00	0.00	
Changes in law	0	0	0.00	0.00	
<b>Total costs exempt from cost sharing</b>		<b>771,689</b>	<b>2,155</b>	<b>245.00</b>	<b>0.68</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level



ANSP(S)	HUF '000	EUR '000	HUF/SU	EUR/SU
HungaroControl	4,544,242	12,740	1,442.75	4.04
METSP(s)	HUF '000	EUR '000	HUF/SU	EUR/SU
Hungary MET	62,865	177	19.96	0.06
<b>Total charging zone</b>	<b>4,607,107</b>	<b>12,917</b>	<b>1,462.71</b>	<b>4.10</b>
<b>Actual cost for users***</b>	<b>61,317,073</b>	<b>172,901</b>	<b>19,467.56</b>	<b>54.89</b>
<b>Regulatory result (% AUCU)</b>	<b>7.5%</b>	<b>7.5%</b>	<b>7.5%</b>	<b>7.5%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Hungary en route charging zone (18,929.31HUF or 53.38€) is -1.0% lower than the nominal DUC (19,116.70HUF or 53.91€) which includes DUC initially charged: 12,121.09HUF (or 34.15€); and to be charged: 6,995.60HUF (or 19.76€). The difference between these two figures (-187.39HUF/SU or -0.54€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+105.86HUF/SU or +0.30€/SU);
- the deduction of the other revenues (-538.26HUF/SU or -1.52€/SU);
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (+245.00HUF/SU or +0.68€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU is 7.5%.



10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

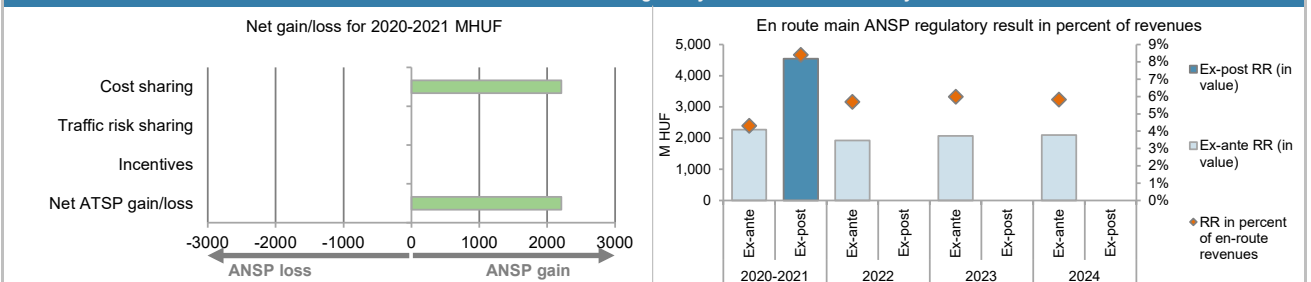
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (HUF '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	944,288			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	324,966			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	938,160			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>2,207,414</b>			
Traffic risk sharing (HUF '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.0%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	52,066,684			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>0</b>			
Incentives (HUF '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (HUF '000)</b>	<b>2,207,414</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>6,164</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

HungaroControl planned regulatory result (HUF '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	20,202,859	25,568,696	45,771,555	29,670,934	31,664,881	31,338,280
Proportion of financing through equity (in %)	100%	95%	97%	81%	82%	87%
RoE pre-tax rate (in %)	4.4%	5.8%	5.1%	8.0%	8.0%	7.7%
RoE (in value)	878,824	1,395,676	2,274,500	1,922,484	2,070,034	2,099,551
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>878,824</b>	<b>1,395,676</b>	<b>2,274,500</b>	<b>1,922,484</b>	<b>2,070,034</b>	<b>2,099,551</b>
<b>Revenue for the en route charging zone</b>	<b>25,754,350</b>	<b>27,127,082</b>	<b>52,881,433</b>	<b>33,832,901</b>	<b>34,621,310</b>	<b>36,094,907</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>3.4%</b>	<b>5.1%</b>	<b>4.3%</b>	<b>5.7%</b>	<b>6.0%</b>	<b>5.8%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>4.4%</b>	<b>5.8%</b>	<b>5.1%</b>	<b>8.0%</b>	<b>8.0%</b>	<b>7.7%</b>
HungaroControl actual regulatory result (HUF '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	20,202,859	25,851,125	46,053,985			
Proportion of financing through equity (in %)	100%	100%	100%			
RoE pre-tax rate (in %)	4.4%	5.6%	5.1%			
RoE (in value)	878,824	1,458,003	2,336,828			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	2,207,414	2,207,414			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>878,824</b>	<b>3,665,418</b>	<b>4,544,242</b>			
<b>Revenue for the en route charging zone</b>	<b>25,754,350</b>	<b>28,390,208</b>	<b>54,144,559</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>3.4%</b>	<b>12.9%</b>	<b>8.4%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>4.4%</b>	<b>14.2%</b>	<b>9.9%</b>			

13. Focus on the main ANSP regulatory result on en route activity



**HungaroControl net gain on en route activity in the Hungarian charging zone in the combined year 2020-2021**

HungaroControl's net gain amounts to +6.2 M€, arising from the cost sharing mechanism.

**HungaroControl overall regulatory results (RR) for the en route activity**

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+6.2 M€) and the actual RoE (+6.6M€) amounts to +12.7 ME (8.4% of the en route revenues). The resulting ex-post rate of return on equity is 9.9%, which is higher than the 5.1% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
Hungary MET planned regulatory result (HUF '000)	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	20,007	21,730	41,737	32,878	33,804	34,758
Revenue for the en route charging zone	654,689	739,348	1,394,037	1,182,849	1,096,686	1,163,815
Ex-ante regulatory result (+/-) in percent of revenues	3.1%	2.9%	3.0%	2.8%	3.1%	3.0%
Ex-ante RoE pre-tax rate (in %)	3.5%	3.3%	3.4%	3.5%	3.5%	3.5%
Hungary MET actual regulatory result (HUF '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	20,007	42,858	62,865			
Revenue for the en route charging zone	654,689	730,297	1,384,986			
Ex-post regulatory result (+/-) in percent of revenues	3.1%	5.9%	4.5%			
Ex-post RoE pre-tax rate (in %)	3.5%	7.3%	5.4%			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for METSP in Hungary en route charging zone corresponds to 4.5% of the en route revenues.						
Resulting ex-post rate of return on equity is 5.4%, compared to 3.4% planned in the PP.						

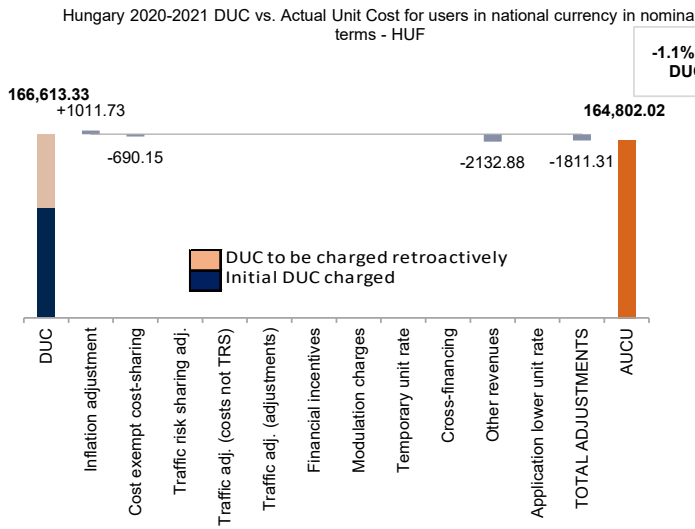
1. Contextual economic information: terminal air navigation services						
Hungary TCZ represents 1.4% of the SES terminal ANS actual costs in 2019 Number of airports in charging zone in 2021: 1 of which: <ul style="list-style-type: none"> <li>· Airports with fewer than 80,000 IFR mvmts: 0</li> <li>· Airports with more than 80,000 IFR mvmts: 1</li> </ul>						
National currency: HUF Exchange rates (1 EUR=) 2017: 308.993 HUF 2020: 350.891 HUF 2021: 358.113 HUF						
Performance Plan: See item 1 for the en route charging zone(s).						
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Hungary: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal HUF)	5,238,902,555	5,740,183,012	10,979,085,566	7,574,897,694	8,784,670,551	9,722,701,447
Inflation %	3.4%	3.6%		3.5%	3.3%	3.0%
Inflation index (100 in 2017)	110.0	114.0		118.0	121.9	125.5
Real terminal costs (HUF2017)	4,859,542,224	5,199,436,229	10,058,978,452	6,691,445,503	7,741,099,280	8,469,413,653
Total terminal service units	31,092	34,804	65,896	57,181	69,033	81,748
<b>Real terminal DUC per service unit (HUF2017)</b>	<b>156,297.88</b>	<b>149,391.66</b>	<b>152,650.22</b>	<b>117,022.91</b>	<b>112,135.67</b>	<b>103,603.43</b>
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>505.83</b>	<b>483.48</b>	<b>494.02</b>	<b>378.72</b>	<b>362.91</b>	<b>335.29</b>
Hungary: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal HUF)	5,238,902,555	5,455,319,252	10,694,221,806			
Inflation %	3.4%	5.2%				
Inflation index (100 in 2017)	110.0	115.7				
Real terminal costs (HUF2017)	4,859,542,224	4,897,850,677	9,757,392,901			
Total terminal service units	31,092	34,804	65,896			
<b>Real terminal AUC per service unit (HUF2017)</b>	<b>156,297.88</b>	<b>140,726.42</b>	<b>148,073.51</b>			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>505.83</b>	<b>455.44</b>	<b>479.21</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal HUF)	in value 0	-284,863,760	-284,863,760			
	in % -	-5.0%	-2.6%			
Inflation %	in p.p. 0.0 p.p.	1.6 p.p.				
Inflation index (100 in 2017)	in p.p. 0.0 p.p.	1.7 p.p.				
Real terminal costs (HUF2017)	in value 0	-301,585,552	-301,585,552			
	in % -	-5.8%	-3.0%			
Total terminal service units	in value 0	0	0			
	in % -	-0.0%	-			
<b>Real terminal unit cost per service unit (HUF2017)</b>	<b>in value 0.00</b>	<b>-8,665.24</b>	<b>-4,576.72</b>			
	<b>in % -</b>	<b>-5.8%</b>	<b>-3.0%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value 0.00</b>	<b>-28.04</b>	<b>-14.81</b>			
	<b>in % -</b>	<b>-5.8%</b>	<b>-3.0%</b>			
4. Focus on terminal DUC monitoring at charging zone level						
<b>AUC vs. DUC</b> In the combined year 2020-2021, the terminal AUC was -3.0% (or -4,576.72HUF2017, or -14.81€2017) lower than the planned DUC. This results from lower than planned terminal costs in real term (-3.0%, or -301.6 MHUF2017, or -1.0 M€2017).						
<b>Terminal service units</b> Actual total terminal service units are in line with planned TNSUs, as plan was presented in February 2022.						
<b>Terminal costs by entity</b> Actual real terminal costs are -3.0% (-301.6 MHUF2017 or -1.0 M€2017) lower than planned. This is driven by the main ANSP, HungaroControl (-3.1%, or -1.0 M€2017).						
<b>Terminal costs for the main ANSP (HungaroControl) at charging zone level</b> The lower than planned terminal costs in real terms for HungaroControl (-3.1%, or -1.0 M€2017) result from: <ul style="list-style-type: none"> <li>- lower staff costs (-3.9%), due to "decrease in headcount (mainly in non-ATCO business functions), restructuring of ATCO wage system (more traffic dependent), savings in payroll taxes due to the reduction in the contribution base;"</li> <li>- lower other operating costs (-4.8%), due to "savings in services used, better customer solvency than planned (less bad debt provision);"</li> <li>- lower depreciation (-1.8%), due to "assets placed in service later than planned, revision of some assets' useful life;"</li> <li>- higher cost of capital (+10.8%), mainly due to increase in net current assets (+417.8% in 2021), "the main driver of growth is a technical issue, namely the different handling of the adjustment of RP2 adjustments".</li> </ul>						

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	HUF/SU	EUR/SU
Initial DUC charged	99,533.85	280.52
DUC to be charged retroactively	67,079.48	189.31
<b>DUC</b>	<b>166,613.33</b>	<b>469.82</b>
Inflation adjustment	1,011.73	2.83
Cost exempt from cost-sharing	-690.15	-1.93
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	0.00	0.00
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	-2,132.88	-6.01
Application of lower unit rate	0.00	0.00
Total adjustments	-1,811.31	-5.12
<b>AUCU</b>	<b>164,802.02</b>	<b>464.71</b>
<b>AUCU vs. DUC</b>	<b>-1.1%</b>	<b>-1.1%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

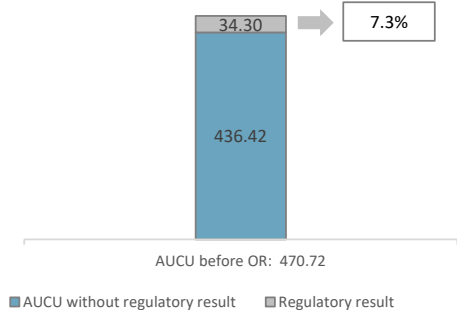
7. Terminal costs exempt from cost sharing

		HUF '000	EUR '000	HUF/SU	EUR/SU
by item	New and existing investments	-45,464	-127	-689.93	-1.93
	Competent authorities and qualified entities costs	-14	0	-0.22	0.00
	Eurocontrol costs	0	0	0.00	0.00
	Pension costs	0	0	0.00	0.00
	Interest on loans	0	0	0.00	0.00
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>-45,478</b>	<b>-127</b>	<b>-690.15</b>	<b>-1.93</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ATSP(S)	HUF '000	EUR '000	HUF/SU	EUR/SU
HungaroControl	805,860	2,260	12,229.34	34.30
METSP(s)	HUF '000	EUR '000	HUF/SU	EUR/SU
Hungary-MET	0	0	0.00	0.00
<b>Total charging zone</b>	<b>805,860</b>	<b>2,260</b>	<b>12,229.34</b>	<b>34.30</b>
<b>Actual cost for users***</b>	<b>11,000,276</b>	<b>31,018</b>	<b>166,934.90</b>	<b>470.72</b>
<b>Regulatory result (% AUCU)</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Hungary terminal charging zone (164,802.02HUF or 464.71€) is -1.1% lower than the nominal DUC (166,613.33HUF or 469.82€) which includes DUC initially charged: 99,533.85HUF (or 280.52€); and to be charged: 67,079.48HUF (or 189.31€). The difference between these two figures (-1,811.31HUF/SU or -5.12€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+1,011.73HUF/SU or +2.83€/SU);
- the deduction of the other revenues (-2,132.88HUF/SU or -6.01€/SU);
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-690.15HUF/SU or -1.93€/SU).

The share of regulatory result (see items 10 to 13) in the terminal AUCU is 7.3%.

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

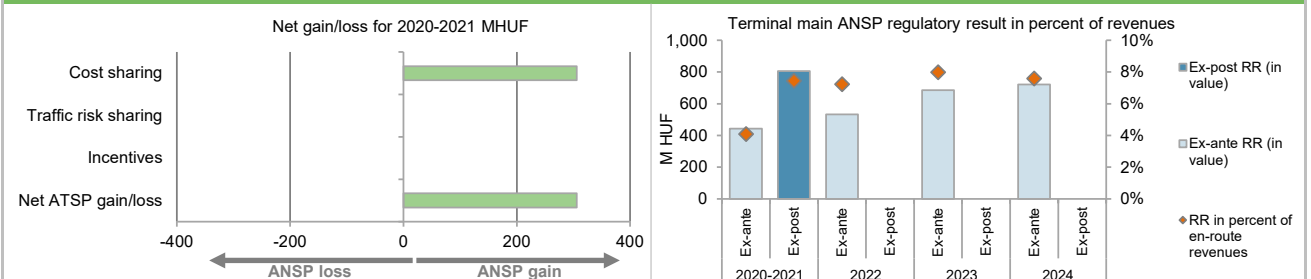
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (HUF '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	284,849			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	66,668			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-45,464			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>306,054</b>			
Traffic risk sharing (HUF '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.0%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	10,682,167			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>0</b>			
Incentives (HUF '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (HUF '000)</b>	<b>306,054</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>855</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

HungaroControl planned regulatory result (HUF '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	3,944,962	4,958,200	8,903,163	8,214,232	10,493,694	10,778,204
Proportion of financing through equity (in %)	100%	95%	97%	81%	82%	87%
RoE pre-tax rate (in %)	4.4%	5.8%	5.1%	8.0%	8.0%	7.7%
RoE (in value)	171,606	270,645	442,251	532,229	686,006	722,101
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>171,606</b>	<b>270,645</b>	<b>442,251</b>	<b>532,229</b>	<b>686,006</b>	<b>722,101</b>
<b>Revenue for the terminal charging zone</b>	<b>5,168,516</b>	<b>5,635,745</b>	<b>10,804,261</b>	<b>7,369,440</b>	<b>8,584,481</b>	<b>9,507,231</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>3.3%</b>	<b>4.8%</b>	<b>4.1%</b>	<b>7.2%</b>	<b>8.0%</b>	<b>7.6%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>4.4%</b>	<b>5.8%</b>	<b>5.1%</b>	<b>8.0%</b>	<b>8.0%</b>	<b>7.7%</b>
HungaroControl actual regulatory result (HUF '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	3,944,962	5,819,143	9,764,105			
Proportion of financing through equity (in %)	100%	100%	100%			
RoE pre-tax rate (in %)	4.4%	5.6%	5.1%			
RoE (in value)	171,606	328,200	499,806			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	306,054	306,054			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>171,606</b>	<b>634,254</b>	<b>805,860</b>			
<b>Revenue for the terminal charging zone</b>	<b>5,168,516</b>	<b>5,656,950</b>	<b>10,825,466</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>3.3%</b>	<b>11.2%</b>	<b>7.4%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>4.4%</b>	<b>10.9%</b>	<b>8.3%</b>			

13. Focus on main ANSP regulatory result on terminal activity



**HungaroControl net gain on terminal activity in the Hungarian charging zone in the combined year 2020-2021**

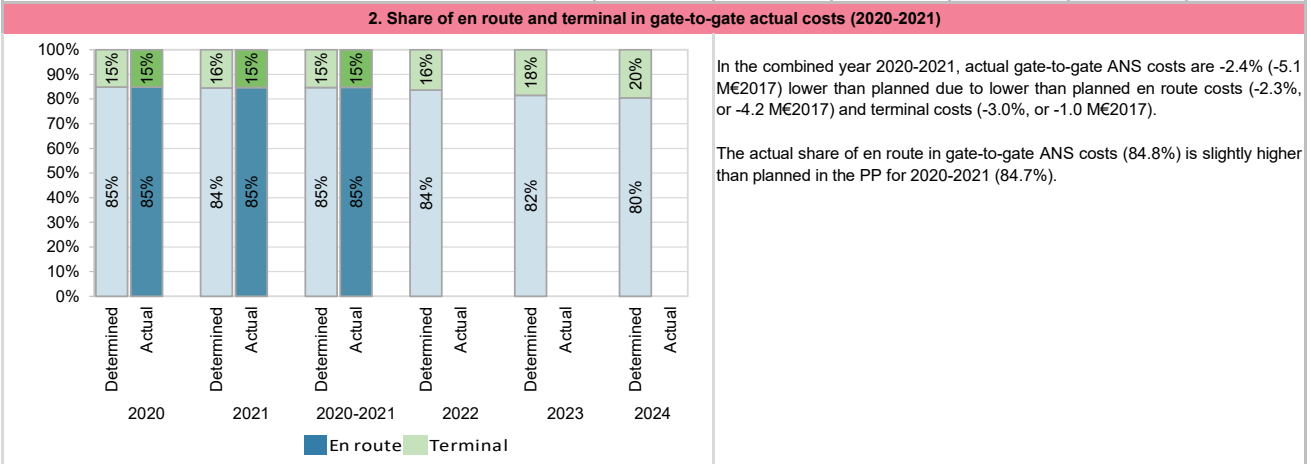
HungaroControl's net gain amounts to +0.9 M€, arising from the cost sharing mechanism.

**HungaroControl overall regulatory results (RR) for the terminal activity**

Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+0.9 M€) and the actual RoE (+1.4 M€) amounts to +2.3 M€ (7.4% of the terminal revenues). The resulting ex-post rate of return on equity is 8.3%, which is higher than the 5.1% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Hungary-MET planned regulatory result (HUF '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	0	0	0	0	0	0
Revenue for the terminal charging zone	0	0	0	78,917	63,104	67,841
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Hungary-MET actual regulatory result (HUF '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	0	0	0			
Revenue for the terminal charging zone	0	0	0			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
No plans or actuals are reported for 2020-2021, as MET services are provided by HungaroControl until 01/01/2022, when they are taken over by OMSZ (Hungary-MET).						

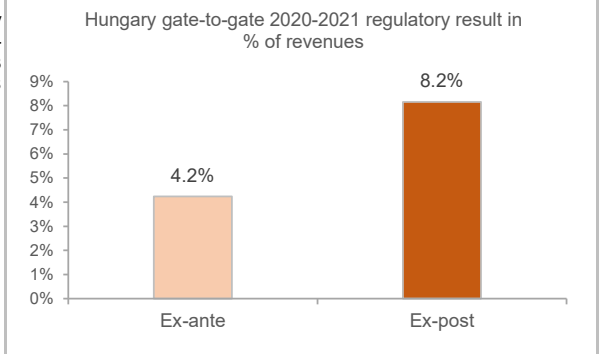
1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1: Hungary		En route charging zone 2:					
Terminal charging zone 1: Hungary		Terminal charging zone 2:					
Hungary: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		88,066,601	91,620,408	179,687,009	110,609,471	110,418,307	112,708,232
Real terminal costs (EUR2017)		15,727,030	16,827,036	32,554,066	21,655,654	25,052,669	27,409,727
Real gate-to-gate costs (EUR2017)		103,793,632	108,447,444	212,241,075	132,265,125	135,470,976	140,117,959
En route share (%)		84.8%	84.5%	84.7%	83.6%	81.5%	80.4%
Hungary: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		88,066,601	87,454,722	175,521,324			
Real terminal costs (EUR2017)		15,727,030	15,851,009	31,578,039			
Real gate-to-gate costs (EUR2017)		103,793,632	103,305,731	207,099,363			
En route share (%)		84.8%	84.7%	84.8%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017) in value		0	-5,141,713	-5,141,713			
in %		0.0%	-4.7%	-2.4%			
En route share in p.p.		0.0 p.p.	0.2 p.p.	0.1 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In HUF '000	ANSP(S)	Ex-ante			Ex-post		
		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	HungaroControl	2,716,751	63,685,693	4.3%	5,350,102	64,970,024	8.2%
METSP(s)		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	Hungary MET	41,737	1,394,037	3.0%	62,865	1,384,986	4.5%
<b>Total</b>		<b>2,758,488</b>	<b>65,079,730</b>	<b>4.2%</b>	<b>5,412,967</b>	<b>66,355,011</b>	<b>8.2%</b>

For the ANSPs providing services in the en route and terminal charging zones of Hungary covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +15.2 M€ (+12.9 M€ for en route and +2.3 M€ for terminal - see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 8.2% of gate-to-gate ANS revenues.

This is higher than the return planned for the year (4.2%).



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# **Annual Monitoring Report 2021**

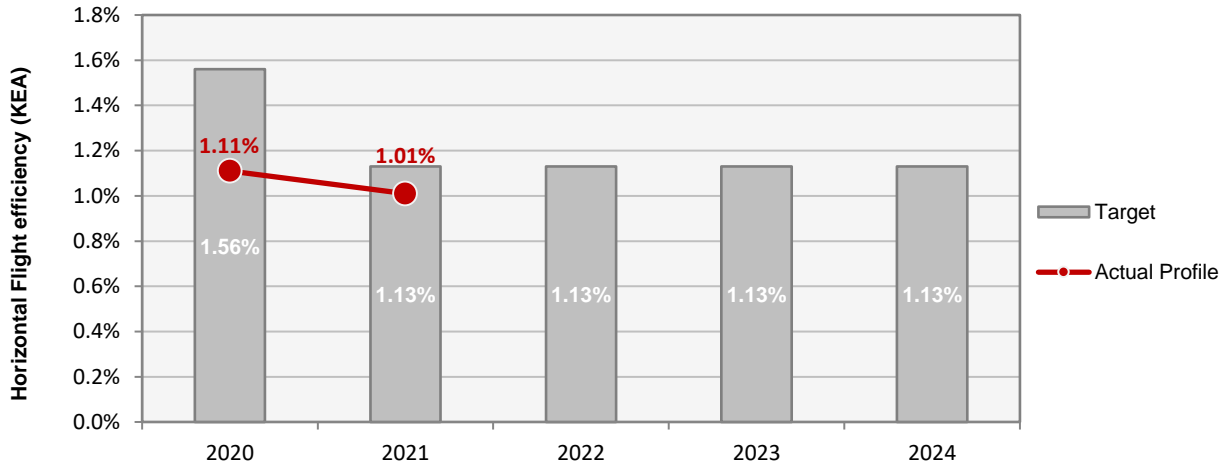
## Local level view

### Ireland

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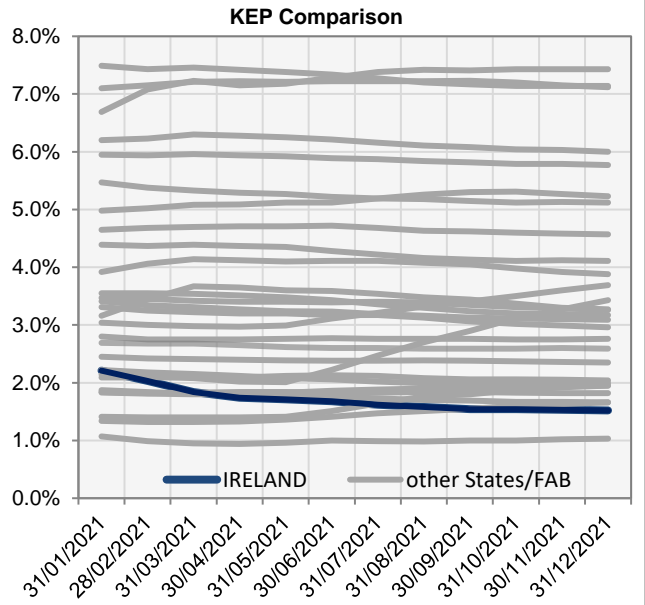
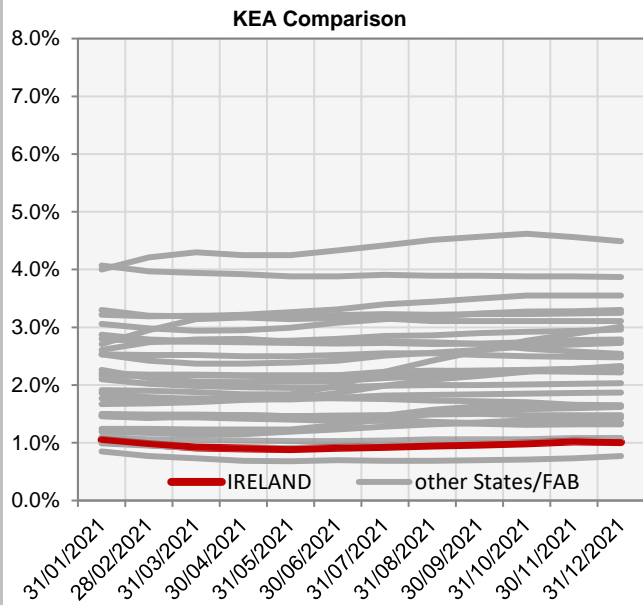
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
IAA	91	D	C	C	C	C
<p>Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.</p>						
Observations						
<p>Four out of five EoSM components of the ANSP meet, or exceed, already the 2024 target level. Only the component "Safety Risk Management" is below 2024 target level. Improvements in safety risk management are still expected during RP3 to achieve 2024 targets. This year is observed that maturity has slightly decreased in some questions, making "Safety Assurance" to reduce its maturity from D to C.</p>						

KEA					
	2020	2021	2022	2023	2024
Target	1.56%	1.13%	1.13%	1.13%	1.13%
Actual performance	1.11%	1.01%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	1.05%	0.98%	0.92%	0.90%	0.89%	0.91%	0.93%	0.95%	0.97%	0.99%	1.02%	1.01%
KEP	2.21%	2.03%	1.84%	1.74%	1.71%	1.68%	1.62%	1.58%	1.54%	1.54%	1.53%	1.52%
KES	1.74%	1.61%	1.47%	1.43%	1.43%	1.43%	1.42%	1.41%	1.41%	1.43%	1.44%	1.45%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**1. Overview**

Ireland includes 3 airports under RP3 monitoring. However, in accordance with IR (EU) 2019/317 and the traffic figures, only Dublin must be monitored for additional taxi-out and ASMA times.

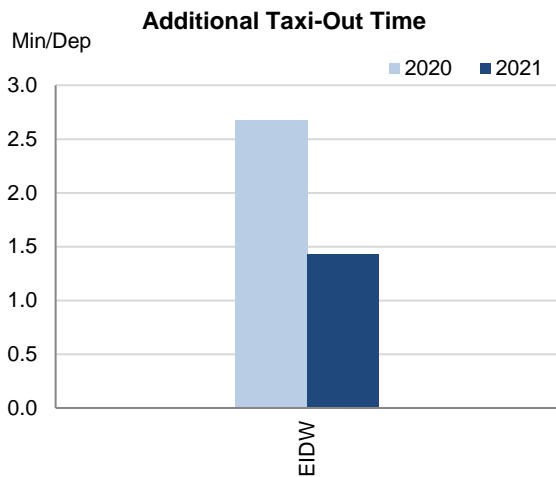
Traffic at these Irish airports in 2021 was still 62% lower with respect to 2019.

Both additional times at Dublin observed in 2021 an important further reduction.

Despite a decrease at Cork, the share of CDO flights is in the higher range of all observed values in 2021.

Ireland reports that the NSA holds regular performance meetings with the ANSP at Dublin airport where the data related to all these indicators is reviewed and discussions are held on the factors that impact or enhance performance. The report also mentions that Dublin Airport has an extensive infrastructural project underway which includes a parallel runway and new taxiways. This improvement in the infrastructure at Dublin airport should translate into an improvement in the additional times (both taxi-out and ASMA) performance from 2022 onwards.

**2. Additional Taxi-Out Time**

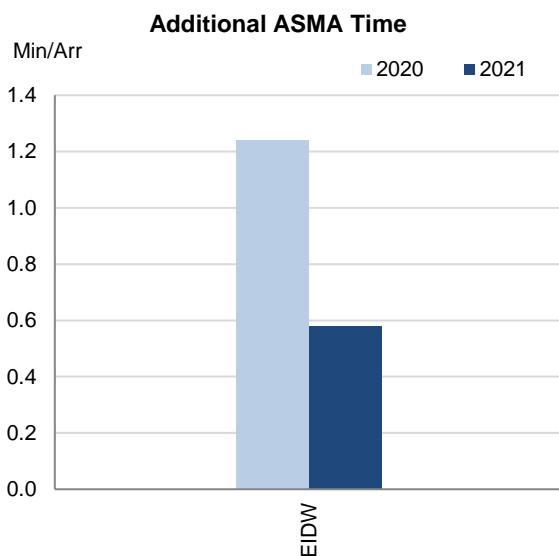


Additional taxi-out times at Dublin significantly lowered for the second year in a row (EIDW; 2019: 7.1 min/dep.; 2020: 2.67 min/dep.; 2021: 1.43 min/dep.)

The additional times in the first half of the year averaged 0.18 min/dep., while the second half of the year observed a progressive increase in line with the traffic recovery, and averaging 1.81 min/dep.

According to the Irish monitoring report: *Most of the factors influencing additional taxi-out time are related to aerodrome infrastructure rather than ATM capacity. For example, congestion at the runway in use adds significantly to this indicator.*

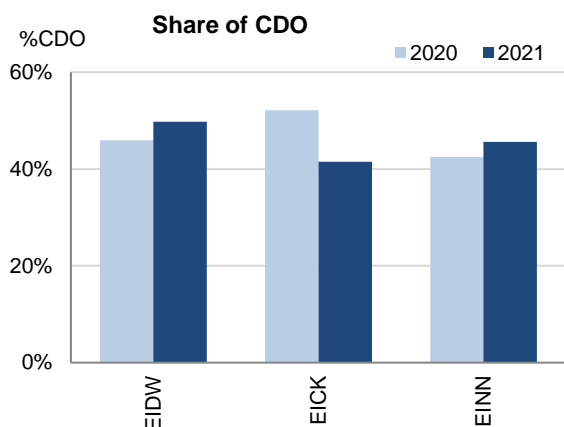
**3. Additional ASMA Time**



Additional ASMA times at Dublin, like the additional taxi-out times, further and significantly decreased in 2021 (EIDW; 2019: 3.29 min/arr.; 2020: 1.24 min/arr. 2021: 0.58 min/arr.) Between April and July the additional ASMA times were practically zero, and they only exceeded the minute per arrival in December (1.38 min/arr.)

According to the Irish monitoring report: *The additional time is terminal airspace is generally attributable to the flights following the "Point Merge" legs in part or in full. However the Point Merge has been demonstrated to have considerable benefits to the Airspace Users in reduced fuel consumption and to the environment in lowering Co2 emissions around terminal areas, and maximising runway throughput compared to vertical holding. These benefits outweigh any impact on ASMA Time.*

#### 4. Share of arrivals applying CDO



The share of CDO flights increased at Dublin and Shannon by respectively 3.8 and 3.1 percentage points. Cork had a decrease of 10.6 percentage points. Nevertheless, the share of CDO flights at all airports is well above the overall RP3 value in 2021 (30.5%).

Cork and Shannon had an increase of the monthly values as from June while the monthly values for Dublin stayed relatively stable throughout the year.

According to the Irish monitoring report: *Low level airspace review to incorporate EICK (Cork) and EINN (Shannon) due 2022. Dublin Airspace review due later part of 2022 (CDO for Dublin operations restricted by neighbouring airspace structures).*

*On continuous descent operations (CDO), from January to December 2021 the amount of time flown level during descents into Irish airports averaged 64.1 seconds per descent, 90.3 seconds lower than in 2019, in context the average for the top European airports in 2021 was 127.3 seconds.*

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Dublin-EIDW	2.67	1.43				1.24	0.58				46%	50%			
Cork-EICK	-	-				-	-				52%	41%			
Shannon-EINN	-	-				-	-				42%	46%			

**Update on Military dimension of the plan**

All military airspace is flight plannable and direct routes are given through activated military airspace as routine. The implementation of Point Merge at Dublin Airport was effected in a manner to ensure there was no impact on capacity at Dublin resulting from the military activity. Likewise the FRA project in 2009 also required no filing differences for military activity.

In addition the Military airspace even though proximate to Dublin Airport has no impact on the capacity of Dublin airport and this was confirmed in 2008 when differential flow rates were no longer required for military airspace activity.

**Military - related measures implemented or planned to improve capacity**

The NSA meets regularly with the Military through the Standing Civil Military Air Navigation Committee (StaCMAN) to discuss FUA implementation and any associated issues.

Full FAB ASM management is reliant upon the rollout of LARA. Ireland reports c.75% complete pending full LARA application. A full record of the hours of activation will be available through LARA and will be sent to NM

**PI#6 Effective use of reserved or segregated airspace - national level**

Ratio PI#6	2020	2021	2022	2023	2024
Ireland					

**PI#6 Effective use of reserved or segregated airspace (per ACC)**

Ratio PI#6	2020	2021	2022	2023	2024
Shannon ACC					

**Initiatives implemented or planned to improve PI#6**

No information provided.

**PI#7 Rate of planning via available airspace structures - national level**

Ratio PI#7	2020	2021	2022	2023	2024
Ireland					

**PI#7 Rate of planning via available airspace structures (per ACC)**

Ratio PI#7	2020	2021	2022	2023	2024
Shannon ACC					

**Initiatives implemented or planned to improve PI#7**

No information provided.

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Ireland					

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Shannon ACC					

**Initiatives implemented or planned to improve PI#8**

No information provided.



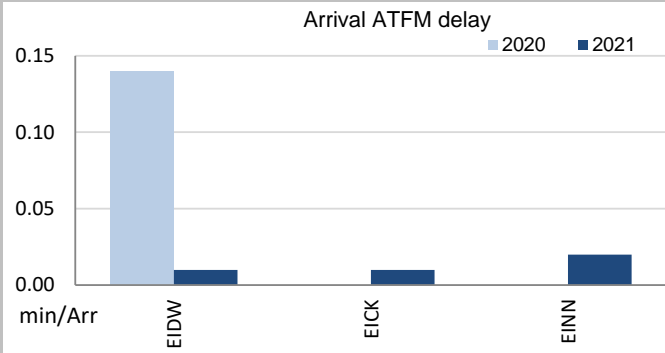
Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.07	0.01	0.03	0.03	0.03		
<b>Actual performance</b>	0.00	0.00					
NSA's assessment of capacity performance							
<p>The level of ATFM delay per flight in 2021 was zero, in the context of a substantial reduction in traffic stemming from the COVID-19 crisis.</p> <p>The ANSP avoided ATFM delay despite an increased level of Covid related absences, and mandatory time off following rest periods.</p>							
Monitoring process for capacity performance							
Actual performance is monitored on a regular basis between the NSA and ANSP							
Capacity Planning							
Resumption of Student Controller Programmes and actively seeking to recruit direct entry controllers							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned (Perf Plan)</b>	-	-	248	248	255	258	
<b>Actual</b>	258	253	242				
Application of Corrective Measures for Capacity (if applicable)							
Not applicable							
Summary of capacity performance							
Ireland experienced an increase in traffic from 225k flights in 2020 to 254k flights in 2021, with zero ATFM delay. However, traffic levels were still substantially below the 560k flights in 2019.							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.07	0.01	0.03	0.03	0.03		
<b>Deadband +/-</b>	-	-	[0-0.03]	[0-0.03]	[0-0.03]		
<b>Actual performance</b>	0.00	0.00					
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.							

**1. Overview**

Ireland includes 3 airports under RP2 monitoring. However, in accordance with IR (EU) 2019/317 and the traffic figures, only Dublin must be monitored for pre-departure delays. The Airport Operator Data Flow is fully established at Dublin and the monitoring of pre-departure delays can be performed. Nevertheless, the quality of the reporting does not allow for the calculation of the ATC pre-departure delay, with more than 60% of the reported delay not allocated to any cause. Traffic at these Irish airports in 2021 was still 62% lower with respect to 2019.

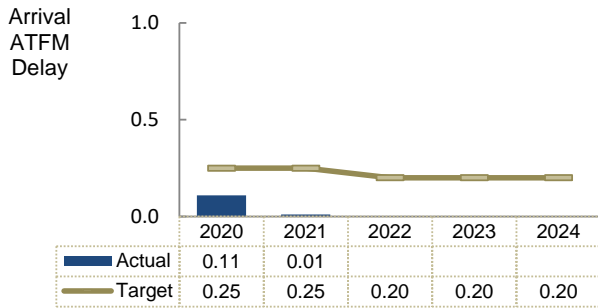
Average arrival ATFM delays in 2021 was 0.01 min/arr, compared to 0.11 min/arr in 2020. ATFM slot adherence has improved (2021: 97.6%; 2020: 96.8%).

**2. Arrival ATFM Delay**



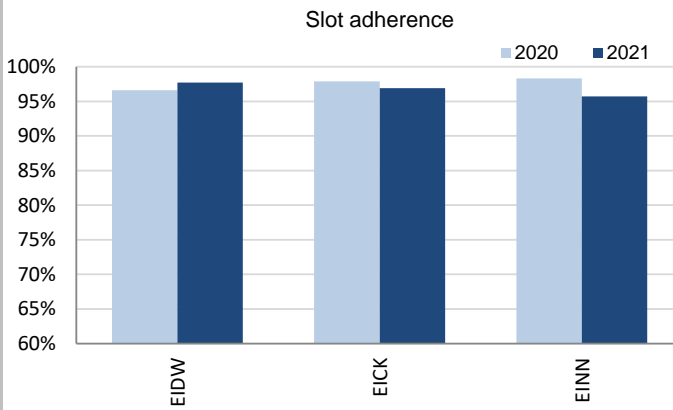
The national average arrival ATFM delay at Irish airports in 2021 was 0.01 min/arr, much lower than the 0.11 min/arr in 2020 or the 0.14 min/arr in 2019. Delays at Shannon (EINN: 2021:0.02 min/arr.) and Cork (EICK: 2021: 0.01 min/arr.) were exclusively attributed to ATC staffing and concentrated in July and August. Dublin (EIDW: 2019: 0.17 min/arr.; 2020: 0.14 min/arr.; 2021: 0.01 min/arr.) drastically reduced its delays, registering only some in October (equipment) and November (accident/incident).

**3. Arrival ATFM Delay – National Target and Incentive Scheme**



The provisional national target on arrival ATFM delay in 2021 was met. In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

#### 4. ATFM Slot Adherence



With the drastic drop in traffic, the share of regulated departures from Irish airports virtually disappeared until July 2021. All three airports showed adherence above 96% and the national average was 97.6%, an improvement with respect to 2020 (96.8%). With regard to the 2.4% of flights that did not adhere, 1.9% was early and 0.5% was late. According to the Irish monitoring report: *During the NSA oversight cycle, the subject of adherence to ATFM measure is discussed with the ANSPs and airline operators. ATCO vigilance and awareness of the requirements are seen as key enablers to improve performance.*

The ANSP monitors adherence slot performance and is reported and discussed at weekly ops review meetings.

#### 5. ATC Pre-departure Delay

The calculation of the ATC pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF) which is properly implemented at Dublin (the only Irish airport subject to monitoring of this indicator). However, there are several quality checks before EUROCONTROL can produce the final value which is established as the average minutes of pre-departure delay (delay in the actual off block time) associated to the IATA delay code 89 (through the APDF, for each delayed flight, the reasons for that delay have to be transmitted and coded according to IATA delay codes. However, sometimes the airport operator has no information concerning the reasons for the delay in the off block, or they cannot convert the reasons to the IATA delay codes. In those cases, the airport operator might:

- Not report any information about the reasons for the delay for that flight (unreported delay)
- Report a special code to indicate they do not have the information (code ZZZ)
- Report a special code to indicate they do not have the means to collect and/or translate the information (code 999)

To be able to calculate with a minimum of accuracy the PI for a given month, the minutes of delay that are not attributed to any IATA code reason should not exceed 40% of the total minutes of pre-departure delay observed at the airport. Finally, to be able to produce the annual figure, at least 10 months of valid data is requested by EUROCONTROL.

The share of unidentified delay reported by Dublin was above 40% for most months since April 2020, preventing the calculation of this indicator both in 2020 and 2021. Dublin had proper reporting before April 2020 and in 2022 the reporting has slightly improved, but still reaching above 40% of unidentified delay some months.

#### 6. All Causes Pre-departure Delay

The total (all causes) delay in the actual off block time at Dublin slightly decreased in 2021 (EIDW: 2020: 7.08 min/dep.; 2021: 6.88 min/dep.) and it was the 2nd lowest among the RP3 monitored airports. The highest delays per flight were observed in the January-February and December. According to the Irish monitoring report: *The NSA holds regular performance meetings with the ANSP at Dublin Airport where the data related to*

- delays due to airline operations;
- en route ATFM;
- reactionary (knock-on) delay;
- airport operations delay, including ATFM airport delay caused by regulation based on traffic volume which has a reference location classified as Aerodrome Zone or Aerodrome;

are reviewed and discussions are held on the factors that impact or enhance performance.

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Dublin-EIDW	0.14	0.01				96.6%	97.7%				n/a	n/a				7.08	6.88			
Cork-EICK	0	0.01				97.9%	96.9%				-	-				-	-			
Shannon-EINN	0	0.02				98.3%	95.7%				-	-				-	-			

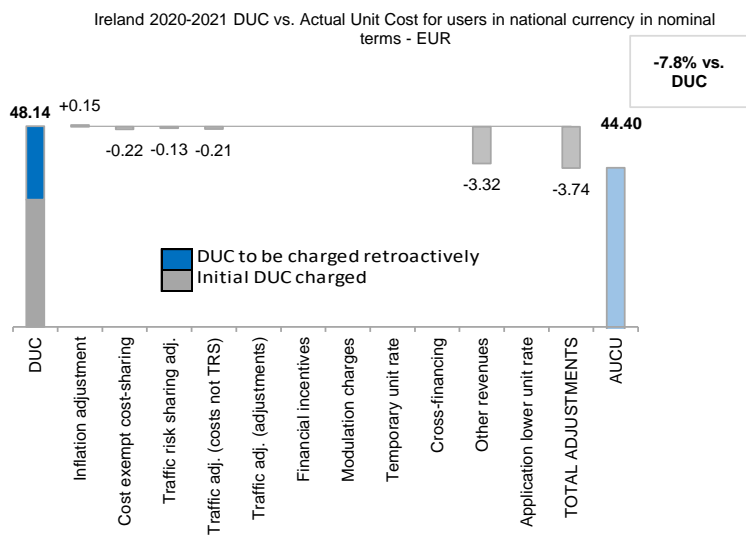
1. Contextual economic information: en route air navigation services						
Ireland ECZ represents 1.8% of the SES en route ANS actual costs in 2019			FAB: UK-Ireland FAB			
National currency: EUR						
Performance Plan: RP3 draft performance plan dated 17 November 2021 and found consistent as per Commission Decision (EU) 2022/766 of 13 April 2022						
The final version of the plan was adopted and published on 13 June 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317.						
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Ireland: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)	102,132,685	104,907,809	207,040,494	123,929,012	129,002,488	129,584,192
Inflation %	0.0%	1.6%		1.9%	2.0%	2.0%
Inflation index (100 in 2017)	101.6	103.2		105.2	107.3	109.4
Real en route costs (EUR2017)	100,825,323	102,364,058	203,189,381	119,095,882	122,100,394	120,687,045
Total en route service units	1,988,290	2,312,329	4,300,619	3,990,958	4,882,829	4,893,147
<b>Real en route DUC per service unit (EUR2017)</b>	<b>50.71</b>	<b>44.27</b>	<b>47.25</b>	<b>29.84</b>	<b>25.01</b>	<b>24.66</b>
Ireland: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)	104,062,483	100,758,077	204,820,559			
Inflation %	0.0%	2.4%				
Inflation index (100 in 2017)	101.6	104.0				
Real en route costs (EUR2017)	102,739,905	97,722,984	200,462,890			
Total en route service units	1,988,290	2,419,194	4,407,484			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>51.67</b>	<b>40.39</b>	<b>45.48</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)	in value 1,929,797	-4,149,732	-2,219,935			
	in % +1.89%	-4.0%	-1.1%			
Inflation %	in p.p. 0.0 p.p.	0.8 p.p.				
Inflation index (100 in 2017)	in p.p. 0.0 p.p.	0.8 p.p.				
Real en route costs (EUR2017)	in value 1,914,583	-4,641,074	-2,726,491			
	in % +1.90%	-4.5%	-1.3%			
Total en route service units	in value 0	106,865	106,865			
	in % -	+4.6%	+2.5%			
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value 0.96</b>	<b>-3.87</b>	<b>-1.76</b>			
	<b>in % +1.90%</b>	<b>-8.8%</b>	<b>-3.7%</b>			
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs. DUC</b>						
The AUC for the combined year 2020-2021 (45.48 €2017) was lower by -3.7% (or -1.76 €2017) from DUC (47.25 €2017). This is the result of higher than planned TSUs (+2.5%) and lower than planned en route costs in real terms (by -1.3%, or -2.7 M€2017).						
<b>En route service units</b>						
The difference between actual and planned TSUs (+2.5%) falls between the ±2% dead band and +10% threshold. Hence the resulting gain will be split between the airspace users and the ANSPs (see item 11).						
<b>En route costs by entity at charging zone level</b>						
Actual real en route costs for 2020-2021 are -1.3 % (-2.7 M€2017) lower than planned. This result is driven by the main ANSP (IAA) with the costs lower by -1.6% (-2.7 M€2017) and NSA/EUROCONTROL with costs lower by -2.1% (-0.5 M€2017). Actual 2020-2021 costs for METSP were higher by +3.9% (+0.5 M€2017).						
<b>En route costs for the main ANSP (IAA) at charging zone level</b>						
Overall, the en route costs in real terms for IAA in 2020-2021 were lower by -1.6% (-2.7 M€2017) comparing to the determined costs from the performance plan. The 2020 actual costs are not equal to the 2020 determined costs by the decision of Irish NSA to limit the level of determined costs for 2020. The lower 2020-2021 costs result from:						
- higher staff costs (+1.2%, +1.2 M€2017) resulting from the decision to unwind some of the staff cost containment measures due to the traffic increase at the end of 2021;						
- lower other-operating costs (-9.5%) due to "the cost containment programme yielding better results than originally anticipated on non-staff Opex, relative to the NSAs target for 2021, which set based on benchmarked cost savings of other ANSPs";						
- slightly lower depreciation, by -0.5% or -0.1 M€2017 and higher costs of capital, by +16.3% or +0.6 M€2017 due to the changes to the CAPEX delivery profile. Additionally, NSA set a lower WACC in the revised Performance Plan which resulted in lower WACC used for the calculation of the final UR to be charged for both 2020 and 2021.						
- lower exceptional costs (-2.0%) and slightly lower deduction for VFR exempted flights (-0.4%).						
			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      +2.5%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
			<p>Costs by entity at ECZ level (M€2017):</p> <p>Main ANSP -1.6%</p> <p>Other ANSP(s) 3.9%</p> <p>METSP(s) -2.1%</p> <p>NSA/EUROCONTROL -1.3%</p> <p>Total CZ -1.3%</p>			
			<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs 1.2%</p> <p>Other operating costs -9.5%</p> <p>Depreciation -0.5%</p> <p>Cost of capital 16.3%</p> <p>Exceptional costs -2.0%</p> <p>VFR exempted flights -0.4%</p> <p>Total Main ANSP -1.6%</p>			

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	30.52
DUC to be charged retroactively	17.62
<b>DUC</b>	<b>48.14</b>
Inflation adjustment	0.15
Cost exempt from cost-sharing	-0.22
Traffic risk sharing adjustment	-0.13
Traffic adj. (costs not TRS)	-0.21
Traffic adj. (adjustments)*	-
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	-
Cross-financing	0.00
Other revenues	-3.32
Application of lower unit rate	0.00
Total adjustments	-3.74
<b>AUCU</b>	<b>44.40</b>
<b>AUCU vs. DUC</b>	<b>-7.8%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

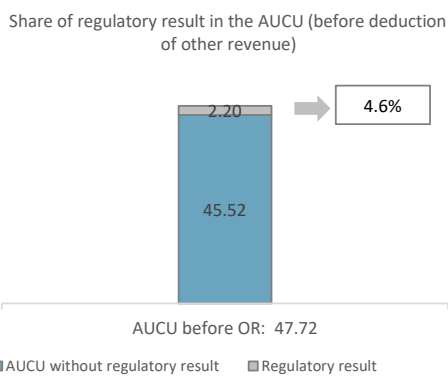
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-443	-0.10
Competent authorities and qualified entities costs	12	0.00
Eurocontrol costs	-540	-0.12
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-972</b>	<b>-0.22</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level



ANSP(S)	EUR '000	EUR/SU
IAA	10,233	2.32
METSP(s)	EUR '000	EUR/SU
Ireland MET	-519	-0.12
<b>Total charging zone</b>	<b>9,714</b>	<b>2.20</b>
<b>Actual cost for users***</b>	<b>210,338</b>	<b>47.72</b>
<b>Regulatory result (% AUCU)</b>	<b>4.6%</b>	<b>4.6%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (44.40€) is -7.8% lower than the nominal DUC (48.14€) that includes DUC initially charged: 30.52€; and to be charged: 17.62€. The difference between these two figures (-3.74€/SU) resulted from:

- the positive inflation adjustment resulting from higher than planned inflation (+0.15€/SU);
- the deduction of the adjustment for costs exempt from cost-sharing (-0.22€/SU), to be reimbursed to the airspace users in future years;
- the deduction of the traffic risk sharing adjustment of -0.13€/SU to be reimbursed to the airspace users in the future years;
- the deduction of traffic adjustment (-0.21€/SU), for the costs not subject to traffic risk sharing to be reimbursed to the airspace users in future years; and
- the deduction of other revenues (-3.32€/SU), which include also the return of unspent CAPEX allowances relating to RP2.

The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 4.6%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

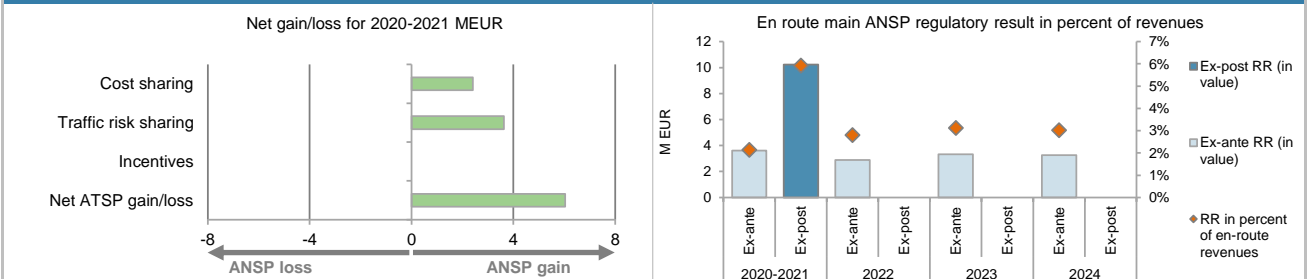
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	2,258			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	592			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-443			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>2,407</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	2.5%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	169,192			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>3,630</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>6,037</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

IAA planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	38,426	47,273	85,699	52,039	59,175	57,777
Proportion of financing through equity (in %)	100%	100%	100%	100%	100%	100%
RoE pre-tax rate (in %)	3.0%	5.2%	4.2%	5.5%	5.6%	5.6%
RoE (in value)	1,143	2,464	3,607	2,878	3,336	3,257
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>1,143</b>	<b>2,464</b>	<b>3,607</b>	<b>2,878</b>	<b>3,336</b>	<b>3,257</b>
<b>Revenue for the en route charging zone</b>	<b>83,983</b>	<b>85,208</b>	<b>169,192</b>	<b>102,981</b>	<b>107,187</b>	<b>107,919</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>1.4%</b>	<b>2.9%</b>	<b>2.1%</b>	<b>2.8%</b>	<b>3.1%</b>	<b>3.0%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>3.0%</b>	<b>5.2%</b>	<b>4.2%</b>	<b>5.5%</b>	<b>5.6%</b>	<b>5.6%</b>
IAA actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	36,925	45,111	82,036			
Proportion of financing through equity (in %)	100%	100%	100%			
RoE pre-tax rate (in %)	5.0%	5.2%	5.1%			
RoE (in value)	1,846	2,350	4,197			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	6,037	6,037			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>1,846</b>	<b>8,387</b>	<b>10,233</b>			
<b>Revenue for the en route charging zone</b>	<b>85,913</b>	<b>87,057</b>	<b>172,970</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>2.1%</b>	<b>9.6%</b>	<b>5.9%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>5.0%</b>	<b>18.6%</b>	<b>12.5%</b>			

13. Focus on the main ANSP regulatory result on en route activity



IAA net gain on activity in the en route charging zone in the combined year 2020-2021

IAA's net gain amounts to +6.0 M€ mainly due to the gains of +3.6 M€ from the traffic risk sharing mechanism and the gains of +2.4 M€ from cost sharing mechanism.

IAA overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+6.0 M€) and the actual RoE (+4.2 M€) amounts to +10.2 M€ (5.9% of the en route revenues). The resulting ex-post rate of return on equity is 12.5% which is higher than the 4.2% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
Ireland MET planned regulatory result (EUR '000)	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	6,627	6,534	13,161	6,826	7,278	6,937
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Ireland MET actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	-519	-519			
Revenue for the en route charging zone	6,627	6,582	13,209			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	-7.9%	-3.9%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
For other ANSP (METSP - ASD) the overall ex-post regulatory results amounted to -0.5 M€ which in full presents the loss from cost-risk sharing mechanism.						

1. Contextual economic information: terminal air navigation services							
<ul style="list-style-type: none"> <li>Ireland TCZ represents 2.0% of the SES terminal ANS actual costs in 2019</li> <li>Number of airports in charging zone in 2021: 3 of which:                             <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 2</li> <li>Airports with more than 80,000 IFR mvmts: 1</li> </ul> </li> <li>National currency: EUR</li> <li>Performance Plan: See item 1 for the en route charging zone(s).</li> </ul>							
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level							
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.</p>							
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)							
Ireland: Data from RP3 Performance Plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal EUR)		19,367,029	21,303,170	40,670,199	28,118,820	30,828,178	31,736,044
Inflation %		0.0%	1.6%		1.9%	2.0%	2.0%
Inflation index (100 in 2017)		101.6	103.2		105.2	107.3	109.4
Real terminal costs (EUR2017)		19,120,035	20,837,647	39,957,683	27,217,382	29,483,198	29,962,049
Total terminal service units		70,511	69,963	140,475	166,175	175,383	183,265
<b>Real terminal DUC per service unit (EUR2017)</b>		<b>271.16</b>	<b>297.84</b>	<b>284.45</b>	<b>163.79</b>	<b>168.11</b>	<b>163.49</b>
Ireland: Actual data from Reporting Tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal EUR)		19,797,207	19,856,281	39,653,488			
Inflation %		0.0%	2.4%				
Inflation index (100 in 2017)		101.6	104.0				
Real terminal costs (EUR2017)		19,548,758	19,274,571	38,823,329			
Total terminal service units		70,511	74,696	145,208			
<b>Real terminal AUC per service unit (EUR2017)</b>		<b>277.24</b>	<b>258.04</b>	<b>267.36</b>			
Difference between Actuals and Planned		2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal EUR)	in value	430,178	-1,446,889	-1,016,711			
	in %	+2.22%	-6.8%	-2.5%			
Inflation %	in p.p.	0.0 p.p.	0.8 p.p.				
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	0.8 p.p.				
Real terminal costs (EUR2017)	in value	428,723	-1,563,077	-1,134,354			
	in %	+2.24%	-7.5%	-2.8%			
Total terminal service units	in value	0	4,733	4,733			
	in %	-	+6.8%	+3.4%			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>6.08</b>	<b>-39.80</b>	<b>-17.08</b>			
	<b>in %</b>	<b>+2.24%</b>	<b>-13.4%</b>	<b>-6.0%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>						
	<b>in %</b>						
4. Focus on terminal DUC monitoring at charging zone level							
<p><b>AUC vs. DUC</b></p> <p>The AUC for the combined year 2020-2021 (267.36€2017) was lower by -6.0%, or -17.08€2017 from DUC (284.45€2017). This results from the combination of higher than planned TNSUs (+3.4%) and lower than planned en route costs in real terms (-2.8%, or -1.1 M€2017).</p> <p><b>Terminal service units</b></p> <p>The actual TNSUs surpassed the planned level (+3.4%) and falls between the ±2% dead band and +10% threshold. Hence the resulting gain will be split between the airspace users and the ANSPs (see item 11).</p> <p><b>Terminal costs by entity at charging zone level</b></p> <p>Actual real terminal costs for 2020-2021 are -2.8% (-1.1 M€2017) lower than planned. This result is driven by the main ANSP (IAA) with the costs lower by -3.7% (-1.3 M€2017). Actual 2020-2021 costs for METSP and NSA were higher by +3.9% and +2.2% respectively.</p> <p><b>Terminal costs for the main ANSP (IAA) at charging zone level</b></p> <p>Overall, the terminal costs in real terms for IAA in 2020-2021 were lower by -3.7% (-1.3 M€2017) comparing to the determined costs from the performance plan. This is mainly the result of:</p> <ul style="list-style-type: none"> <li>- higher staff costs (+5.0% or +0.8 M€2017) resulting from the decision to unwind some of the staff cost containment measures due to the traffic increase at the end of 2021;</li> <li>- lower other operating costs (-8.6% or -0.9 M€2017) due to "the cost containment programme yielding better results than originally anticipated on non-staff Opex, relative to the NSAs target for 2021, which set based on benchmarked cost savings of other ANSPs";</li> <li>- lower depreciation costs by -12.4% (-0.7 M€2017) and lower costs of capital by -23% (-0.5 M€2017) due to the change in the timing of the capitalisation of the IAA's new visual control tower at Dublin airport (the actual operational date was November 2021 vs. planned July 2021);</li> <li>- higher exceptional costs (+1.4%).</li> </ul>				<p>2020-2021 actual vs. planned TNSUs</p> <p>Threshold -10%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p> <p>+3.4%</p>			
<p><b>Costs by entity at TCZ level (M€2017):</b></p> <p>Main ANSP -3.7%</p> <p>Other ANSP(s) 3.9%</p> <p>METSP(s) 2.2%</p> <p>NSA 2.2%</p> <p>Total CZ -2.8%</p>				<p><b>Costs by nature for main ANSP (M€2017):</b></p> <p>Staff costs 5.0%</p> <p>Other operating costs -8.6%</p> <p>Depreciation -12.4%</p> <p>Cost of capital -23.0%</p> <p>Exceptional costs 1.4%</p> <p>Total Main ANSP -3.7%</p>			

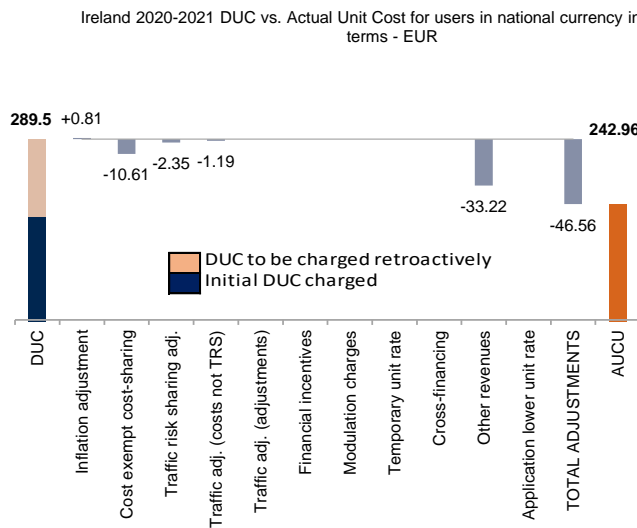


5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	181.88
DUC to be charged retroactively	107.64
<b>DUC</b>	<b>289.52</b>
Inflation adjustment	0.81
Cost exempt from cost-sharing	-10.61
Traffic risk sharing adjustment	-2.35
Traffic adj. (costs not TRS)	-1.19
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	-33.22
Application of lower unit rate	0.00
Total adjustments	-46.56
<b>AUCU</b>	<b>242.96</b>
<b>AUCU vs. DUC</b>	<b>-16.1%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

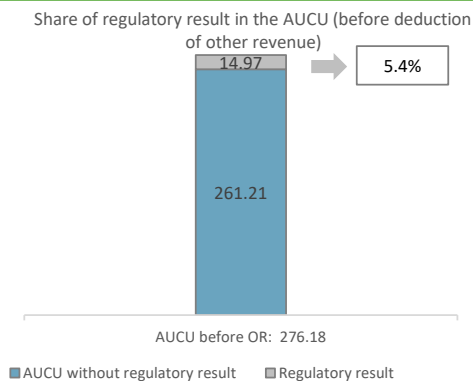
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-1582	-10.89
Competent authorities and qualified entities costs	41	0.28
Eurocontrol costs	0	0.00
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-1541</b>	<b>-10.61</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	EUR '000	EUR/SU
IAA	2,304	15.86
METSP(s)	EUR '000	EUR/SU
Ireland-MET	-130	-0.90
<b>Total charging zone</b>	<b>2,173</b>	<b>14.97</b>
<b>Actual cost for users***</b>	<b>40,103</b>	<b>276.18</b>
<b>Regulatory result (% AUCU)</b>	<b>5.4%</b>	<b>5.4%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (242.96€) is -16.1% lower than the nominal DUC (289.52€), includes DUC initially charged: 181.88€; and to be charged: 107.64€. The difference between these two figures (-46.56€/SU) resulted from:

- the positive inflation adjustment resulting from higher than planned inflation (+0.81€/SU);
- the deduction of -10.61€/SU of costs exempt from cost-sharing;
- the deduction of traffic risk sharing mechanism of -2.35€/SU to be reimbursed to the airspace users in future years;
- the deduction of traffic adjustment (-1.19€/SU), for the costs not subject to traffic risk sharing to be reimbursed to the airspace users in future years;
- the deduction of -33.22€/SU of other revenue, which include also the return of unspent CAPEX allowances relating to RP2.

The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 5.4%.

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

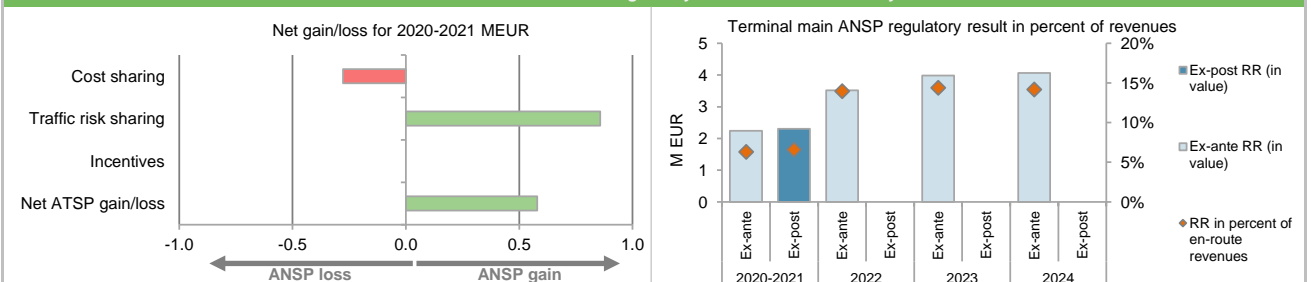
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	1,200			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	105			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-1,582			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>-277</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	3.4%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	35,548			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>857</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>580</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

IAA planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	14,490	34,692	49,182	63,580	70,627	72,083
Proportion of financing through equity (in %)	100%	100%	100%	100%	100%	100%
RoE pre-tax rate (in %)	3.0%	5.2%	4.6%	5.5%	5.6%	5.6%
RoE (in value)	431	1,808	2,239	3,517	3,982	4,064
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>431</b>	<b>1,808</b>	<b>2,239</b>	<b>3,517</b>	<b>3,982</b>	<b>4,064</b>
<b>Revenue for the terminal charging zone</b>	<b>16,945</b>	<b>18,603</b>	<b>35,548</b>	<b>25,169</b>	<b>27,690</b>	<b>28,649</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>2.5%</b>	<b>9.7%</b>	<b>6.3%</b>	<b>14.0%</b>	<b>14.4%</b>	<b>14.2%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>3.0%</b>	<b>5.2%</b>	<b>4.6%</b>	<b>5.5%</b>	<b>5.6%</b>	<b>5.6%</b>
IAA actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	14,640	19,033	33,673			
Proportion of financing through equity (in %)	100%	100%	100%			
RoE pre-tax rate (in %)	5.0%	5.2%	5.1%			
RoE (in value)	732	992	1,724			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	580	580			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>732</b>	<b>1,572</b>	<b>2,304</b>			
<b>Revenue for the terminal charging zone</b>	<b>17,375</b>	<b>17,553</b>	<b>34,928</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>4.2%</b>	<b>9.0%</b>	<b>6.6%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>5.0%</b>	<b>8.3%</b>	<b>6.8%</b>			

13. Focus on main ANSP regulatory result on terminal activity



IAA net gain on activity in the terminal charging zone in the combined year 2020-2021

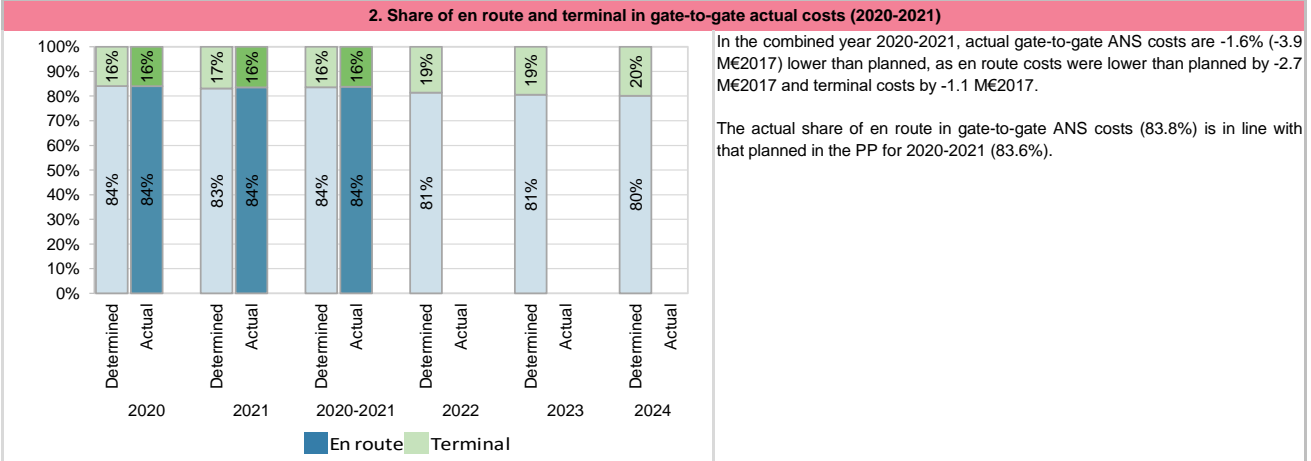
IAA's net gain amounts to +0.6 M€ mainly due to the gains of +0.9 M€ from the traffic risk sharing mechanism. The cost sharing mechanism amounted to -0.3M€.

IAA overall regulatory results (RR) for the terminal activity

Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+0.6 M€) and the actual RoE (+1.7 M€) amount to +2.3 M€ (6.6% of the terminal revenues). The resulting ex-post rate of return on equity is 6.8% which is higher than the 4.6% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Ireland-MET planned regulatory result (EUR '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	0	0	0	0	0	0
Revenue for the terminal charging zone	1,657	1,633	3,290	1,707	1,820	1,734
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Ireland-MET actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	0	-130	-130			
Revenue for the terminal charging zone	1,657	1,645	3,302			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	-7.9%	-3.9%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity</b>						
For other ANSP (METSP - ASD) the overall ex-post regulatory results amounted to -0.1 M€ which in full presents the loss from cost-risk sharing mechanism.						

1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1: Ireland		En route charging zone 2:					
Terminal charging zone 1: Ireland		Terminal charging zone 2:					
Ireland: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		100,825,323	102,364,058	203,189,381	119,095,882	122,100,394	120,687,045
Real terminal costs (EUR2017)		19,120,035	20,837,647	39,957,683	27,217,382	29,483,198	29,962,049
Real gate-to-gate costs (EUR2017)		119,945,358	123,201,705	243,147,064	146,313,264	151,583,592	150,649,095
En route share (%)		84.1%	83.1%	83.6%	81.4%	80.5%	80.1%
Ireland: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		102,739,905	97,722,984	200,462,890			
Real terminal costs (EUR2017)		19,548,758	19,274,571	38,823,329			
Real gate-to-gate costs (EUR2017)		122,288,664	116,997,555	239,286,219			
En route share (%)		84.0%	83.5%	83.8%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017) in value		2,343,305	-6,204,150	-3,860,845			
in %		2.0%	-5.0%	-1.6%			
En route share in p.p.		-0.0 p.p.	0.4 p.p.	0.2 p.p.			

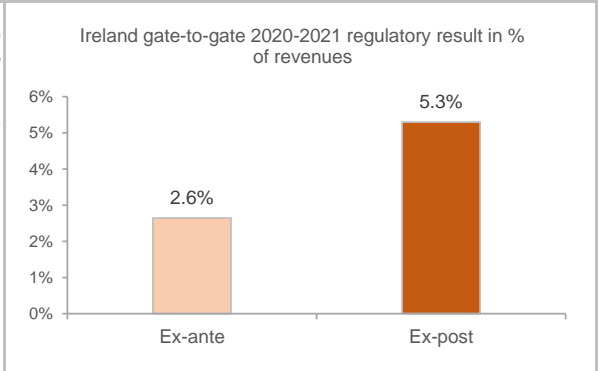


**3. Gate-to-gate regulatory result (RR) 2020-2021**

In EUR '000	ANSP(S)	Ex-ante			Ex-post		
		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	IAA	5,846	204,739	2.9%	12,537	207,898	6.0%
	<b>METSP(s)</b>						
	Ireland MET	0	16,451	0.0%	-649	16,511	-3.9%
	<b>Total</b>	<b>5,846</b>	<b>221,190</b>	<b>2.6%</b>	<b>11,888</b>	<b>224,409</b>	<b>5.3%</b>

For the ANSPs providing services in the charging zones of Ireland covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +11.9 M€ (see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 5.3% of gate-to-gate ANS revenues.

This is higher than the planned RR for the combined year 2020-2021 included in the performance plan (2.6%).



# **Annual Monitoring Report 2021**

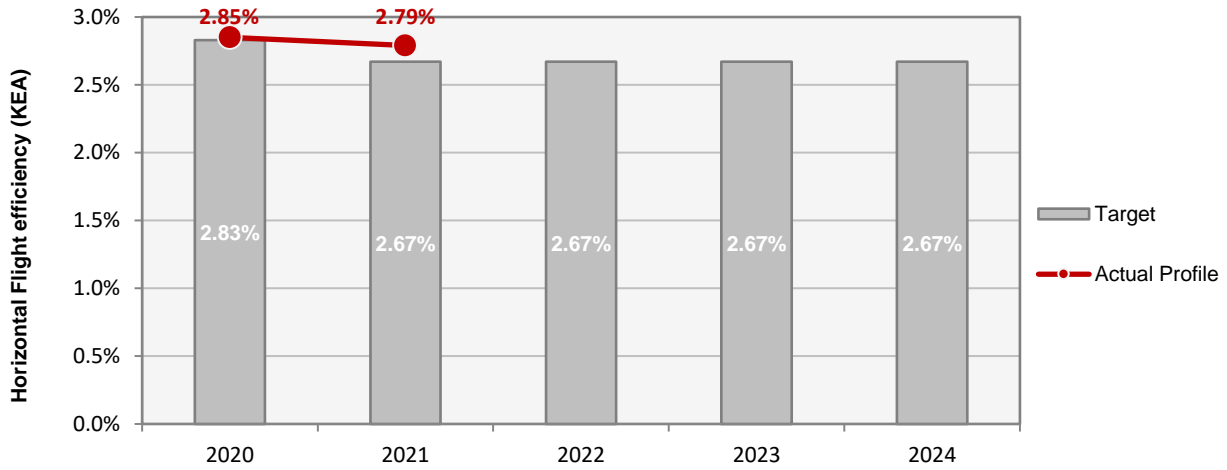
## Local level view

### Italy

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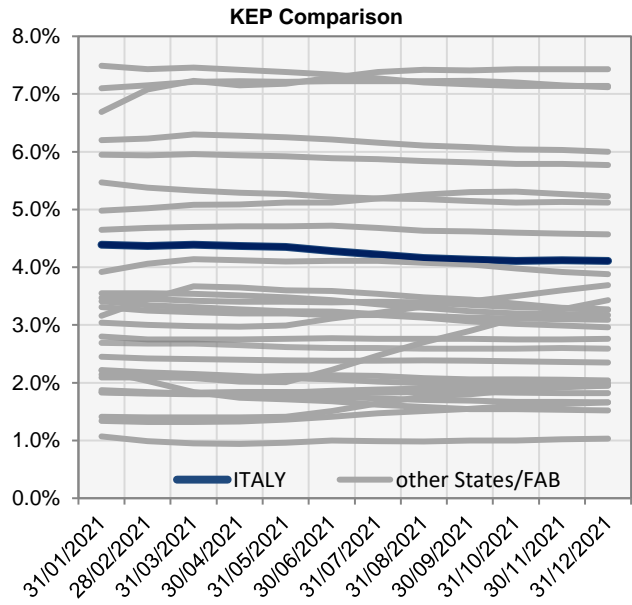
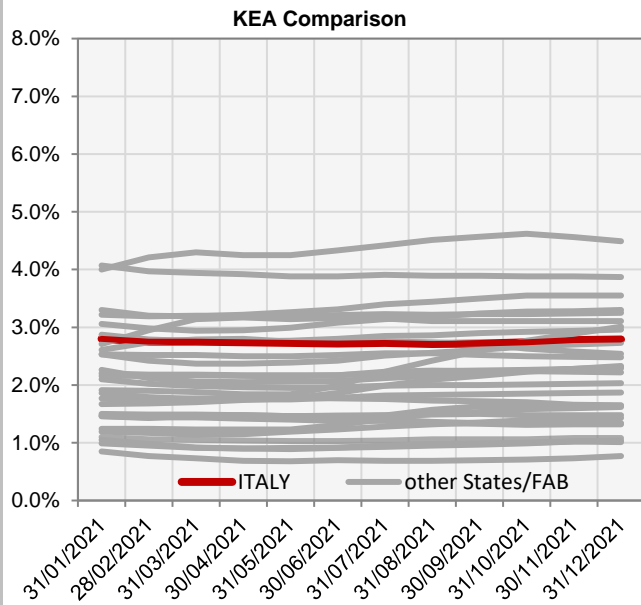
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
ENAV	97	C	C	D	D	C
Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.						
Observations						
All five EoSM components of the ANSP meet, or exceed, already the 2024 target level. Slight increase in maturity is observed from 2020 figures.						

KEA					
	2020	2021	2022	2023	2024
Target	2.83%	2.67%	2.67%	2.67%	2.67%
Actual performance	2.85%	2.79%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	2.80%	2.75%	2.75%	2.74%	2.73%	2.72%	2.73%	2.71%	2.72%	2.74%	2.78%	2.79%
KEP	4.39%	4.37%	4.39%	4.37%	4.35%	4.28%	4.22%	4.16%	4.13%	4.11%	4.12%	4.11%
KES	3.89%	3.85%	3.86%	3.85%	3.84%	3.80%	3.74%	3.69%	3.66%	3.65%	3.67%	3.67%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.



**1. Overview**

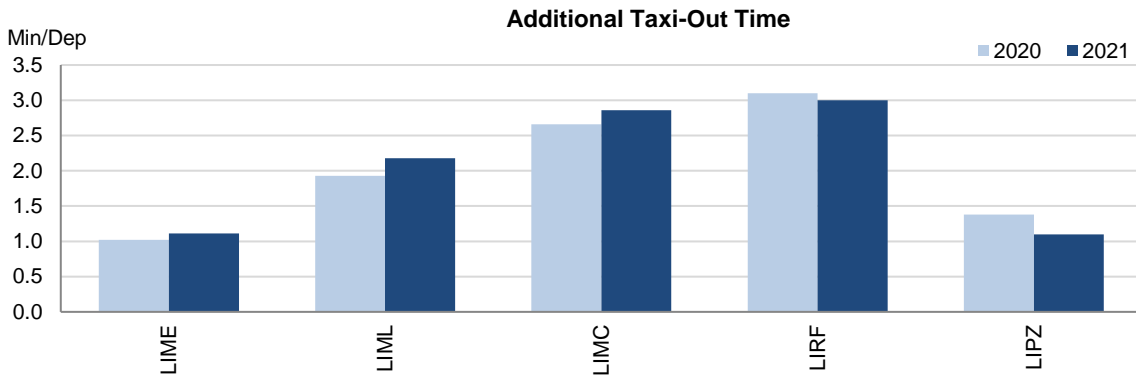
Italy identified five airports as subject to RP3 monitoring. All of them have a fully implemented data flow that allows the proper monitoring of environmental indicators.

Traffic at the ensemble of these Italian airports in 2021 is still 52% lower than in 2019.

Additional times in 2021 increased with respect to 2020 at most of these airports in different degrees depending on the airport, driven by the higher additional times observed in the second half of the year in line with the traffic recovery.

The overall share of CDO flights for Italy (31.9%) is slightly above the overall RP3 value in 2021.

**2. Additional Taxi-Out Time**



Additional taxi-out times at Rome Fiumicino (LIRF; 2019: 7.87 min/dep.; 2020: 3.1 min/dep.; 2021: 3 min/dep.) averaged 2.83 min/dep. in the first trimester, maybe influenced by de-icing operations. These additional times were below 2 mi/dep. only in April and May, and then increased again in the rest of the year averaging 3.21 min/dep. in line with the traffic recovery.

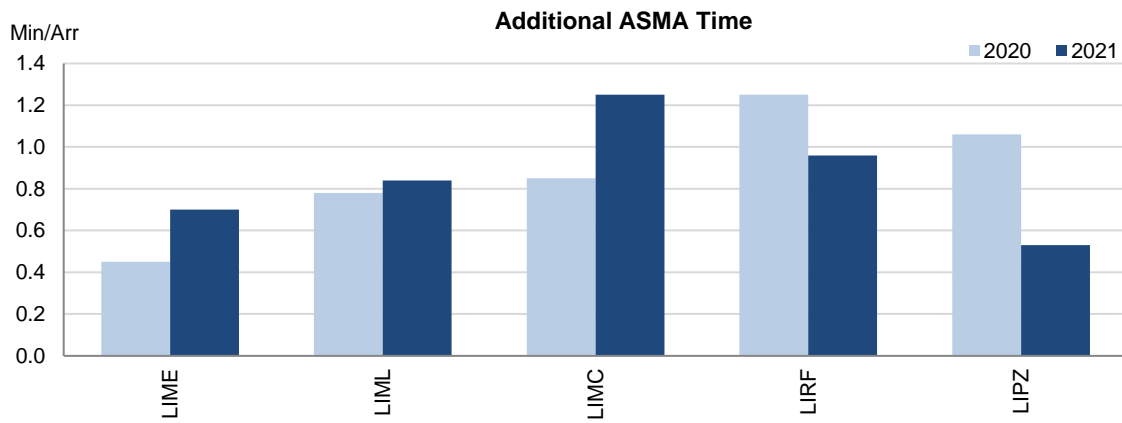
This increase of the additional taxi-out times with the recovery of traffic was observed as well at the rest of airports. Only the two Milan airports, Malpensa and Linate, showed higher additional taxi-out times in January related to de-icing procedures.

According to the Italian monitoring report: *As in previous years and also for RP2, ENAV SpA is unable to comment or assess the data submitted by PRU, as ENAV SpA and the other ANSPs do not have access to part of the data used by PRU to process the output, and therefore not able to replicate the processing and to verify the correct analysis of the information.*

*As in the past, also for this year access was requested at least to the processed file from which the output is obtained; but without the possibility of access.*

*Taking into account the above concerns, both for 2021 and 2022, it is necessary to evaluate the impact caused by the temporary aerodrome infrastructure changes derived by the Airport Operators activity implemented to tackle the traffic reduction associated to the pandemic COVID19 risk reduction (i.g. terminal closure) and/or associated with the booster in restructuring of airside infrastructure that was affected by works involving the aerodrome manouvring area (i.g. heavy maintenance and WIP affecting runways, taxiways and aprons).*

### 3. Additional ASMA Time



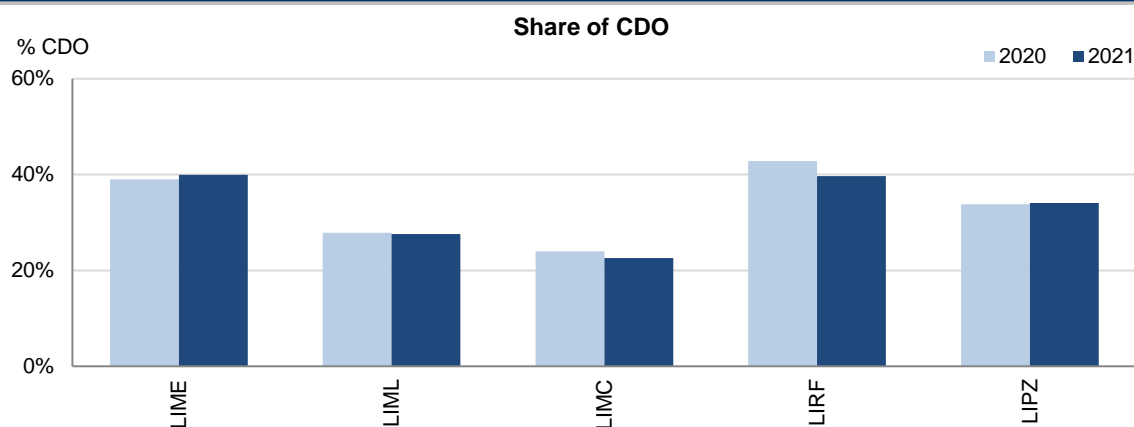
The additional ASMA times at both Rome Fiumicino and Venice further decreased in 2021, while Milan Malpensa observed a significant increase driven by the higher additional times in September, October and December (averaging those months 1.98min/arr.)

According to the Italian monitoring report: *As in previous years and also for RP2, and similar as for the Taxi Time, ENAV SpA is unable to comment or assess the data submitted by PRU, as ENAV SpA and the other ANSPs do not have access to part of the data used by PRU to process the output, and therefore they are not able to replicate the processing and therefore to verify the correct analysis of the information.*

*As in the past, also for this year access was requested at least to the processed file from which the output is obtained; but without the possibility of access.*

ENAC complements the information by adding: *That counted higher additional time is ascribable to the preparatory Operational Scenario to handle the traffic on that airport (and the other 2 involved in the Milano Area) in preparation to the closure and the limitation planned and completed in November 2021, as also reported within the Italian AIP as a Supplement Publication. The ATCOs on duty were involved to manage the traffic with limitations and by applying additional spacing between Arrivals and Arrivals and Departures due to the unavailability of the fully Operational Scenario on the Milano Malpensa Airport and parallelly for Bergamo and Linate too.*

#### 4. Share of arrivals applying CDO



The share of CDO flights increased slightly at Bergamo while it recorded the same value of the 2020 both in Milano Linate and Venice, and it slightly decreased at both Milano Malpensa and Rome according to the Table at the bottom of the page. Bergamo, Rome and Venice had shares of CDO flights above the overall RP3 value in 2021 - 30.5% - (LIME: 39.9%; LIRF: 39.7%; LIPZ: 34.1%).

All airports had an almost continuous decrease of the monthly values as from April. From April to December, the decreases are in the order of magnitude of 10 percentage points.

According to the Italian monitoring report: *The methodology of the VFE during Climb and Descent segments to/from the Departure/Arrival airports was defined and released by the PRU at the end of a series of coordination between members of the PRU, Eurocontrol and representatives of the ANSPs which took place in recent years.*

*Even if further cooperation was requested, at the time relating to the analysis of the outputs downstream of the application of the metrics and sources described in the methodology to refine the output in relation to the actual performances of the AUs, this sharing was not carried out and the processed output file was not shared.*

*For this reason, as for 2020, also for 2021 it was not possible to analyze the details of the data (the consolidated data on monthly basis, sum and average values, are published and available on the ANS Performance website but in terms of final values only and without the VFE performance data of the individual flights) and it is therefore not possible once again to validate or comment/assess the value presented.*

*However, as has been repeatedly highlighted, ENAV SpA disagrees with the value presented in the Performance Plan and this is due to both the CDO procedures carried out by the ATCOs and based on an efficient Route and Terminal NTW that has been implemented, together with the other implementations introduced in the Airspace, in order to favor the Flight efficiency of operations even in the Arrival phases at National airports.*

*This value represents, according to the interpretation of the values extracted from the PRU metric, the % of flights that were compliant with a continuous descent from the TOD upon landing (inside a cylinder with a radius of D200 NM centered from the airport of landing) without having been affected by an interruption, a leveling due to any reason, which caused it to be counted in the list of inefficient flights from the point of view of the VFE.*

*It therefore intends to represent that only 40% of the flights landed at LIRF in 2021 were compliant with a continuous descent from TOD to touch down!*

*However, as has been done for other KPIs and PIs in the KPA ENV area, there is currently a coordination between ENAV SpA and PRU in order to have, following the analysis of an extract of the output received upon request by PRU, an effective view of the calculation and output for each flight and therefore correct more or less evident inconsistencies in the management of the "Level Segments" and to better define the parameters for which any interruption of the continuous descent can and it must be considered an inefficiency, and this both in terms of revision of the methodology and setting of the algorithm.*

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Bergamo/Orio Alserio-LIME	1.02	1.11				0.45	0.7				39%	40%			
Milan/Linate-LIML	1.93	2.18				0.78	0.84				28%	28%			
Milan/Malpensa-LIMC	2.66	2.86				0.85	1.25				24%	23%			
Rome/Fiumicino-LIRF	3.1	3				1.25	0.96				43%	40%			
Venice/Tessera-LIPZ	1.38	1.1				1.06	0.53				34%	34%			

**Update on Military dimension of the plan**

A continuous review of the airspace structure is in progress, in the framework of National Airspace Strategy initiative, conducted by ENAC, ENAV and IATA, with the participation of Italian Air Force.

The action is aimed to review the design of TSA and TRA utilised for military training in order to better fit with the changed flows of traffic in the new Free Route Airspace Environment.

This action is beneficial for the three parameters ENC, CAP and CEF.

**Military - related measures implemented or planned to improve capacity**

The process was not replicated in 2021 due to the basic uncertainty about traffic flows following pandemics.

In 2022 the Ukrainian crisis is generating further uncertainty about traffic flows, so for the moment actions are suspended, while attention is focused on Civil Use of Released Area (CURA) during weekends.

**PI#6 Effective use of reserved or segregated airspace - national level**

Ratio PI#6	2020	2021	2022	2023	2024
Italy					

**PI#6 Effective use of reserved or segregated airspace (per ACC)**

Ratio PI#6	2020	2021	2022	2023	2024
Brindisi ACC					
Milano ACC					
Padova ACC					
Rome ACC					

**Initiatives implemented or planned to improve PI#6**

No information provided.

**PI#7 Rate of planning via available airspace structures - national level**

Ratio PI#7	2020	2021	2022	2023	2024
Italy					

**PI#7 Rate of planning via available airspace structures (per ACC)**

Ratio PI#7	2020	2021	2022	2023	2024
Brindisi ACC					
Milano ACC					
Padova ACC					
Rome ACC					

**Initiatives implemented or planned to improve PI#7**

No information provided.

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Italy					

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Brindisi ACC					
Milano ACC					
Padova ACC					
Rome ACC					

**Initiatives implemented or planned to improve PI#8**

No information provided.

Minutes of ATFM en-route delay							Observations
	2020	2021	2022	2023	2024		
<b>National Target</b>	0.25	0.07	0.11	0.11	0.11		
<b>Actual performance</b>	0.01	0.05					
<b>NSA's assessment of capacity performance</b>							
<p>The two most significant reasons of ATFM Enroute ATFM delay were Industrial Action (45% of total) and Weather (the remaining 55%). As such, there is no "ATM responsibility" in the generation of the delay.</p>							
<b>Monitoring process for capacity performance</b>							
<p>Monthly monitoring and analysis of the operational performance at Country and single ACC level carried out by ENAV. Check is made against the value of ATFM generated delay per month and its expected trend across the year.</p>							
<b>Capacity Planning</b>							
<p>No capacity issues. The FTEs planned in the Performance Plan were consistent with the maximum configurations needed and coordinated with NM and published in the Rolling NOP.</p>							
ATCO in OPS (FTE)							Observations
	2019	2020	2021	2022	2023	2024	
<b>Brindisi ACC</b>							
<b>Planned (Perf Plan)</b>			87	95	94	96	
<b>Actual</b>	91	90	87				
<b>Milano ACC</b>							
<b>Planned (Perf Plan)</b>			264	282	282	278	
<b>Actual</b>	253	260	264				
<b>Padova ACC</b>							
<b>Planned (Perf Plan)</b>			208	213	213	211	
<b>Actual</b>	194	201	208				
<b>Rome ACC</b>							
<b>Planned (Perf Plan)</b>			322	332	327	320	
<b>Actual</b>	327	319	322				

### Application of Corrective Measures for Capacity (if applicable)

Nil

### Summary of capacity performance

Italy experienced an increase in traffic from 782k flights in 2020 to 1,106k flights in 2021, with 54k minutes of en route ATFM delays. The ATFM delays in 2021 were attributed to industrial action (45%) and adverse weather. (55%)

However, traffic levels were still substantially below the 1,962k flights in 2019, for which there were 32k minutes of en route ATFM delay.

### En route Capacity Incentive Scheme

	2020	2021	2022	2023	2024	Observations
<b>National Capacity target</b>	0.25	0.07	0.11	0.11	0.11	
<b>Deadband +/-</b>	-	-	0.109- 0.111	0.109- 0.111	0.109- 0.111	
<b>Actual performance</b>	0.01	0.05				

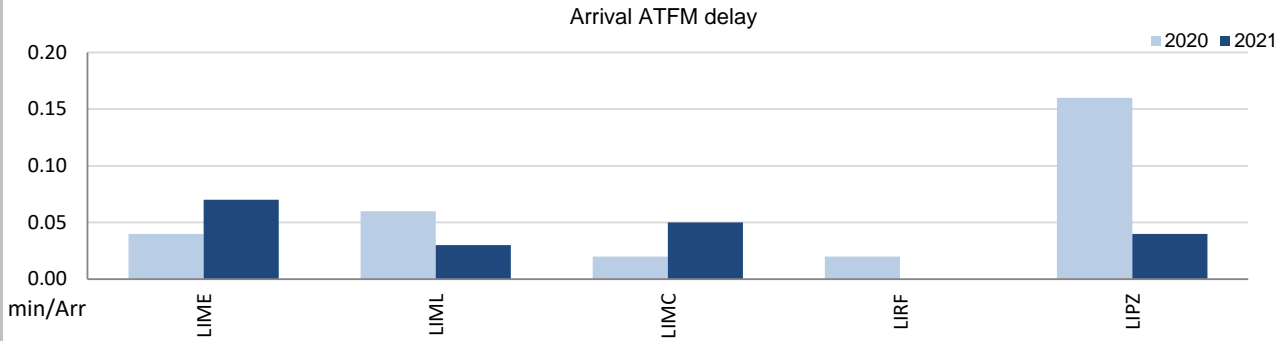
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024, and taking into consideration only Enroute CMRSTP ATFM delay causes..

**1. Overview**

Italy identified five airports as subject to RP3 monitoring. All of them have a fully implemented data flow that allows the proper monitoring of pre-departure delays. Nevertheless, the quality of the reporting does not allow for the calculation of the ATC pre-departure delay at both Milan airports, with more than 60% of the reported delay not allocated to any cause. Traffic at the ensemble of these Italian airports in 2021 is still 52% lower than in 2019.

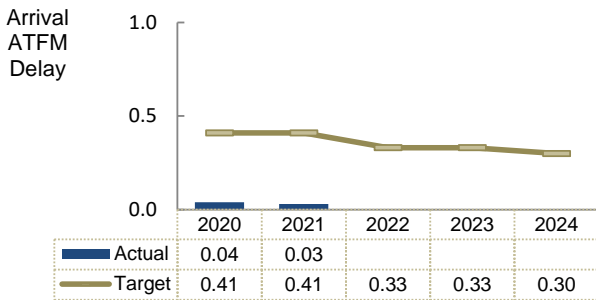
Average arrival ATFM delays in 2021 was 0.03 min/arr, compared to 0.04 min/arr in 2020. ATFM slot adherence has improved (2021: 96.8%; 2020: 95.9%).

**2. Arrival ATFM Delay**



The national average arrival ATFM delay at Italian airports in 2021 was 0.03 min/arr and most delays were recorded in the second half of the year. 81% of all delays at Italian airports were attributed to weather and 13% associated with industrial action in Milan Malpensa and Venice in the summer. At airport level, the worst delays were observed at Bergamo (LIME) where regulations issued resulted in 1833 minutes of delay, of which only 14' were attributable to industrial actions and the remaining 1819 were determined by regulations issued due to adverse weather conditions.

**3. Arrival ATFM Delay – National Target and Incentive Scheme**

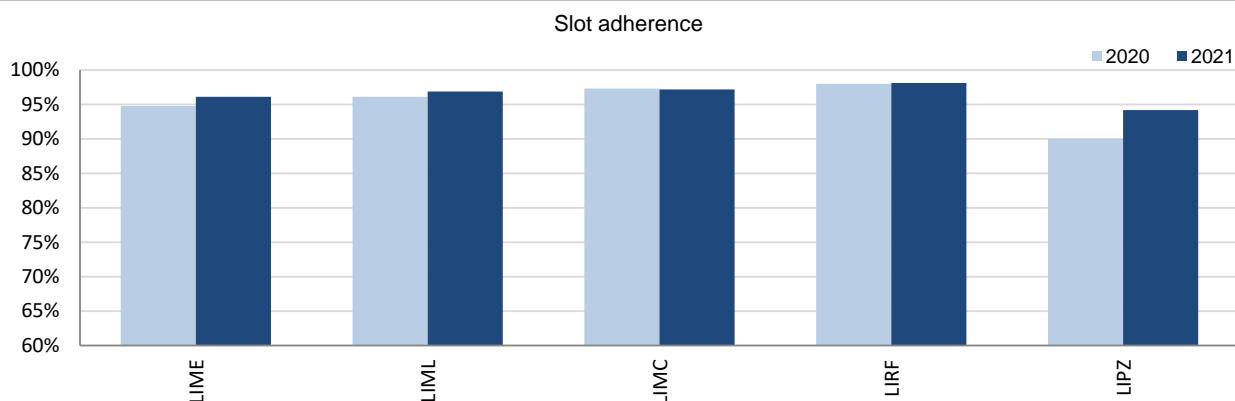


The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.



#### 4. ATFM Slot Adherence



With the drastic drop in traffic, the share of regulated departures from Italian airports virtually disappeared until July 2021. All Italian airports showed adherence above 94% and the national average was 96.8%, an improvement with respect to 2020 (95.9%). With regard to the 3.2% of flights that did not adhere, 1.9% was early and 1.4% was late. The Italian NSA reports: *Slightly worse performance is reported in the prefilled tables for year 2021 with respect to the values elaborated by ENAV for the same year, which are based upon NM/NMIR tool. The decimal digits should be two/three units higher. Such a difference is likely to happen because the flight sample granted from the ATFM standard slot time window, as reported by PRB, is different from what was counted in by the ANSPs. Anyhow values are very still very good and show improvement in respect of 2020 ones.*

#### 5. ATC Pre-departure Delay

The performance at all three Italian airports where this indicator can be calculated had notably improved in 2020 with respect to 2019, but it deteriorated alongside the traffic recovery in the second half of 2021 at Fiumicino and Bergamo (LIRF; 2019: 1.47 min/dep.; 2020: 0.64 min/dep.; 2021: 0.89 min/dep.; LIME: 2019: 0.99 min/dep.; 2020: 0.53 min/dep.; 2021: 0.77 min/dep.; LIPZ; 2019: 1.75 min/dep.; 2020: 0.86 min/dep.; 2021: 0.75 min/dep.)

The quality of the airport data reported by Milan Linate and Milan Malpensa was too low, preventing the calculation of this indicator for these two airports.

#### 6. All Causes Pre-departure Delay

The total (all causes) delay in the actual off block time at Italian airports in 2020 was between 7.79 min/dep for Milan Linate (LIML) and 20.14 min/dep. for Milan Malpensa (LIMC) which are, respectively, the 3rd lowest and the 3rd highest among the RP3 monitored airports.

Malpensa and Bergamo (LIME) observed the highest delays in February and December, while the other airports observed higher delays during the Summer season.

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Bergamo/Orio Alserio-LIME	0.04	0.07				94.8%	96.1%				0.53	0.77				8.00	12.53			
Milan/Linate-LIML	0.06	0.03				96.1%	96.9%				n/a	n/a				5.14	7.79			
Milan/Malpensa-LIMC	0.02	0.05				97.3%	97.2%				n/a	n/a				17.81	20.14			
Rome/Fiumicino-LIRF	0.02	0				98.0%	98.1%				0.64	0.89				6.44	9.22			
Venice/Tessera-LIPZ	0.16	0.04				90.0%	94.2%				0.86	0.75				9.78	11.97			

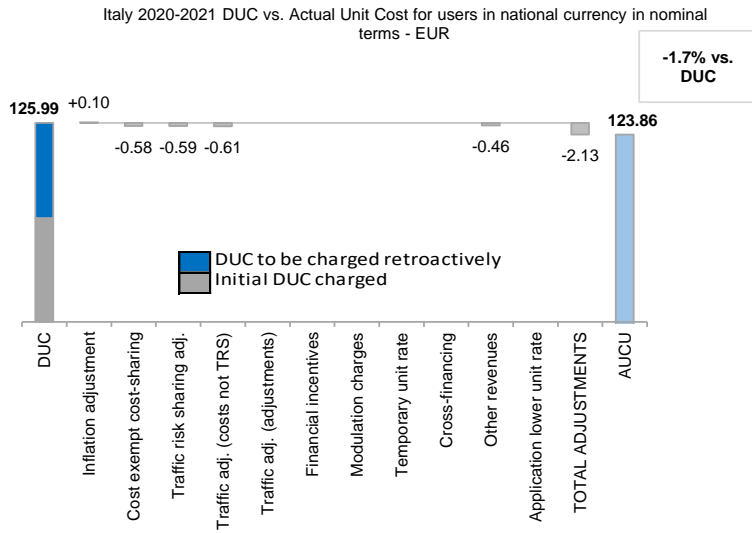
1. Contextual economic information: en route air navigation services						
· Italy ECZ represents 10.3% of the SES en route ANS actual costs in 2019 · National currency: EUR · Performance Plan: RP3 draft performance plan dated 19 November 2021 and found consistent as per Commission Decision (EU) 2022/773 of 13 April 2022 The final version of the plan can now be adopted and published by Italy in accordance with Article 16 (a) of regulation EU) 2019/317			· FAB: BLUE MED FAB			
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Italy: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)	582,128,865	615,248,136	1,197,377,001	650,766,141	673,861,874	689,087,960
Inflation %	0.0%	1.7%		1.8%	1.2%	1.2%
Inflation index (100 in 2017)	101.8	103.5		105.3	106.6	107.9
Real en route costs (EUR2017)	575,114,508	600,665,737	1,175,780,245	626,745,304	643,329,121	651,865,224
Total en route service units	3,989,844	5,514,000	9,503,844	8,507,000	10,457,000	11,278,000
<b>Real en route DUC per service unit (EUR2017)</b>	<b>144.14</b>	<b>108.93</b>	<b>123.72</b>	<b>73.67</b>	<b>61.52</b>	<b>57.80</b>
Italy: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)	582,128,865	606,693,516	1,188,822,381			
Inflation %	0.0%	1.9%				
Inflation index (100 in 2017)	101.8	103.7				
Real en route costs (EUR2017)	575,114,508	591,294,066	1,166,408,574			
Total en route service units	3,989,844	5,782,897	9,772,742			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>144.14</b>	<b>102.25</b>	<b>119.35</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)						
in value	0	-8,554,620	-8,554,620			
in %	-	-1.4%	-0.7%			
Inflation %						
in p.p.	0.0 p.p.	0.2 p.p.				
Inflation index (100 in 2017)						
in p.p.	0.0 p.p.	0.2 p.p.				
Real en route costs (EUR2017)						
in value	0	-9,371,671	-9,371,671			
in %	-	-1.6%	-0.8%			
Total en route service units						
in value	0	268,897	268,897			
in %	-	+4.9%	+2.8%			
<b>Real en route unit cost per service unit (EUR2017)</b>						
in value	<b>0.00</b>	<b>-6.69</b>	<b>-4.36</b>			
in %	-	<b>-6.1%</b>	<b>-3.5%</b>			
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs DUC</b> In the combined year 2020-2021, the AUC was lower than the planned DUC (-3.5%, or -4.36€2017). This results from the combination of higher than planned TSUs (+2.8%) and lower than planned en route costs in real terms (-0.8%, or -9.4 M€2017).						
<b>En route service units</b> The difference between actual and planned TSUs (+2.8%) falls outside of the ±2% dead band. Hence, the resulting gain is shared between the ANSP and airspace users, with the ANSP retaining an amount of 22.2 M€ (see items 10 to 14).						
<b>En route costs by entity at charging zone level</b> Actual real en route costs for 2020-2021 are -0.8% (-9.4 M€2017) lower than planned. This reflects the results across all the entities in the charging zone: main ANSP - ENAV (-0.6%, or -5.5 M€2017), other ANSP - ITAF (-0.9%, or -0.8 M€2017) and the NSA/EUROCONTROL (-3.5%, or -3.1 M€2017).						
<b>En route costs for the main ANSP (ENAV) at charging zone level</b> The lower than planned en route costs in real terms for ENAV in 2020-2021 reflects a combination of: - slightly lower staff costs (-0.1%); - lower other operating costs (-3.1%), which are understood to reflect costs savings for utilities and communications, external services and maintenance of non-operational equipment; - lower depreciation costs (-1.5%); and, - higher cost of capital (+2.2%), resulting from the use of higher than planned average interest rate on debts (from 1.9% to 3.04%) to compute the WACC.						

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	65.81
DUC to be charged retroactively	60.18
<b>DUC</b>	<b>125.99</b>
Inflation adjustment	0.10
Cost exempt from cost-sharing	-0.58
Traffic risk sharing adjustment	-0.59
Traffic adj. (costs not TRS)	-0.61
Traffic adj. (adjustments)*	-
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	-
Cross-financing	0.00
Other revenues	-0.46
Application of lower unit rate	0.00
Total adjustments	-2.13
<b>AUCU</b>	<b>123.86</b>
<b>AUCU vs. DUC</b>	<b>-1.7%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

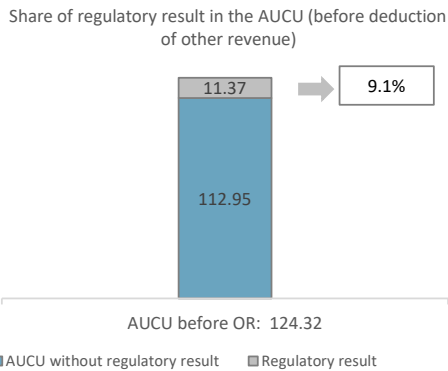
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-2,557	-0.26
Competent authorities and qualified entities costs	0	0.00
Eurocontrol costs	-3,075	-0.31
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-5,632</b>	<b>-0.58</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level



ANSP(S)	EUR '000	EUR/SU
ENAV	110,275	11.28
ITAF	832	0.09
METSP(s)	EUR '000	EUR/SU
<b>Total charging zone</b>	<b>111,107</b>	<b>11.37</b>
<b>Actual cost for users***</b>	<b>1,214,959</b>	<b>124.32</b>
<b>Regulatory result (% AUCU)</b>	<b>9.1%</b>	<b>9.1%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (123.86€) is -1.7% lower than the nominal DUC (125.99€) which includes DUC initially charged: 65.81€; and to be charged: 60.18€. The difference between these two figures is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.10€/SU), to be charged to the airspace users in future years;
- the deduction of the other revenues (-0.46€/SU);
- the deduction of the traffic risk sharing adjustments (-0.59€) and the traffic adjustment (-0.61€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.58€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU is 9.1%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

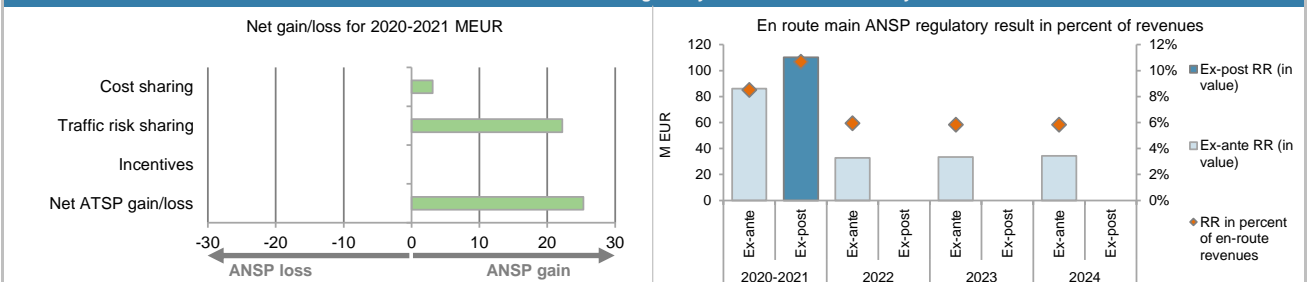
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	4,751			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	920			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-2,557			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>3,115</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	2.8%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	986,793			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>22,191</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>25,306</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

ENAV planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	884,478	1,124,267	2,008,745	1,003,431	909,701	907,796
Proportion of financing through equity (in %)	75%	75%	75%	75%	75%	75%
RoE pre-tax rate (in %)	6.6%	5.0%	5.7%	4.4%	4.9%	5.0%
RoE (in value)	43,562	42,447	86,009	32,754	33,458	34,352
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>43,562</b>	<b>42,447</b>	<b>86,009</b>	<b>32,754</b>	<b>33,458</b>	<b>34,352</b>
<b>Revenue for the en route charging zone</b>	<b>492,482</b>	<b>520,610</b>	<b>1,013,093</b>	<b>551,426</b>	<b>573,690</b>	<b>588,781</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>8.8%</b>	<b>8.2%</b>	<b>8.5%</b>	<b>5.9%</b>	<b>5.8%</b>	<b>5.8%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>6.6%</b>	<b>5.0%</b>	<b>5.7%</b>	<b>4.4%</b>	<b>4.9%</b>	<b>5.0%</b>
ENAV actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	884,478	1,096,750	1,981,229			
Proportion of financing through equity (in %)	75%	75%	75%			
RoE pre-tax rate (in %)	6.6%	5.0%	5.7%			
RoE (in value)	43,562	41,408	84,970			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	25,306	25,306			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>43,562</b>	<b>66,713</b>	<b>110,275</b>			
<b>Revenue for the en route charging zone</b>	<b>492,482</b>	<b>541,164</b>	<b>1,033,647</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>8.8%</b>	<b>12.3%</b>	<b>10.7%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>6.6%</b>	<b>8.1%</b>	<b>7.4%</b>			

13. Focus on the main ANSP regulatory result on en route activity



ENAV net gain on en route activity in the Italian charging zone in the combined year 2020-2021

ENAV's net gain amounts to +25.3 M€, as a combination of a gain of +3.1 M€ arising from the cost sharing mechanism and a gain of +22.2 M€ arising from the traffic risk sharing mechanism.

ENAV overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+25.3 M€) and the actual RoE (+85.0 M€) amounts to +110.3 M€ (10.7% of the en route revenues). The resulting ex-post rate of return on equity is 7.4%, which is higher than the 5.7% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
ITAF planned regulatory result (EUR '000)	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	46,725	49,060	95,785	53,316	53,927	53,949
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
ITAF actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	832	832			
Revenue for the en route charging zone	46,725	49,164	95,889			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	1.7%	0.9%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			

**Overall regulatory results (RR) for the en route activity for other ANSP in the charging zone**  
 For ITAF the overall ex-post regulatory result for the combined year 2020-2021 amounted to +0.8 M€, which represents 0.9% of the en route revenues. It should be noted that ITAF does not charge the cost of capital.

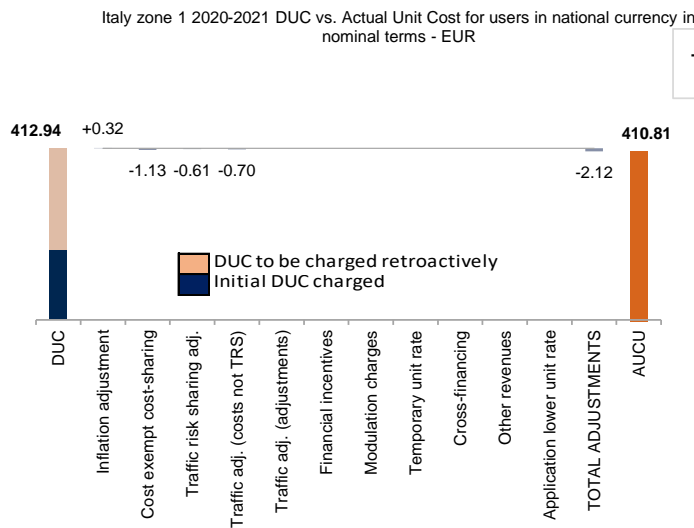
1. Contextual economic information: terminal air navigation services						
<ul style="list-style-type: none"> <li>Italy zone 1 TCZ represents 2.9% of the SES terminal ANS actual costs in 2019</li> <li>Number of airports in charging zone in 2021: 1 of which:                             <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 0</li> <li>Airports with more than 80,000 IFR mvmts: 1</li> </ul> </li> <li>National currency: EUR</li> <li>Performance Plan: See item 1 for the en route charging zone(s).</li> </ul>						
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.</p>						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Italy zone 1: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal EUR)	30,724,712	30,961,063	61,685,776	32,694,898	34,117,550	34,270,939
Inflation %	0.0%	1.7%		1.8%	1.2%	1.2%
Inflation index (100 in 2017)	101.8	103.5		105.3	106.6	107.9
Real terminal costs (EUR2017)	30,396,073	30,262,880	60,658,953	31,554,941	32,660,406	32,549,596
Total terminal service units	73,384	76,000	149,384	176,000	220,000	230,000
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>414.21</b>	<b>398.20</b>	<b>406.06</b>	<b>179.29</b>	<b>148.46</b>	<b>141.52</b>
Italy zone 1: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal EUR)	30,724,712	29,944,548	60,669,260			
Inflation %	0.0%	1.9%				
Inflation index (100 in 2017)	101.8	103.7				
Real terminal costs (EUR2017)	30,396,073	29,207,704	59,603,776			
Total terminal service units	73,384	79,337	152,720			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>414.21</b>	<b>368.15</b>	<b>390.28</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal EUR)	in value 0	-1,016,515	-1,016,515			
	in % -	-3.3%	-1.6%			
Inflation %	in p.p. 0.0 p.p.	0.2 p.p.				
Inflation index (100 in 2017)	in p.p. 0.0 p.p.	0.2 p.p.				
Real terminal costs (EUR2017)	in value 0	-1,055,176	-1,055,176			
	in % -	-3.5%	-1.7%			
Total terminal service units	in value 0	3,337	3,337			
	in % -	+4.4%	+2.2%			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value 0.00</b>	<b>-30.05</b>	<b>-15.78</b>			
	<b>in % -</b>	<b>-7.5%</b>	<b>-3.9%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>					
	<b>in %</b>					
4. Focus on terminal DUC monitoring at charging zone level						
<p><b>AUC vs DUC</b> In the combined year 2020-2021, the AUC for Italy TCZ1 was lower than the planned DUC (-3.9%, or -15.78€). This results from the combination of higher than planned TNSUs (+2.2%) and lower than planned terminal costs in real terms (-1.7%, or -1.1 M€2017).</p>						
<p><b>Terminal service units</b> The difference between actual and planned TNSUs (+2.2%) falls outside of the ±2% dead band. Hence, the resulting gain is shared between the ANSP and airspace users, with the ANSP retaining an amount of 1.2 M€ (see items 10 to 14).</p>						
<p><b>Terminal costs by entity at charging zone level</b> Actual real terminal costs for 2020-2021 in the Italian TCZ1 are -1.7% (-1.1 M€2017) lower than planned. This mainly reflects lower than planned costs for the main ANSP - ENAV (-1.8%, or -1.1 M€2017), while the costs for the NSA were in line with the plan.</p>						
<p><b>Terminal costs for the main ANSP (ENAV) in the Italian TCZ1</b> The lower than planned terminal costs in real terms for ENAV in 2020-2021 reflects a combination of:</p> <ul style="list-style-type: none"> <li>- slightly lower staff costs (-0.1%);</li> <li>- lower other operating costs (-2.7%), which are understood to reflect costs savings for utilities and communications, external services and maintenance of non-operational equipment;</li> <li>- lower depreciation costs (-1.4%); and,</li> <li>- lower cost of capital (-6.0%), which are understood to reflect lower than planned asset base used to compute the cost of capital.</li> </ul>						

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	169.88
DUC to be charged retroactively	243.05
<b>DUC</b>	<b>412.94</b>
Inflation adjustment	0.32
Cost exempt from cost-sharing	-1.13
Traffic risk sharing adjustment	-0.61
Traffic adj. (costs not TRS)	-0.70
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-2.12
<b>AUCU</b>	<b>410.81</b>
<b>AUCU vs. DUC</b>	<b>-0.5%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

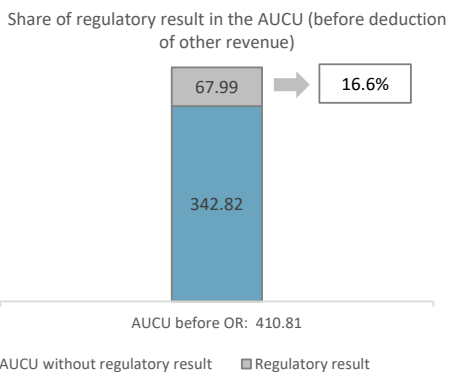
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-172	-1.13
Competent authorities and qualified entities costs	0	0.00
Eurocontrol costs	0	0.00
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-172</b>	<b>-1.13</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	EUR '000	EUR/SU
ENAV	10,383	67.99
METSP(s)	EUR '000	EUR/SU
<b>Total charging zone</b>	<b>10,383</b>	<b>67.99</b>
<b>Actual cost for users***</b>	<b>62,740</b>	<b>410.81</b>
<b>Regulatory result (% AUCU)</b>	<b>16.5%</b>	<b>16.5%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (410.81€) in Italy TCZ1 is -0.5% lower than the nominal DUC (412.94€) which includes DUC initially charged: 169.88€; and to be charged: 243.05€. The difference between these two figures is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.32€/SU), to be charged to the airspace users in future years.
- the deduction of the traffic risk sharing adjustments (-0.61€/SU) and the traffic adjustment (-0.70€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- and the impact of adjustments resulted from the costs exempted from cost-sharing mechanism (-1.13€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU is 16.6% in TCZ1.

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

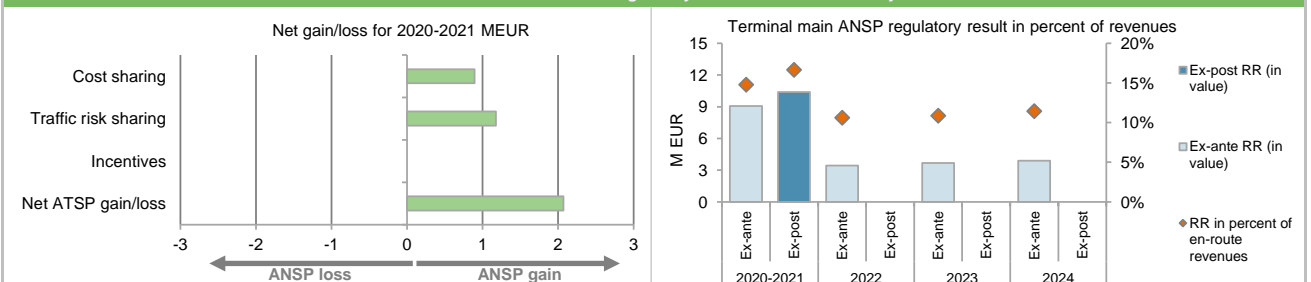
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	1,017			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	49			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-172			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>893</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	2.2%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	56,880			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>1,177</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>2,070</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

ENAV planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	106,968	100,559	207,527	105,750	100,114	102,955
Proportion of financing through equity (in %)	75%	75%	75%	75%	75%	75%
RoE pre-tax rate (in %)	6.6%	5.0%	5.8%	4.4%	4.9%	5.0%
RoE (in value)	5,268	3,797	9,065	3,452	3,682	3,896
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>5,268</b>	<b>3,797</b>	<b>9,065</b>	<b>3,452</b>	<b>3,682</b>	<b>3,896</b>
<b>Revenue for the terminal charging zone</b>	<b>30,516</b>	<b>30,737</b>	<b>61,254</b>	<b>32,471</b>	<b>33,894</b>	<b>34,047</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>17.3%</b>	<b>12.4%</b>	<b>14.8%</b>	<b>10.6%</b>	<b>10.9%</b>	<b>11.4%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>6.6%</b>	<b>5.0%</b>	<b>5.8%</b>	<b>4.4%</b>	<b>4.9%</b>	<b>5.0%</b>
ENAV actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	106,968	80,634	187,602			
Proportion of financing through equity (in %)	75%	75%	75%			
RoE pre-tax rate (in %)	6.6%	5.0%	5.9%			
RoE (in value)	5,268	3,044	8,313			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	2,070	2,070			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>5,268</b>	<b>5,115</b>	<b>10,383</b>			
<b>Revenue for the terminal charging zone</b>	<b>30,516</b>	<b>31,791</b>	<b>62,308</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>17.3%</b>	<b>16.1%</b>	<b>16.7%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>6.6%</b>	<b>8.5%</b>	<b>7.4%</b>			

13. Focus on main ANSP regulatory result on terminal activity



ENAV net gain on terminal activity in the Italian TCZ1 in the combined year 2020-2021

ENAV's net gain amounts to +2.1 M€, as a combination of a gain of +0.9 M€ arising from the cost sharing mechanism and a gain of +1.2 M€ arising from the traffic risk sharing mechanism.

ENAV overall regulatory results (RR) for terminal activity

Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+2.1 M€) and the actual RoE (+8.3 M€) amounts to +10.4 M€ (16.7% of the terminal revenues in TCZ1). The resulting ex-post rate of return on equity is 7.4%, which is higher than the 5.8% planned in the PP.



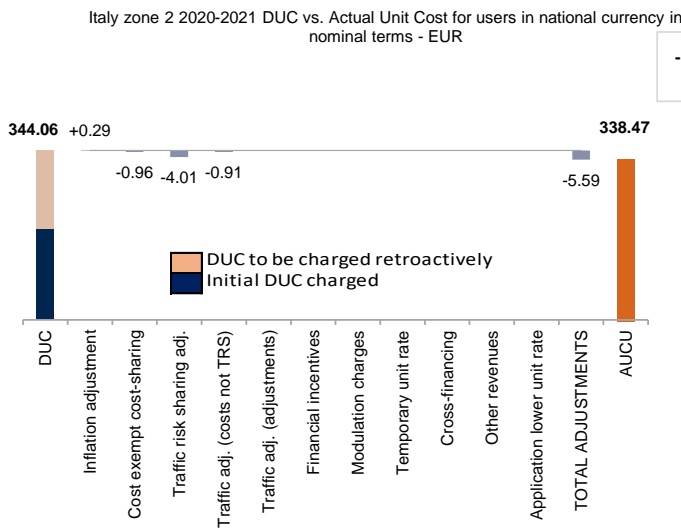
1. Contextual economic information: terminal air navigation services						
<ul style="list-style-type: none"> <li>Italy zone 2 TCZ represents 4.6% of the SES terminal ANS actual costs in 2019</li> <li>Number of airports in charging zone in 2021: 4 of which:                             <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 0</li> <li>Airports with more than 80,000 IFR mvmts: 4</li> </ul> </li> <li>National currency: EUR</li> <li>Performance Plan: See item 1 for the en route charging zone(s).</li> </ul>						
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.</p>						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Italy zone 2: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal EUR)	53,719,717	57,125,883	110,845,600	61,486,950	64,129,608	65,855,281
Inflation %	0.0%	1.7%		1.8%	1.2%	1.2%
Inflation index (100 in 2017)	101.8	103.5		105.3	106.6	107.9
Real terminal costs (EUR2017)	53,066,438	55,741,234	108,807,672	59,192,224	61,196,632	62,266,240
Total terminal service units	143,170	179,000	322,170	270,000	323,000	340,000
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>370.65</b>	<b>311.40</b>	<b>337.73</b>	<b>219.23</b>	<b>189.46</b>	<b>183.14</b>
Italy zone 2: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal EUR)	53,719,717	57,010,139	110,729,856			
Inflation %	0.0%	1.9%				
Inflation index (100 in 2017)	101.8	103.7				
Real terminal costs (EUR2017)	53,066,438	55,549,053	108,615,491			
Total terminal service units	143,170	191,446	334,616			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>370.65</b>	<b>290.15</b>	<b>324.60</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal EUR)	in value 0	-115,744	-115,744			
	in % -	-0.2%	-0.1%			
Inflation %	in p.p. 0.0 p.p.	0.2 p.p.				
Inflation index (100 in 2017)	in p.p. 0.0 p.p.	0.2 p.p.				
Real terminal costs (EUR2017)	in value 0	-192,181	-192,181			
	in % -	-0.3%	-0.2%			
Total terminal service units	in value 0	12,446	12,446			
	in % -	+7.0%	+3.9%			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value 0.00</b>	<b>-21.25</b>	<b>-13.14</b>			
	<b>in % -</b>	<b>-6.8%</b>	<b>-3.9%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>					
	<b>in %</b>					
4. Focus on terminal DUC monitoring at charging zone level						
<p><b>AUC vs DUC</b> In the combined year 2020-2021, the AUC for Italy TCZ2 was lower than the planned DUC (-3.9%, or -13.14€). This results from the combination of higher than planned TNSUs (+3.9%) and slightly lower than planned terminal costs in real terms (-0.2%, or -0.2 M€2017).</p>			<p>2020-2021 actual vs. planned TNSUs</p> <p>Threshold -10%   Threshold +10%</p> <p>Dead-band -2%   Dead-band +2%</p> <p>+3.9%</p>			
<p><b>Terminal service units</b> The difference between actual and planned TNSUs (+3.9%) falls outside of the ±2% dead band. Hence, the resulting gain is shared between the ANSP and airspace users, with the ANSP retaining an amount of 2.6 M€ (see items 10 to 14).</p>			<p>Costs by entity at TCZ level (M€2017):</p> <ul style="list-style-type: none"> <li>Main ANSP: -0.2%</li> <li>Other ANSP(s): 0.0%</li> <li>METSP(s): 0.0%</li> <li>NSA: 0.0%</li> <li>Total CZ: -0.2%</li> </ul>			
<p><b>Terminal costs by entity at charging zone level</b> Actual real terminal costs for 2020-2021 in the Italian TCZ2 are -0.2% (-0.2 M€2017) lower than planned. This mainly reflects lower than planned costs for the main ANSP - ENAV (-0.2%, or -0.2 M€2017), while the costs for the NSA were in line with the plan.</p>			<p>Costs by nature for main ANSP (M€2017):</p> <ul style="list-style-type: none"> <li>Staff costs: -0.1%</li> <li>Other operating costs: -2.7%</li> <li>Depreciation: -1.4%</li> <li>Cost of capital: 6.8%</li> <li>Exceptional costs: 0.0%</li> <li>VFR exempted flights: 0.0%</li> <li>Total Main ANSP: -0.2%</li> </ul>			
<p><b>Terminal costs for the main ANSP (ENAV) in the Italian TCZ2</b> The lower than planned terminal costs in real terms for ENAV in 2020-2021 reflects a combination of:</p> <ul style="list-style-type: none"> <li>- slightly lower staff costs (-0.1%);</li> <li>- lower other operating costs (-2.7%), which are understood to reflect costs savings for utilities and communications, external services and maintenance of non-operational equipment;</li> <li>- lower depreciation costs (-1.4%); and,</li> <li>- higher cost of capital (+6.8%), which are understood to reflect a combination of slightly higher actual asset base as well as the use of higher than planned average interest rate on debts (from 1.9% to 3.04%) to compute the WACC.</li> </ul>						

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	183.54
DUC to be charged retroactively	160.51
<b>DUC</b>	<b>344.06</b>
Inflation adjustment	0.29
Cost exempt from cost-sharing	-0.96
Traffic risk sharing adjustment	-4.01
Traffic adj. (costs not TRS)	-0.91
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-5.59
<b>AUCU</b>	<b>338.47</b>
<b>AUCU vs. DUC</b>	<b>-1.6%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

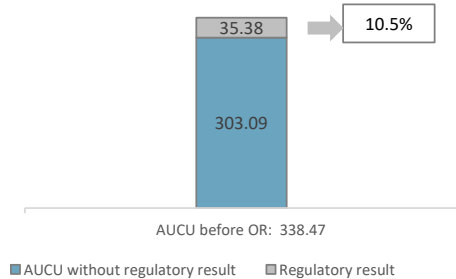
7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-322	-0.96
Competent authorities and qualified entities costs	0	0.00
Eurocontrol costs	0	0.00
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-322</b>	<b>-0.96</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ATSP(S)	EUR '000	EUR/SU
ENAV	11,838	35.38
METSP(s)	EUR '000	EUR/SU
<b>Total charging zone</b>	<b>11,838</b>	<b>35.38</b>
<b>Actual cost for users***</b>	<b>113,256</b>	<b>338.47</b>
<b>Regulatory result (% AUCU)</b>	<b>10.5%</b>	<b>10.5%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

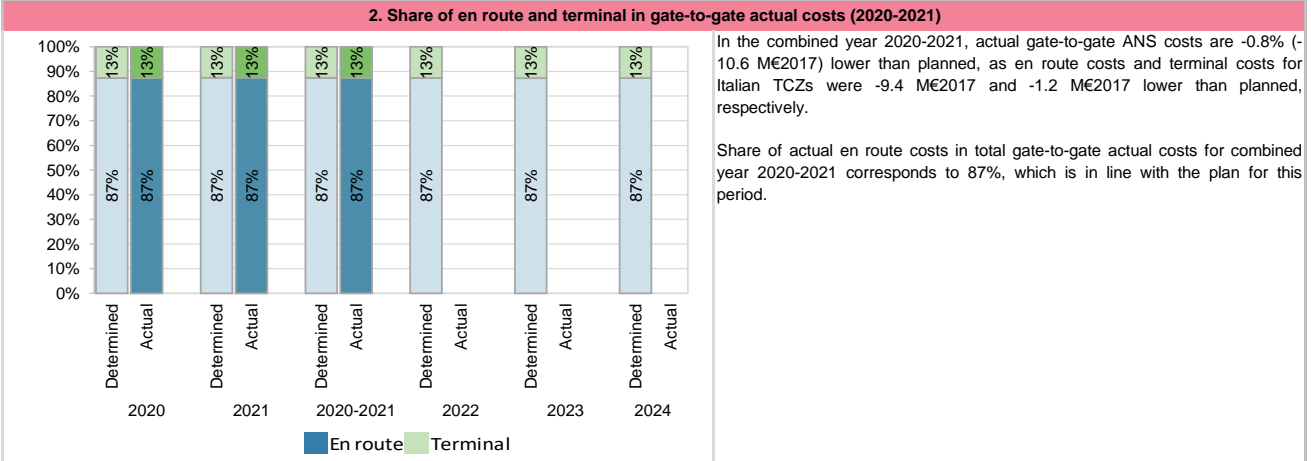
The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (338.47€) in Italy TCZ2 is -1.6% lower than the nominal DUC (344.06€) which includes DUC initially charged: 183.54€; and to be charged: 160.51€. The difference between these two figures is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.29€), to be charged to the airspace users in future years.
- the deduction of the traffic risk sharing adjustments (-4.01€) and the traffic adjustment (-0.91€) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.96€).

The share of regulatory result (see items 10 to 14) in the AUCU is 10.5% in TCZ2.

10. Monitoring of the terminal ANSPs regulatory results (RR)						
<p>The <b>Regulatory Result (RR)</b> corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.</p> <p>The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.</p> <ul style="list-style-type: none"> <li>- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.</li> <li>- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.</li> </ul> <p>The <b>net gain/loss</b> calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).</p> <p>The monitoring of the RR is carried out in national currency in nominal terms.</p>						
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level						
Cost sharing (EUR '000)	2020-2021	2022	2023	2024		
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	116					
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	97					
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-322					
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>-109</b>					
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024		
Difference in total service units (actual vs PP) %	3.9%					
Determined costs subject to traffic risk sharing for the ANSP (PP)	102,984					
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>2,635</b>					
Incentives (EUR '000)	2020-2021	2022	2023	2024		
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>					
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>2,526</b>					
12. Regulatory result (RR) for the main ANSP at charging zone level						
ENAV planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	92,922	118,048	210,970	124,871	117,125	118,266
Proportion of financing through equity (in %)	75%	75%	75%	75%	75%	75%
RoE pre-tax rate (in %)	6.6%	5.0%	5.7%	4.4%	4.9%	5.0%
RoE (in value)	4,577	4,457	9,033	4,076	4,308	4,475
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>4,577</b>	<b>4,457</b>	<b>9,033</b>	<b>4,076</b>	<b>4,308</b>	<b>4,475</b>
<b>Revenue for the terminal charging zone</b>	<b>53,395</b>	<b>56,777</b>	<b>110,173</b>	<b>61,139</b>	<b>63,781</b>	<b>65,507</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>8.6%</b>	<b>7.8%</b>	<b>8.2%</b>	<b>6.7%</b>	<b>6.8%</b>	<b>6.8%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>6.6%</b>	<b>5.0%</b>	<b>5.7%</b>	<b>4.4%</b>	<b>4.9%</b>	<b>5.0%</b>
ENAV actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	92,922	125,431	218,353			
Proportion of financing through equity (in %)	75%	75%	75%			
RoE pre-tax rate (in %)	6.6%	5.0%	5.7%			
RoE (in value)	4,577	4,736	9,312			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	2,526	2,526			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>4,577</b>	<b>7,262</b>	<b>11,838</b>			
<b>Revenue for the terminal charging zone</b>	<b>53,395</b>	<b>59,188</b>	<b>112,583</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>8.6%</b>	<b>12.3%</b>	<b>10.5%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>6.6%</b>	<b>7.7%</b>	<b>7.2%</b>			
13. Focus on main ANSP regulatory result on terminal activity						
<p><b>ENAV net gain on terminal activity in the Italian TC22 in the combined year 2020-2021</b></p> <p>ENAV's net gain amounts to +2.5 ME, as a combination of a loss of -0.1 ME arising from the cost sharing mechanism and a gain of +2.6 ME arising from the traffic risk sharing mechanism.</p> <p><b>ENAV overall regulatory results (RR) for the terminal activity</b></p> <p>Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+2.5 ME) and the actual RoE (+9.3 ME) amounts to +11.8 ME (10.5% of the terminal revenues in TC22). The resulting ex-post rate of return on equity is 7.2%, which is higher than the 5.7% planned in the PP.</p>						

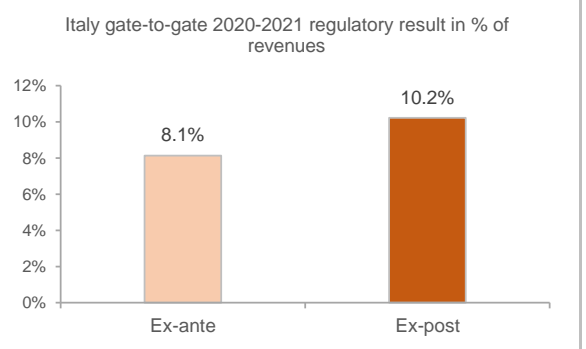
1. Monitoring of gate-to-gate ANS costs						
Charging zones concerned:						
En route charging zone 1: Italy		En route charging zone 2: N/A				
Terminal charging zone 1: Italy zone 1		Terminal charging zone 2: Italy zone 2				
Italy: data from RP3 performance plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)	575,114,508	600,665,737	1,175,780,245	626,745,304	643,329,121	651,865,224
Real terminal costs (EUR2017)	83,462,511	86,004,114	169,466,625	90,747,166	93,857,038	94,815,836
Real gate-to-gate costs (EUR2017)	658,577,019	686,669,851	1,345,246,869	717,492,470	737,186,159	746,681,060
En route share (%)	87.3%	87.5%	87.4%	87.4%	87.3%	87.3%
Italy: actual data from reporting tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)	575,114,508	591,294,066	1,166,408,574			
Real terminal costs (EUR2017)	83,462,511	84,756,756	168,219,267			
Real gate-to-gate costs (EUR2017)	658,577,019	676,050,822	1,334,627,841			
En route share (%)	87.3%	87.5%	87.4%			
Difference between actuals and planned (actuals vs. PP)	2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017) in value	0	-10,619,028	-10,619,028			
in %	0.0%	-1.5%	-0.8%			
En route share in p.p.	0.0 p.p.	-0.0 p.p.	-0.0 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In EUR '000	ANSP(S)	Ex-ante			Ex-post		
		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	ENAV	104,107	1,184,519	8.8%	132,497	1,208,538	11.0%
	ITAF	0	95,785	0.0%	832	95,889	0.9%
METSP(s)		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
<b>Total</b>		<b>104,107</b>	<b>1,280,304</b>	<b>8.1%</b>	<b>133,328</b>	<b>1,304,426</b>	<b>10.2%</b>

For the ANSPs providing services in the Italian charging zones covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +133.3 M€ (see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 10.2% of gate-to-gate ANS revenues.

This is higher than the planned RR for the combined year 2020-2021 included in the performance plan of +104.1 M€ (corresponding to some 8.1% of gate-to-gate ANS revenues).



# **Annual Monitoring Report 2021**

Local level view

Latvia

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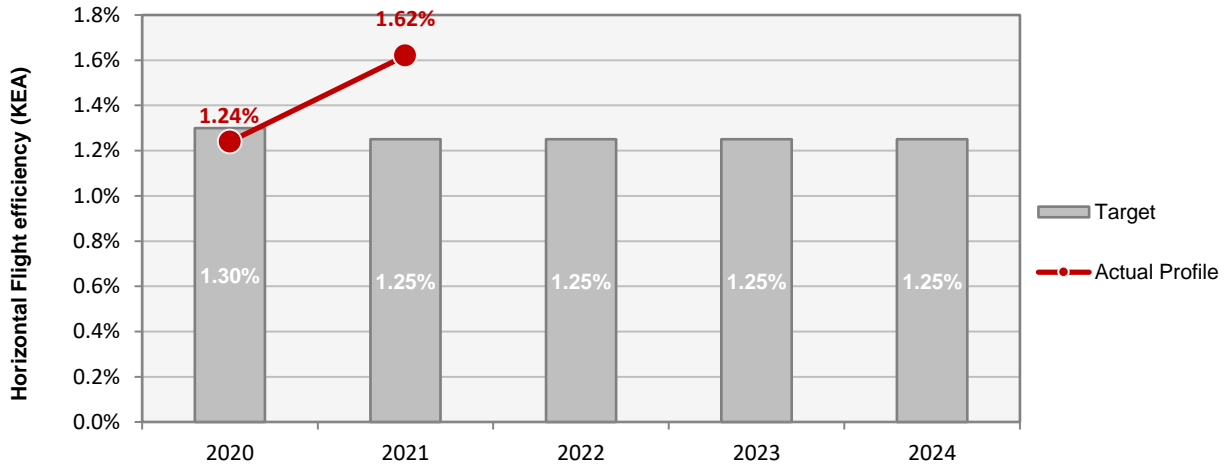
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>SJSC</b>	93	C	C	C	C	C

Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.

**Observations**

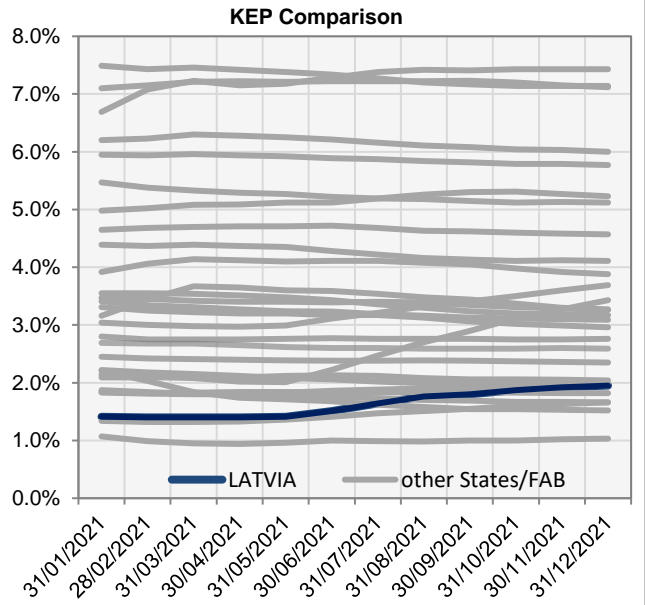
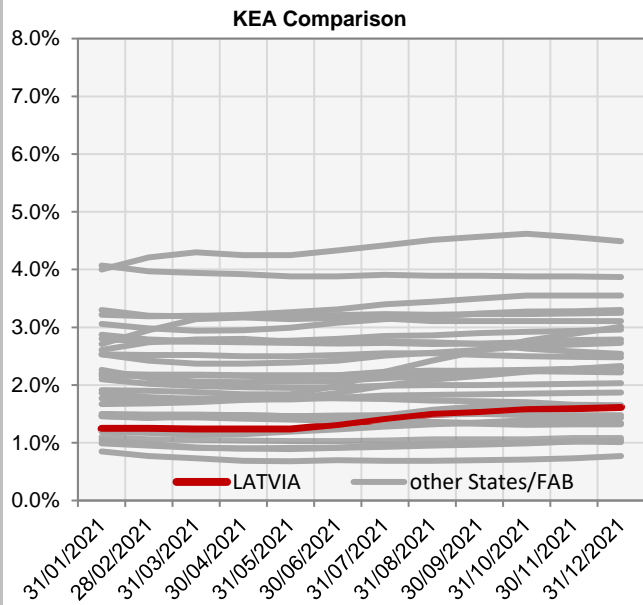
Four out of five EoSM components of the ANSP meet already the 2024 target level. Only the component "Safety Risk Management" is below 2024 target level. Improvements in safety risk management are still expected during RP3 to achieve 2024 targets. Slight increase in maturity is observed from 2020 figures.

KEA					
	2020	2021	2022	2023	2024
Target	1.30%	1.25%	1.25%	1.25%	1.25%
Actual performance	1.24%	1.62%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	1.24%	1.24%	1.23%	1.23%	1.23%	1.31%	1.41%	1.50%	1.53%	1.58%	1.60%	1.62%
KEP	1.41%	1.40%	1.40%	1.40%	1.41%	1.51%	1.64%	1.76%	1.80%	1.87%	1.92%	1.95%
KES	1.14%	1.14%	1.14%	1.15%	1.16%	1.22%	1.31%	1.41%	1.46%	1.53%	1.58%	1.61%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.



**1. Overview**

Latvia identified 4 airports as subject to RP3 monitoring. In accordance with IR (EU) 2019/317 and the traffic figures at these 4 airports, additional taxi-out and ASMA times are not monitored and the environmental performance focuses only on the share of arrivals applying CDO.

Traffic at these Latvian airports in 2021 was still 55% lower than in 2019.

The shares of CDO flights changed significantly for Liepaya and Ventstpils while it slightly decreased for Riga.

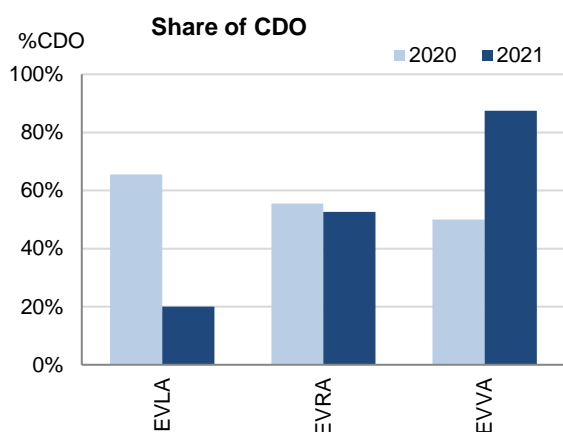
**2. Additional Taxi-Out Time**

This indicator is not monitored for airports below 80 000 IFR movements average during the 2016-2018 period, so it is not monitored for any airport in this state.

**3. Additional ASMA Time**

This indicator is not monitored for airports below 80 000 IFR movements average during the 2016-2018 period, so it is not monitored for any airport in this state.

**4. Share of arrivals applying CDO**



The shares of CDO flights changed significantly for Liepaya (-45.5 percentage points) and Ventstpils (+37.5 percentage points) while it slightly decreased for Riga (-2.9 percentage points).

While the shares of CDO flights were well above the overall RP3 in 2020 for all airports, only Riga and Ventstpils have values well above the overall RP3 value in 2021 (30.5%). The value for Liepaya is well below the overall RP3 value in 2021.

According to the Latvian monitoring report: *Although, LGS cannot directly impact environmental pollution, projects carried out by LGS in 2020 - 2021 included mechanisms to reduce noise, CO2 and NOx. For example: implementation of additional effectiveness and safety for aircraft services at the airport and during descent and approach (A-CDM), PBN procedures to increase predictability of flight arrival trajectories from flight planning perspective, as well as implementation of Free Route Airspace (projects FRA 1 and FRA2) to optimize airspace use and to facilitate reduction/straightning of enroute segments. In 2022 and forward other service improvements are planned.*

**5. Appendix**

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Liepaya-EVLA	-	-				-	-				66%	20%			
Riga-EVRA	-	-				-	-				56%	53%			
Ventstpils-EVVA	-	-				-	-				50%	88%			

## Update on Military dimension of the plan

Design of all military use areas takes into consideration impact on other airspace users, and subsequently the impact on the environment and capacity. As a result, airspace booking (for FUA areas only) and airspace use procedures are developed appropriately to minimize the impact.

## Military - related measures implemented or planned to improve capacity

Various considerable changes in MIL SUA areas were implemented and more are planned for 2022.

## PI#6 Effective use of reserved or segregated airspace - national level

Ratio PI#6	2020	2021	2022	2023	2024
Latvia	13%	87%			

## PI#6 Effective use of reserved or segregated airspace (per ACC)

Ratio PI#6	2020	2021	2022	2023	2024
Riga ACC	13%	87%			

## Initiatives implemented or planned to improve PI#6

In comparison to 2020, in 2021 changes in certain areas designated for military use were implemented, which affected the efficiency of their use. Certain changes in military airspace use priorities also affected the military SUA area use efficiency positively.

The CAA is closely involved in providing the guidance to the military in different airspace management and oversight aspects. LoA between the ANSP and the military about booking and actual use of military areas and procedures is under the CAA oversight in line with Reg.2017/373.

## PI#7 Rate of planning via available airspace structures - national level

Ratio PI#7	2020	2021	2022	2023	2024
Latvia					

## PI#7 Rate of planning via available airspace structures (per ACC)

Ratio PI#7	2020	2021	2022	2023	2024
Riga ACC					

## Initiatives implemented or planned to improve PI#7

FRA was implemented in Riga FIR in 2015.

## PI#8 Rate of using available airspace structures - national level

Ratio PI#8	2020	2021	2022	2023	2024
Latvia		#N/A			

## PI#8 Rate of using available airspace structures (per ACC)

Ratio PI#8	2020	2021	2022	2023	2024
Riga ACC					

## Initiatives implemented or planned to improve PI#8

FRA was implemented in Riga FIR in 2015.

Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.06	0.01	0.03	0.03	0.03		
<b>Actual performance</b>	0.00	0.00					
NSA's assessment of capacity performance							
Due to considerable impact of COVID-19 and sanctions against Belarus, there were no identified issues with the capacity.							
Monitoring process for capacity performance							
Impact of traffic diversion due to Belarus sanctions were analysed and posed no capacity issues. Data was shared with EASA. Information about impact on traffic flows and numbers is shared by the ANSP upon request and during oversight audits and inspections, when all aspects impacting capacity in different sectors is checked.							
Capacity Planning							
Currently, LGS capacity planning is adequate and meets the requirements.							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned 2021 Perf Plan</b>	-	-	65	64	65	66	
<b>Planned 2022 Perf Plan</b>			58	63	62	61	
<b>Actual</b>	56	60	58				
Application of Corrective Measures for Capacity (if applicable)							
Not applicable.							
Summary of capacity performance							
Latvia experienced an increase in traffic from 129k flights in 2020 to 163k flights in 2021, with zero ATFM delay. However, traffic levels were still substantially below the 295k flights in 2019.							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.06	0.01	0.03	0.03	0.03		
<b>Deadband +/-</b>	-	-	[0.02-0.04]	[0.02-0.04]	[0.02-0.04]		
<b>Actual performance</b>	0.00	0.00					
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.							

1. Overview

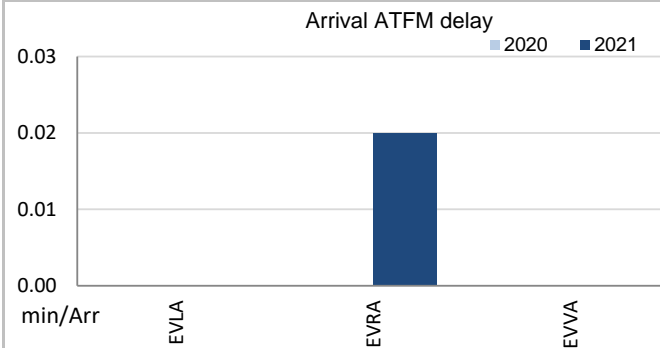
Latvia identified 4 airports as subject to RP3 monitoring. In accordance with IR (EU) 2019/317 and the traffic figures at these 4 airports, pre-departure delays are not monitored and the capacity performance monitoring focuses on arrival ATFM delay and slot adherence.

Traffic at these Latvian airports in 2021 was still 55% lower than in 2019.

Average arrival ATFM delays in 2021 was 0.02 min/arr, compared to 0 min/arr in 2020.

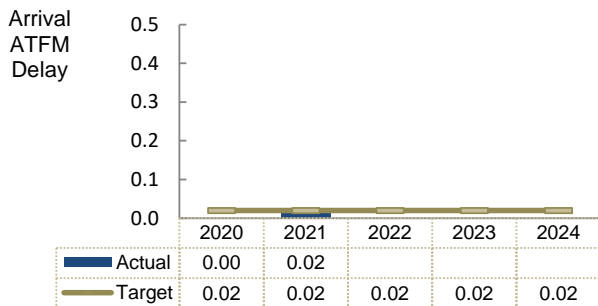
ATFM slot adherence has slightly improved (2021: 98.8%; 2020: 98.4%).

2. Arrival ATFM Delay



Only Riga (EVRA) registered some delays in 2021, all in December, attributed to accident/incident and weather. This resulted in an annual average for Riga of 0.02 min/arr.

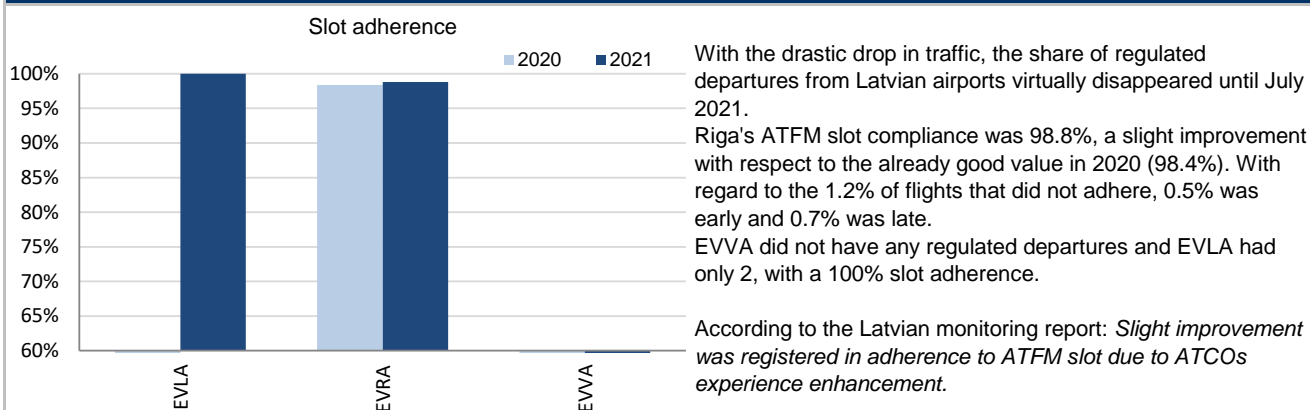
3. Arrival ATFM Delay – National Target and Incentive Scheme



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

#### 4. ATFM Slot Adherence



#### 5. ATC Pre-departure Delay

This indicator is not monitored for airports below 80 000 IFR movements annual average during the 2016-2018 period, so it is not monitored for any airport in Latvia.

#### 6. All Causes Pre-departure Delay

This indicator is not monitored for airports below 80 000 IFR movements annual average during the 2016-2018 period, so it is not monitored for any airport in Latvia.

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Liepaya-EVLA	0	0				n/a	100.0%				-	-				-	-			
Riga-EVRA	0	0.02				98.4%	98.8%				-	-				-	-			
Ventstpiils-EVVA	0	0				n/a	n/a				-	-				-	-			

1. Contextual economic information: en route air navigation services						
Latvia ECZ represents 0.4% of the SES en route ANS actual costs in 2019			FAB:	NEFAB		
National currency:	EUR					
Performance Plan:	RP3 draft performance plan dated 17 November 2021 and found inconsistent as per Commission Decision (EU) 2022/728 of 13 April 2022 Latvia has submitted a revised RP3 draft performance plan in July 2022, currently under assessment.					
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Latvia: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)	19,790,150	20,295,138	40,085,288	20,051,203	22,707,660	22,828,981
Inflation %	0.1%	2.1%		10.0%	3.9%	3.1%
Inflation index (100 in 2017)	105.5	107.7		119.7	124.3	128.1
Real en route costs (EUR2017)	19,046,363	19,273,567	38,319,930	17,724,537	19,519,091	19,144,924
Total en route service units	439,248	517,000	956,248	466,000	548,000	570,000
<b>Real en route DUC per service unit (EUR2017)</b>	<b>43.36</b>	<b>37.28</b>	<b>40.07</b>	<b>38.04</b>	<b>35.62</b>	<b>33.59</b>
Latvia: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)	19,790,150	18,651,514	38,441,664			
Inflation %	0.1%	3.2%				
Inflation index (100 in 2017)	105.5	108.8				
Real en route costs (EUR2017)	19,046,363	17,572,511	36,618,874			
Total en route service units	439,248	541,944	981,192			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>43.36</b>	<b>32.42</b>	<b>37.32</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)	in value	0	-1,643,624	-1,643,624		
	in %	-	-8.1%	-4.1%		
Inflation %	in p.p.	0.0 p.p.	1.1 p.p.			
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	1.1 p.p.			
Real en route costs (EUR2017)	in value	0	-1,701,055	-1,701,055		
	in %	-	-8.8%	-4.4%		
Total en route service units	in value	0	24,944	24,944		
	in %	-	+4.8%	+2.6%		
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-4.85</b>	<b>-2.75</b>		
	<b>in %</b>	<b>-</b>	<b>-13.0%</b>	<b>-6.9%</b>		
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs DUC</b>			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      +2.6%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
<p>In the combined year 2020-2021, the AUC was lower by -6.9% (or -2.75€2017) than the planned DUC. This results from the combination of higher than planned TSUs (+2.6%) and lower than planned en route costs in real terms (by -4.4%, or -1.7 M€2017).</p> <p><b>En route service units</b></p> <p>The difference between actual and planned TSUs (+2.6%) falls outside the ±2% dead band, but does not exceed the ±10% threshold foreseen in the traffic risk sharing mechanism. The resulting gain of additional en route revenues is therefore shared between the ATSP and the airspace users, with the ATSP (LGS) retaining an amount of +0.7 M€2017.</p> <p><b>En route costs by entity at charging zone level</b></p> <p>Actual real en route costs for 2020-2021 are -4.4% (-1.7 M€2017) lower than planned. This result is driven by the main ANSP, LGS (-4.7%, or -1.6 M€2017), the MET service provider (-0.2% or -0.002 M€2017) and the NSA/EUROCONTROL costs (-3.3%, or -0.1 M€2017).</p> <p><b>En route costs for the main ANSP (LGS) at charging zone level</b></p> <p>Lower than planned en route costs in real terms for LGS in 2020-2021 (-4.7%, or -1.6 M€2017 lower) results from:</p> <ul style="list-style-type: none"> <li>- lower staff costs (-3.3%), "due to reduced headcounts by 6.1% of FTEs. At the same time, LGS did increase remuneration of several staff categories due to enormous pressure from trade unions;"</li> <li>- lower other operating costs (-7.8%), "mostly by scaling down of the training and business trips;"</li> <li>- lower depreciation (-6.3%), "As in FY 2020 the ANSP did invest only in the critical part of the services and could not afford to undertake large scale investments with long-term benefits;"</li> <li>- lower cost of capital (-6.9%), same as for depreciation;</li> <li>- lower deduction for VFR exempted flights (-11.1%).</li> </ul>			<p><b>Costs by entity at ECZ level (M€2017):</b></p> <p><b>Costs by nature for main ANSP (M€2017):</b></p>			

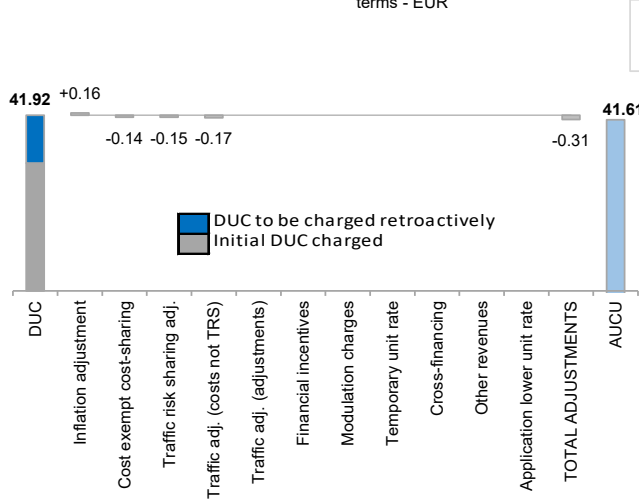
5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level

Latvia 2020-2021 DUC vs. Actual Unit Cost for users in national currency in nominal terms - EUR



-0.7% vs. DUC

Components of the AUCU	EUR/SU
Initial DUC charged	30.51
DUC to be charged retroactively	11.41
<b>DUC</b>	<b>41.92</b>
Inflation adjustment	0.16
Cost exempt from cost-sharing	-0.14
Traffic risk sharing adjustment	-0.15
Traffic adj. (costs not TRS)	-0.17
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-0.31
<b>AUCU</b>	<b>41.61</b>
<b>AUCU vs. DUC</b>	<b>-0.7%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

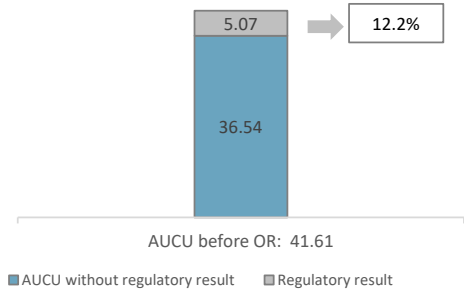
7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	0	0.00
Competent authorities and qualified entities costs	1	0.00
Eurocontrol costs	-139	-0.14
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-138</b>	<b>-0.14</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	EUR '000	EUR/SU
LGS	4,975	5.07
METSP(s)	EUR '000	EUR/SU
Latvia MET	0	0.00
<b>Total charging zone</b>	<b>4,975</b>	<b>5.07</b>
<b>Actual cost for users***</b>	<b>40,832</b>	<b>41.61</b>
<b>Regulatory result (% AUCU)</b>	<b>12.2%</b>	<b>12.2%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Latvia en route charging zone (41.61€) is -0.7% lower than the nominal DUC (41.92€) which includes DUC initially charged: 30.51€; and to be charged: 11.41€. The difference between these two figures (-0.31€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.16€/SU);
- the deduction of the traffic risk sharing adjustments (-0.15€/SU) and the traffic adjustment (-0.17€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.14€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU is 12.2%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

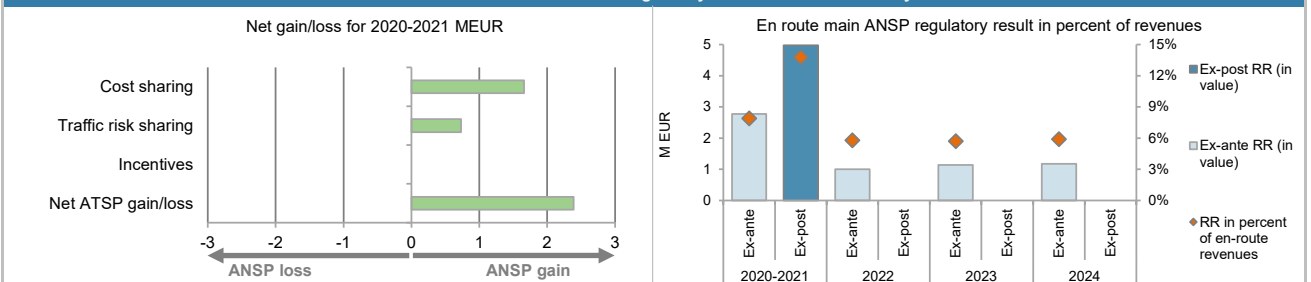
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	1,508			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	150			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	0			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>1,658</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	2.6%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	33,522			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>732</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>2,390</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

LGS planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	20,549	21,528	42,077	20,140	22,740	23,500
Proportion of financing through equity (in %)	100%	100%	100%	100%	100%	100%
RoE pre-tax rate (in %)	6.6%	6.6%	6.6%	5.0%	5.0%	5.0%
RoE (in value)	1,356	1,421	2,777	1,006	1,136	1,176
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>1,356</b>	<b>1,421</b>	<b>2,777</b>	<b>1,006</b>	<b>1,136</b>	<b>1,176</b>
<b>Revenue for the en route charging zone</b>	<b>17,419</b>	<b>17,821</b>	<b>35,240</b>	<b>17,439</b>	<b>19,954</b>	<b>20,014</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>7.8%</b>	<b>8.0%</b>	<b>7.9%</b>	<b>5.8%</b>	<b>5.7%</b>	<b>5.9%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>6.6%</b>	<b>6.6%</b>	<b>6.6%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>
LGS actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	20,549	18,629	39,178			
Proportion of financing through equity (in %)	100%	100%	100%			
RoE pre-tax rate (in %)	6.6%	6.6%	6.6%			
RoE (in value)	1,356	1,230	2,586			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	2,390	2,390			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>1,356</b>	<b>3,619</b>	<b>4,975</b>			
<b>Revenue for the en route charging zone</b>	<b>17,419</b>	<b>18,702</b>	<b>36,121</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>7.8%</b>	<b>19.4%</b>	<b>13.8%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>6.6%</b>	<b>19.4%</b>	<b>12.7%</b>			

13. Focus on the main ANSP regulatory result on en route activity



LGS net gain on en route activity in the Latvia charging zone in the combined year 2020-2021

LGS's net gain amounts to +2.4 ME, as a combination of a gain of +1.7 ME arising from the cost sharing mechanism and a gain of +0.7 ME arising from the traffic risk sharing mechanism.

LGS overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+2.4 ME) and the actual RoE (+2.6 ME) amounts to +5.0 ME (13.8% of the en route revenues). The resulting ex-post rate of return on equity is 12.7%, which is higher than the 6.6% planned in the PP.



14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
Latvia MET planned regulatory result (EUR '000)	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	337	337	674	337	563	569
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Latvia MET actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	0.4	0.4			
Revenue for the en route charging zone	337	340	677			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	0.1%	0.1%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for METSP in Latvia en route charging zone corresponds to 0.1% of the en route revenues.						
It should be noted that Latvia MET does not charge the cost of capital.						

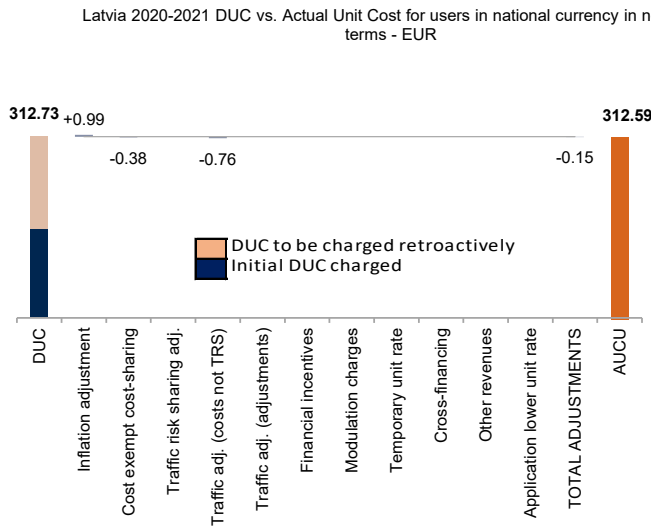
1. Contextual economic information: terminal air navigation services																				
Latvia TCZ represents 0.5% of the SES terminal ANS actual costs in 2019			Airports with fewer than 80,000 IFR mvmts:	3																
Number of airports in charging zone in 2021:	3	of which:	Airports with more than 80,000 IFR mvmts:	0																
National currency:	EUR																			
Performance Plan:	See item 1 for the en route charging zone(s).																			
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level																				
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.																				
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.																				
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)																				
Latvia: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D														
Terminal costs (nominal EUR)	5,968,000	6,273,000	12,241,000	5,976,000	6,863,000	7,219,000														
Inflation %	0.1%	2.1%		10.0%	3.9%	3.1%														
Inflation index (100 in 2017)	105.5	107.7		119.7	124.3	128.1														
Real terminal costs (EUR2017)	5,779,829	6,010,333	11,790,162	5,398,697	6,068,548	6,244,635														
Total terminal service units	18,167	20,975	39,142	37,000	46,000	48,000														
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>318.16</b>	<b>286.54</b>	<b>301.22</b>	<b>145.91</b>	<b>131.92</b>	<b>130.10</b>														
Latvia: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A														
Terminal costs (nominal EUR)	5,968,000	5,980,619	11,948,619																	
Inflation %	0.1%	3.2%																		
Inflation index (100 in 2017)	105.5	108.8																		
Real terminal costs (EUR2017)	5,779,829	5,708,115	11,487,945																	
Total terminal service units	18,167	21,663	39,830																	
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>318.16</b>	<b>263.49</b>	<b>288.43</b>																	
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024														
Terminal costs (nominal EUR)																				
in value	0	-292,381	-292,381																	
in %	-	-4.7%	-2.4%																	
Inflation %																				
in p.p.	0.0 p.p.	1.1 p.p.																		
Inflation index (100 in 2017)																				
in p.p.	0.0 p.p.	1.1 p.p.																		
Real terminal costs (EUR2017)																				
in value	0	-302,217	-302,217																	
in %	-	-5.0%	-2.6%																	
Total terminal service units																				
in value	0	688	688																	
in %	-	+3.3%	+1.8%																	
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-23.05</b>	<b>-12.79</b>																
	<b>in %</b>	<b>-</b>	<b>-8.0%</b>	<b>-4.2%</b>																
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>																			
	<b>in %</b>																			
4. Focus on terminal DUC monitoring at charging zone level																				
<b>AUC vs. DUC</b>			<p>2020-2021 actual vs. planned TNSUs</p> <p>Threshold -10%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p> <p>+1.8%</p>																	
<p>In the combined year 2020-2021, the terminal AUC was -4.2% (or -12.79€2017) lower than the planned DUC. This results from the combination of higher than planned TNSUs (+1.8%) and lower than planned terminal costs in real terms (-2.6%, or -0.3 M€2017).</p>			<p>Costs by nature for main ANSP (M€2017):</p> <table border="1"> <tr><td>Staff costs</td><td>-3.0%</td></tr> <tr><td>Other operating costs</td><td>-12.2%</td></tr> <tr><td>Depreciation</td><td>-4.5%</td></tr> <tr><td>Cost of capital</td><td>17.9%</td></tr> <tr><td>Exceptional costs</td><td></td></tr> <tr><td>VFR exempted flights</td><td></td></tr> <tr><td><b>Total Main ANSP</b></td><td><b>-2.6%</b></td></tr> </table>				Staff costs	-3.0%	Other operating costs	-12.2%	Depreciation	-4.5%	Cost of capital	17.9%	Exceptional costs		VFR exempted flights		<b>Total Main ANSP</b>	<b>-2.6%</b>
Staff costs	-3.0%																			
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Cost of capital	17.9%																			
Exceptional costs																				
VFR exempted flights																				
<b>Total Main ANSP</b>	<b>-2.6%</b>																			
<p><b>Terminal service units</b></p> <p>The difference between actual and planned TNSUs (+1.8%) falls within the ±2% dead band. Hence the resulting additional revenue is kept by the ANSPs (see items 10 to 14).</p>			<p>Costs by entity at TCZ level (M€2017):</p> <table border="1"> <tr><td>Main ANSP</td><td>-2.6%</td></tr> <tr><td>Other ANSP(s)</td><td></td></tr> <tr><td>METSP(s)</td><td>-0.7%</td></tr> <tr><td>NSA</td><td>-2.8%</td></tr> <tr><td><b>Total CZ</b></td><td><b>-2.6%</b></td></tr> </table>				Main ANSP	-2.6%	Other ANSP(s)		METSP(s)	-0.7%	NSA	-2.8%	<b>Total CZ</b>	<b>-2.6%</b>				
Main ANSP	-2.6%																			
Other ANSP(s)																				
METSP(s)	-0.7%																			
NSA	-2.8%																			
<b>Total CZ</b>	<b>-2.6%</b>																			
<p><b>Terminal costs by entity</b></p> <p>Actual real terminal costs are -2.6% (-0.3 M€2017) lower than planned. This is driven by the main ANSP, LGS (-2.6%, or -0.3 M€2017) and the NSA costs (-2.8%, or -0.01 M€2017).</p>																				
<p><b>Terminal costs for the main ANSP (LGS) at charging zone level</b></p> <p>The lower than planned terminal costs in real terms for LGS (-2.6%, or -0.3 M€2017) result from:</p> <ul style="list-style-type: none"> <li>- lower staff costs (-3.0%), "due to reduced headcounts by 6.1% of FTEs. At the same time, LGS did increase remuneration of several staff categories due to enormous pressure from trade unions;"</li> <li>- lower other operating costs (-12.2%), "mostly by scaling down of the training and business trips;"</li> <li>- lower depreciation (-4.5%), "As in FY 2020 the ANSP did invest only in the critical part of the services and could not afford to undertake large scale investments with long-term benefits;"</li> <li>- higher cost of capital (+17.9%), driven by the use of higher asset base (+18.9%) to compute cost of capital.</li> <li>- deduction for VFR exempted flights.</li> </ul>																				

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	153.34
DUC to be charged retroactively	159.39
<b>DUC</b>	<b>312.73</b>
Inflation adjustment	0.99
Cost exempt from cost-sharing	-0.38
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.76
Traffic adj. (adjustments)*	-0.15
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	0.00
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-0.15
<b>AUCU</b>	<b>312.59</b>
<b>AUCU vs. DUC</b>	<b>-0.05%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

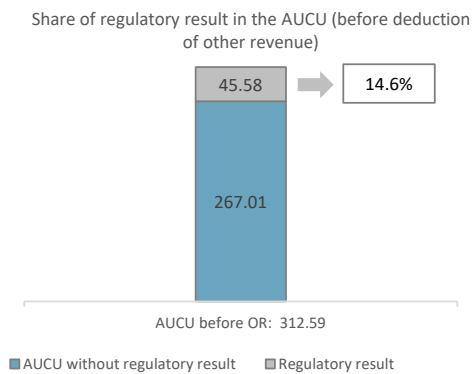
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	0	0.00
Competent authorities and qualified entities costs	-15	-0.38
Eurocontrol costs	0	0.00
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-15</b>	<b>-0.38</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	EUR '000	EUR/SU
LGS	1,814	45.56
METSP(s)	EUR '000	EUR/SU
Latvia-MET	1	0.03
<b>Total charging zone</b>	<b>1,816</b>	<b>45.58</b>
<b>Actual cost for users***</b>	<b>12,450</b>	<b>312.59</b>
<b>Regulatory result (% AUCU)</b>	<b>14.6%</b>	<b>14.6%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Latvia terminal charging zone (312.59€) is -0.05% lower than the nominal DUC (312.73€) which includes DUC initially charged: 153.34€; and to be charged: 159.39€. The difference between these two figures (-0.15€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.99€/SU);
- the deduction of the traffic adjustment (-0.76€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.38€/SU).

The share of regulatory result (see items 10 to 14) in the terminal AUCU is 14.6%.

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

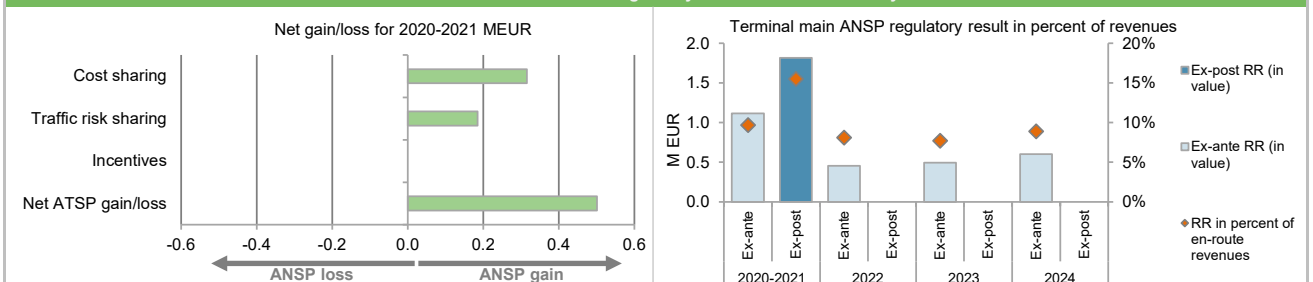
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	277			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	38			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	0			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>316</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	1.8%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	10,524			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>185</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>501</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

LGS planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	8,679	8,192	16,871	9,071	9,919	12,071
Proportion of financing through equity (in %)	100%	100%	100%	100%	100%	100%
RoE pre-tax rate (in %)	6.6%	6.6%	6.6%	5.0%	5.0%	5.0%
RoE (in value)	573	541	1,114	454	496	604
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>573</b>	<b>541</b>	<b>1,114</b>	<b>454</b>	<b>496</b>	<b>604</b>
<b>Revenue for the terminal charging zone</b>	<b>5,592</b>	<b>5,898</b>	<b>11,490</b>	<b>5,608</b>	<b>6,426</b>	<b>6,788</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>10.2%</b>	<b>9.2%</b>	<b>9.7%</b>	<b>8.1%</b>	<b>7.7%</b>	<b>8.9%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>6.6%</b>	<b>6.6%</b>	<b>6.6%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>
LGS actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	8,679	11,221	19,900			
Proportion of financing through equity (in %)	100%	100%	100%			
RoE pre-tax rate (in %)	6.6%	6.6%	6.6%			
RoE (in value)	573	741	1,314			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	501	501			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>573</b>	<b>1,242</b>	<b>1,814</b>			
<b>Revenue for the terminal charging zone</b>	<b>5,592</b>	<b>6,121</b>	<b>11,713</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>10.2%</b>	<b>20.3%</b>	<b>15.5%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>6.6%</b>	<b>11.1%</b>	<b>9.1%</b>			

13. Focus on main ANSP regulatory result on terminal activity



LGS net gain on activity in the Latvia terminal charging zone in the combined year 2020-2021

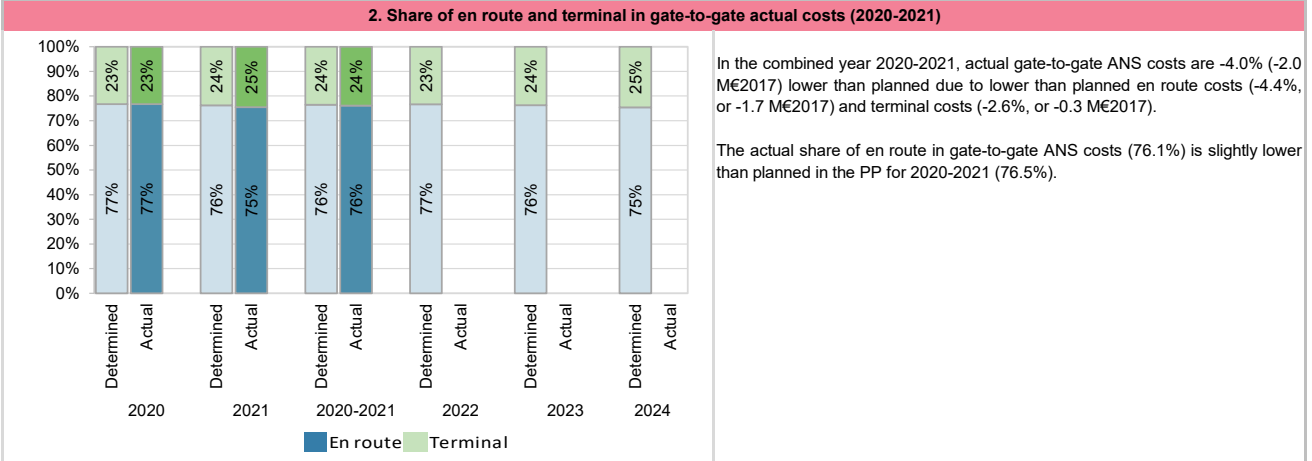
LGS's net gain amounts to +0.5 ME due to gains of +0.3 ME from the cost sharing mechanism and of +0.2 ME from the traffic risk sharing mechanism.

LGS overall regulatory results (RR) for the terminal charging zone activity

Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+0.5 ME) and the actual RoE (+1.3 ME) amounts to +1.8 ME (15.5% of the terminal revenues). The resulting ex-post rate of return on equity is 9.1%, which is higher than the 6.6% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Latvia-MET planned regulatory result (EUR '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	0	0	0	0	0	0
Revenue for the terminal charging zone	113	113	226	113	190	191
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Latvia-MET actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	0	1	1			
Revenue for the terminal charging zone	113	114	227			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	1.0%	0.5%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity</b>						
Ex-post, the overall RR for METSP in Latvia terminal charging zone corresponds to 0.5% of the terminal revenues.						
It should be noted that Latvia-MET does not charge the cost of capital.						

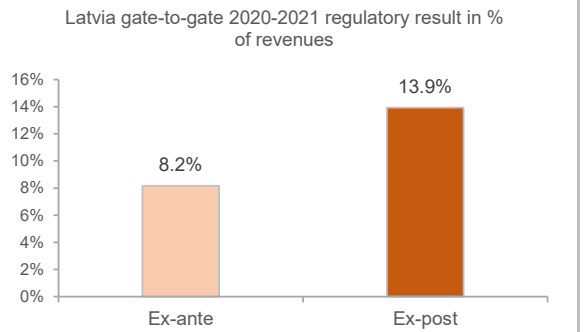
1. Monitoring of gate-to-gate ANS costs						
Charging zones concerned:						
En route charging zone 1: Latvia		En route charging zone 2:				
Terminal charging zone 1: Latvia		Terminal charging zone 2:				
Latvia: data from RP3 performance plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)	19,046,363	19,273,567	38,319,930	17,724,537	19,519,091	19,144,924
Real terminal costs (EUR2017)	5,779,829	6,010,333	11,790,162	5,398,697	6,068,548	6,244,635
Real gate-to-gate costs (EUR2017)	24,826,192	25,283,899	50,110,092	23,123,233	25,587,639	25,389,559
En route share (%)	76.7%	76.2%	76.5%	76.7%	76.3%	75.4%
Latvia: actual data from reporting tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)	19,046,363	17,572,511	36,618,874			
Real terminal costs (EUR2017)	5,779,829	5,708,115	11,487,945			
Real gate-to-gate costs (EUR2017)	24,826,192	23,280,627	48,106,819			
En route share (%)	76.7%	75.5%	76.1%			
Difference between actuals and planned (actuals vs. PP)	2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017)						
	in value	0	-2,003,273	-2,003,273		
	in %	0.0%	-7.9%	-4.0%		
En route share	in p.p.	0.0 p.p.	-0.7 p.p.	-0.4 p.p.		



3. Gate-to-gate regulatory result (RR) 2020-2021										
In EUR '000	ANSP(S)	Ex-ante			Ex-post			RR	Revenues	RR % revenues
		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues			
	LGS	3,891	46,730	8.3%	6,789	47,834	14.2%			
	<b>METSP(s)</b>									
	Latvia MET	0	900	0.0%	1	904	0.2%			
	<b>Total</b>	<b>3,891</b>	<b>47,630</b>	<b>8.2%</b>	<b>6,791</b>	<b>48,739</b>	<b>13.9%</b>			

For the ANSPs providing services in the en route and terminal charging zones of Latvia covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +6.8 M€ (+5.0 M€ for en route and +1.8 M€ for terminal - see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 13.9% of gate-to-gate ANS revenues.

This is higher than the return planned for the year (8.2%).



# **Annual Monitoring Report 2021**

## Local level view

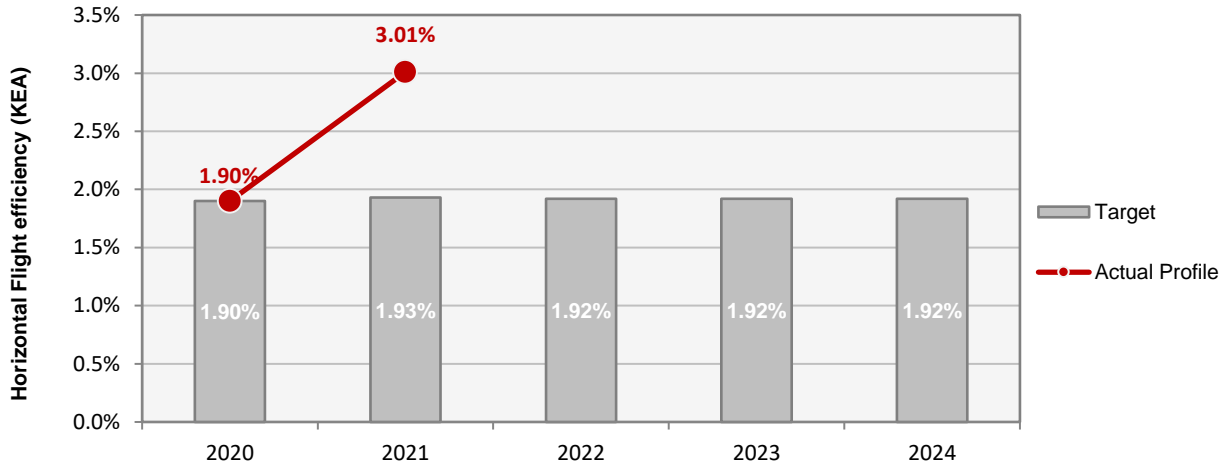
### Lithuania

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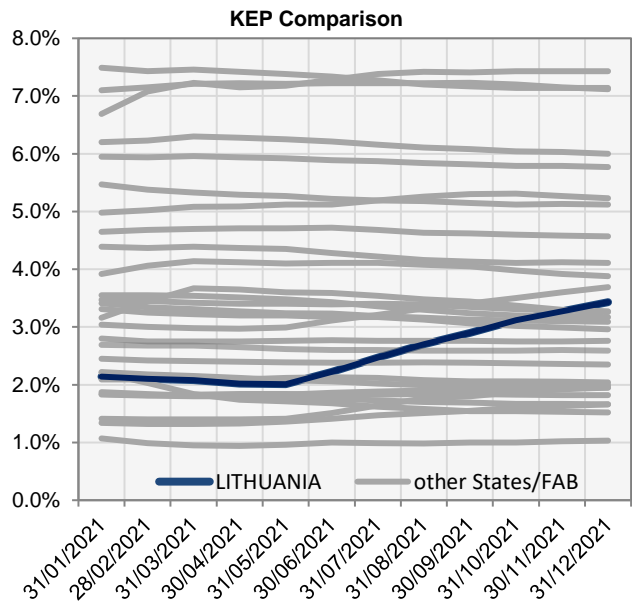
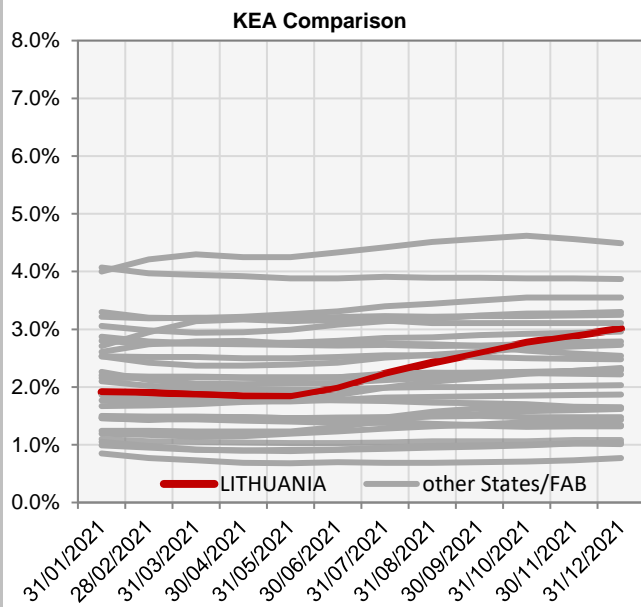
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>Oro Navigacija</b>	99	D	D	D	C	D
<p>Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.</p>						
Observations						
<p>All five EoSM components of the ANSP meet, or exceed, already the 2024 target level. Slight increase in maturity is observed this year, leaving only one question below maximum maturity level.</p> <p>IMPORTANT: EASA/European Commission did not receive the verified questionnaire from the NSA on time. This is an important step to receive confirmation that the self-evaluated questionnaire by the ANSP has been actually verified. It should be sent in due time to allow proper and timely drafting of the Monitoring Report.</p>						

KEA					
	2020	2021	2022	2023	2024
Target	1.90%	1.93%	1.92%	1.92%	1.92%
Actual performance	1.90%	3.01%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	1.91%	1.90%	1.88%	1.84%	1.84%	1.99%	2.23%	2.42%	2.59%	2.77%	2.89%	3.01%
KEP	2.14%	2.10%	2.08%	2.02%	2.01%	2.22%	2.47%	2.70%	2.90%	3.12%	3.27%	3.43%
KES	1.57%	1.54%	1.52%	1.49%	1.48%	1.60%	1.74%	1.89%	2.02%	2.16%	2.26%	2.32%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**Update on Military dimension of the plan**

Assessing the 2021 statistics, it can be seen that the use of ARES, which were reserved by LIT MIL, has become more efficient - thus, the transfer of part of the responsibilities to MIL AMC ensures more flexible and efficient use of airspace. There are also observed more cancellations of reservations, which may indicate better involvement of MIL representatives in notifying the changed planning of activities (i.e. lower values of the number of reservations and time coefficients do not necessarily mean "bad" - it also indicates more active involvement, timely provision of information from stakeholders sides).

Statistics of airspace usage effectiveness provided in sheets 2.2.2 F PI#6, 2.2.2 G PI#7, 2.2.2HF PI#8 respectively. Having in mind airspace design dimension - during 2021 in cooperation with MIL two new TSAs EY TSA8A and EY TSA8B were created, respective alternate routes were established, activation sequencies and priorities were revised. Also in 2021 work together with MIL and neighbouring countries started on adoption in the region the airspace structure which enables large scale exercises, including participation of 5th generation aircraft. Mitigation means of possible negative impact on traffic flows and capacity are taken into consideration. The results of this work will be implemented gradually in 2022-2024.

**Military - related measures implemented or planned to improve capacity**

Automated ASM tool LARA with latest version v.3.2 connected to ATM system was put into operation. MIL using LARA web interface. Impact on Capacity could not been fairly measured, because in 2021 COVID restrictive measures had a major impact on aviation business activity.

**PI#6 Effective use of reserved or segregated airspace - national level**

Ratio PI#6	2020	2021	2022	2023	2024
Lithuania	96%	100%			

**PI#6 Effective use of reserved or segregated airspace (per ACC)**

Ratio PI#6	2020	2021	2022	2023	2024
Vilnius ACC	96%	100%			

**Initiatives implemented or planned to improve PI#6**

In 2021 ON moved to Automated ASM tool LARA v.3.2 and connected via FMTP LARA with ATM system iTEC. Also, in 2021 LIT MIL established MIL AMC division, which is using web-LARA interface. Having this in mind coordination activities were updated accordingly, so coordination and interoperability with MIL increased.

In future - further enhancement and installation of newest Automated ASM tool version and ensurance of technical interoperability with MIL also updating respective coordination procedures.

**PI#7 Rate of planning via available airspace structures - national level**

Ratio PI#7	2020	2021	2022	2023	2024
Lithuania	110%	112%			

**PI#7 Rate of planning via available airspace structures (per ACC)**

Ratio PI#7	2020	2021	2022	2023	2024
Vilnius ACC	110%	112%			

**Initiatives implemented or planned to improve PI#7**

In 2021 ON moved to Automated ASM tool LARA v.3.2 and connected via FMTP LARA with ATM system iTEC. Also, in 2021 LIT MIL established MIL AMC division, which is using web-LARA interface. Having this in mind coordination activities were updated accordingly, so coordination and interoperability with MIL increased.

In future - further enhancement and installation of newest Automated ASM tool version and ensurance of technical interoperability with MIL also updating respective coordination procedures.

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Lithuania	155%	152%			

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Vilnius ACC	155%	152%			

**Initiatives implemented or planned to improve PI#8**

In 2021 ON moved to Automated ASM tool LARA v.3.2 and connected via FMTP LARA with ATM system iTEC. Also, in 2021 LIT MIL established MIL AMC division, which is using web-LARA interface. Having this in mind coordination activities were updated accordingly, so coordination and interoperability with MIL increased.

In future - further enhancement and installation of newest Automated ASM tool version and ensurance of technical interoperability with MIL also updating respective coordination procedures.

Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.05	0.01	0.03	0.03	0.03		
<b>Actual performance</b>	0.00	0.00					
NSA's assessment of capacity performance							
ATSP ON [SE Oro Navigacija] is meeting the value: an excellent result, as in previous RP2 years. Outlook for next years' achievement is presented below.							
CAP targets will be certainly achieved in the rest of RP3 due to regional effect into the Baltics, Poland and Finland stemming out of the war and EU sanctions.							
Flights	JAN	FEB	MAR	APR	MAY	JUN	
2019 Actual	21 820	19 233	21 791	24 617	27 913	27 913	
2022 Plan	18 207	16 048	18 183	20 541	22 951	23 291	
2022 Actual	18 401	15 268	10 704	12 060			
<b>Difference 2022 A / 2022 P*</b>	<b>1,1%</b>	<b>-4,9%</b>	<b>-41,1%</b>	<b>-41,3%</b>			
Difference 2022 A/ 2019 A	-15,7%	-20,6%	-50,9%	-51,0%			
<b>* - Draft RP3 PP with approved targets by the EC Decision of 13 APR 2022.</b>							
Monitoring process for capacity performance							
Monthly on <a href="https://ansperformance.eu/data/">https://ansperformance.eu/data/</a>							
Capacity Planning							
Planning is in line with the required performance.							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned (Perf Plan)</b>	-	-	36	38	42	42	
<b>Actual</b>	35	36	34				
Application of Corrective Measures for Capacity (if applicable)							
Not applicable.							
Summary of capacity performance							
Lithuania experienced an increase in traffic from 139k flights in 2020 to 178k flights in 2021, with zero ATFM delay. However, traffic levels were still substantially below the 302k flights in 2019.							
As explained by the NSA, traffic levels in 2022 have reduced significantly due to war and international sanctions.							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.05	0.01	0.03	0.03	0.03		
<b>Deadband +/-</b>	-	-	[0.029-0.031]	[0.029-0.031]	[0.029-0.031]		
<b>Actual performance</b>	0.00	0.00					
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.							

1. Contextual economic information: en route air navigation services						
Lithuania ECZ represents 0.4% of the SES en route ANS actual costs in 2019			FAB: Baltic FAB			
National currency: EUR						
Performance Plan: RP3 draft performance plan dated 17 November 2021 and found consistent as per Commission Decision (EU) 2022/769 of 13 April 2022						
The final version of the plan was adopted and published on 18 August 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317.						
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Lithuania: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)	19,503,591	20,910,657	40,414,248	24,494,602	27,956,051	28,632,942
Inflation %	1.1%	3.2%		2.8%	2.7%	2.1%
Inflation index (100 in 2017)	105.9	109.3		112.4	115.4	117.8
Real en route costs (EUR2017)	18,661,791	19,622,361	38,284,152	22,466,160	25,065,668	25,251,545
Total en route service units	332,616	425,318	757,934	506,000	611,000	673,000
<b>Real en route DUC per service unit (EUR2017)</b>	<b>56.11</b>	<b>46.14</b>	<b>50.51</b>	<b>44.40</b>	<b>41.02</b>	<b>37.52</b>
Lithuania: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)	19,503,591	21,440,731	40,944,322			
Inflation %	1.1%	4.6%				
Inflation index (100 in 2017)	105.9	110.8				
Real en route costs (EUR2017)	18,661,791	19,932,490	38,594,281			
Total en route service units	332,616	443,151	775,768			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>56.11</b>	<b>44.98</b>	<b>49.75</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)						
in value	0	530,074	530,074			
in %	-	+2.5%	+1.3%			
Inflation %						
in p.p.	0.0 p.p.	1.4 p.p.				
Inflation index (100 in 2017)						
in p.p.	0.0 p.p.	1.5 p.p.				
Real en route costs (EUR2017)						
in value	0	310,128	310,128			
in %	-	+1.6%	+0.8%			
Total en route service units						
in value	0	17,833	17,833			
in %	-	+4.2%	+2.4%			
<b>Real en route unit cost per service unit (EUR2017)</b>						
in value	<b>0.00</b>	<b>-1.16</b>	<b>-0.76</b>			
in %	-	<b>-2.5%</b>	<b>-1.5%</b>			
4. Focus on en route DUC monitoring at charging zone level						
<b>ACU vs. DUC</b>						
The AUC for the combined year 2020-2021 (49.75 €2017) turned out close to the planned DUC (lower by -1.5%, or -0.76 €2017). This results from the higher actual vs. forecast TSUs (+2.4%) and higher actual vs. determined costs (+0.8% or +0.3 M€2017).						
<b>En route service units</b>						
The difference between actual and planned TSUs (+2.4%) falls between the +2% dead band and the +10% threshold, which resulting in the additional gains shared between the ANSP and the airspace users.						
<b>En route costs by entity at charging zone level</b>						
Actual real en route costs for 2020-2021 are +0.8% (+0.3 M€2017) higher than planned. This result is driven by the main ANSP - Oro navigacija (+0.6%, or +0.2 M€2017), METSP (+8.0% or +0.1 M€2017) and the NSA/EUROCONTROL costs (+1.4%, or + 0.05 M€2017). The costs for other ANSP (LGS for provision of services at NINTA-ADAXA) are -5.7% lower than planned.						
<b>En route costs for the main ANSP (Oro navigacija) at charging zone level</b>						
Overall, the en route costs in real terms for Oro navigacija in 2020-2021 were slightly higher than determined (+0.6% or +0.2 M€). This results from:						
- higher staff costs (+0.9%) resulting from the newly recruited staff in second half of 2021;						
- higher other operating costs (+2.2%) and higher depreciation costs (+1.3%) resulting from the unexpected increase of overflights and in consequence bigger share of costs attributed to en route activities;						
- higher cost of capital (+6.9%) due to the difference in allocation of costs resulting from additional overflights and increase in the average assets base;						
- the negative exceptional costs representing the result of the asset base recalculation, which were not foreseen in the PP.						
			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p> <p>+2.4%</p>			
			<p>Costs by entity at ECZ level (M€2017):</p> <p>Main ANSP 0.6%</p> <p>Other ANSP(s) -5.7%</p> <p>METSP(s) 8.0%</p> <p>NSA/EUROCONTROL 1.4%</p> <p>Total CZ 0.8%</p>			
			<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs 0.9%</p> <p>Other operating costs 2.2%</p> <p>Depreciation 1.3%</p> <p>Cost of capital 6.9%</p> <p>Exceptional costs</p> <p>VFR exempted flights</p> <p>Total Main ANSP 0.6%</p>			

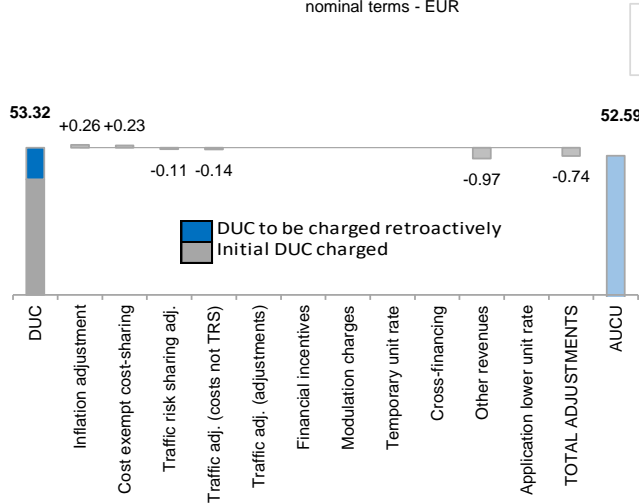
5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level

Lithuania 2020-2021 DUC vs. Actual Unit Cost for users in national currency in nominal terms - EUR



Components of the AUCU EUR/SU

Component	EUR/SU
Initial DUC charged	41.85
DUC to be charged retroactively	11.47
<b>DUC</b>	<b>53.32</b>
Inflation adjustment	0.26
Cost exempt from cost-sharing	0.23
Traffic risk sharing adjustment	-0.11
Traffic adj. (costs not TRS)	-0.14
Traffic adj. (adjustments)*	-0.11
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	0.00
Cross-financing	0.00
Other revenues	-0.97
Application of lower unit rate	0.00
Total adjustments	-0.74
<b>AUCU</b>	<b>52.59</b>
<b>AUCU vs. DUC</b>	<b>-1.4%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

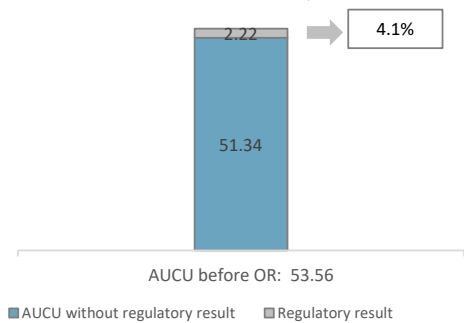
7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	127	0.16
Competent authorities and qualified entities costs	-1	0.00
Eurocontrol costs	49	0.06
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>175</b>	<b>0.23</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	EUR '000	EUR/SU
Oro Navigacija	1,727	2.23
Lithuania ANSP-NINTA ADAXA	97	0.12
METSP(s)	EUR '000	EUR/SU
Lithuania MET	-102	-0.13
<b>Total charging zone</b>	<b>1,721</b>	<b>2.22</b>
<b>Actual cost for users***</b>	<b>41,547</b>	<b>53.56</b>
<b>Regulatory result (% AUCU)</b>	<b>4.1%</b>	<b>4.1%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (52.59€) is -1.4% lower than the nominal DUC (53.32€) which includes DUC initially charged: 41.85€; and to be charged: 11.47€. The difference between these two figures (-0.74€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+0.26€/SU);
  - the impact of adjustments resulting from the costs exempt from cost-sharing mechanism (+0.23€/SU);
  - the deduction of the traffic risk sharing adjustments (-0.11€/SU);
  - the deduction of the traffic adjustment (-0.14€/SU) for the costs not subject to traffic risk sharing to be reimbursed to the airspace users in future years; and
  - the deduction of the other revenues (-0.97€/SU) to be reimbursed to the airspace users in future years, representing the government grants received by NSA to cover part of EUROCONTROL's contribution.
- The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 4.1%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

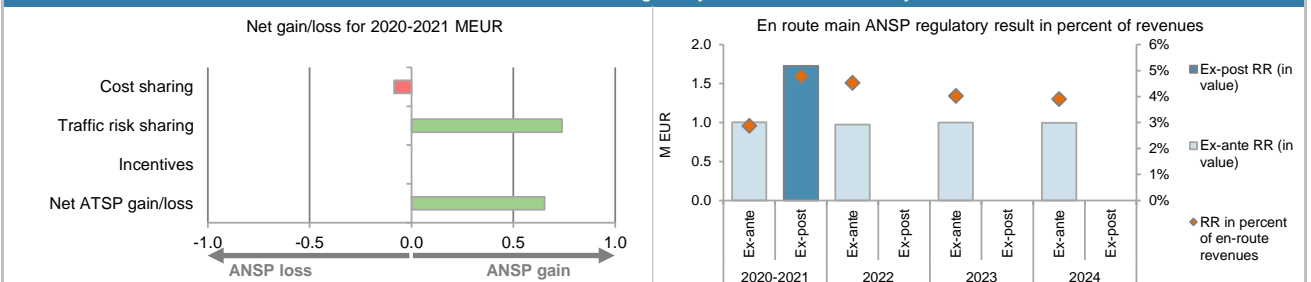
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	-407			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	194			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	127			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>-86</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	2.4%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	35,070			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>739</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>653</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

Oro Navigacija planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	39,185	33,474	72,660	32,515	33,345	33,210
Proportion of financing through equity (in %)	100%	100%	100%	100%	100%	100%
RoE pre-tax rate (in %)	0.0%	3.0%	1.4%	3.0%	3.0%	3.0%
RoE (in value)	0	1,004	1,004	975	1,000	996
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>0</b>	<b>1,004</b>	<b>1,004</b>	<b>975</b>	<b>1,000</b>	<b>996</b>
Revenue for the en route charging zone	16,832	18,238	35,070	21,543	24,914	25,532
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>0.0%</b>	<b>5.5%</b>	<b>2.9%</b>	<b>4.5%</b>	<b>4.0%</b>	<b>3.9%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>0.0%</b>	<b>3.0%</b>	<b>1.4%</b>	<b>3.0%</b>	<b>3.0%</b>	<b>3.0%</b>
Oro Navigacija actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	39,185	35,789	74,975			
Proportion of financing through equity (in %)	100%	100%	100%			
RoE pre-tax rate (in %)	0.0%	3.0%	1.4%			
RoE (in value)	0	1,074	1,074			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	653	653			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>0</b>	<b>1,727</b>	<b>1,727</b>			
Revenue for the en route charging zone	16,832	19,297	36,129			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>0.0%</b>	<b>8.9%</b>	<b>4.8%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>0.0%</b>	<b>4.8%</b>	<b>2.3%</b>			

13. Focus on the main ANSP regulatory result on en route activity



Oro navigacija net gain on en route activity in the Lithuanian charging zone in the combined year 2020-2021

Oro navigacija's net gain amounts to +0.7 ME, as a combination of a loss of -0.1 ME arising from the cost sharing mechanism and a gain of +0.7 ME arising from the traffic risk sharing mechanism.

Oro navigacija overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+0.7 ME) and the actual RoE (+1.1 ME) amounts to +1.7 ME (4.8% of the en route revenues). The resulting ex-post rate of return on equity is 2.3% which is lower than the 3.0% planned in the PP.



14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
<b>Lithuania ANSP-NINTA ADAXA planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	18.9	29.0	47.9	35.8	41.3	28.2
Revenue for the en route charging zone	323.0	334.8	657.8	375.3	401.1	399.3
Ex-ante regulatory result (+/-) in percent of revenues	5.9%	8.7%	7.3%	9.6%	10.3%	7.1%
Ex-ante RoE pre-tax rate (in %)	4.5%	6.6%	5.6%	5.4%	5.4%	5.4%
<b>Lithuania ANSP-NINTA ADAXA actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	18.9	77.6	96.5			
Revenue for the en route charging zone	323.0	352.5	675.5			
Ex-post regulatory result (+/-) in percent of revenues	5.9%	22.0%	14.3%			
Ex-post RoE pre-tax rate (in %)	4.5%	20.4%	12.1%			
<b>Lithuania MET planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0.0	0.0	0.0	0.0	0.0	0.0
Revenue for the en route charging zone	600.0	621.0	1,221.0	724.0	753.0	789.0
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Lithuania MET actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0.0	-102.3	-102.3			
Revenue for the en route charging zone	600.0	628.7	1,228.7			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	-16.3%	-8.3%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSPs planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	18.9	29.0	47.9	35.8	41.3	28.2
Revenue for the en route charging zone	923.0	955.8	1,878.8	1,099.3	1,154.1	1,188.3
Ex-ante regulatory result (+/-) in percent of revenues	2.0%	3.0%	2.5%	3.3%	3.6%	2.4%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total other ANSPs actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	18.9	-24.6	-5.7			
Revenue for the en route charging zone	923.0	981.3	1,904.3			
Ex-post regulatory result (+/-) in percent of revenues	2.0%	-2.5%	-0.3%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
For other ANSPs (2 ANSPs) the overall ex-post regulatory results for the combined year 2020-2021 amounted to -6,000€, mainly arising from the negative ex-post RR for METSP at the level of -0.1 M€. For LGS providing the services at NINTA-ADAXA the ex-post RR corresponds to +0.1 M€ and represents 14.3% of the revenues and ex-post RoE at the level of 12.1% (vs. ex-ante RoE 5.6%).						

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# **Annual Monitoring Report 2021**

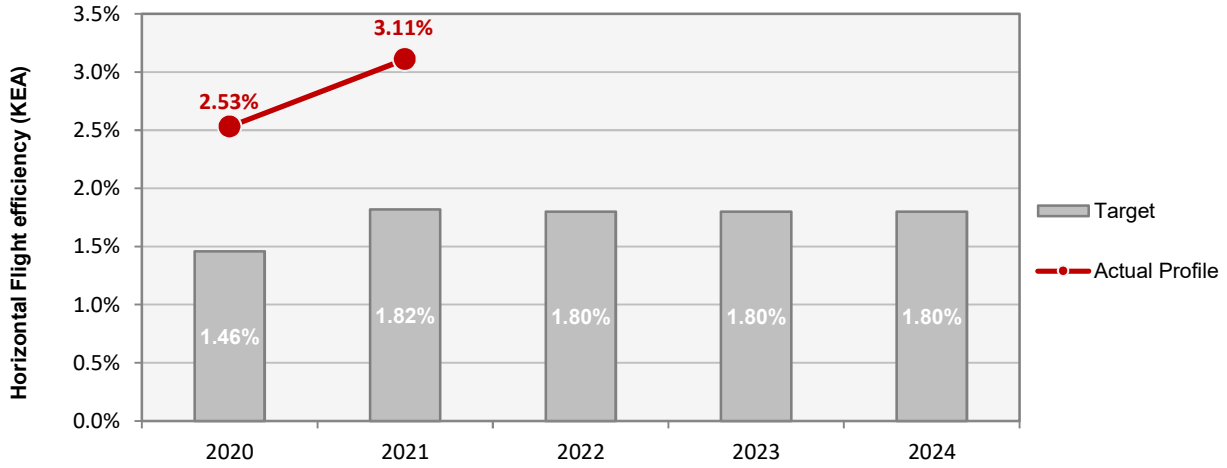
Local level view

Malta

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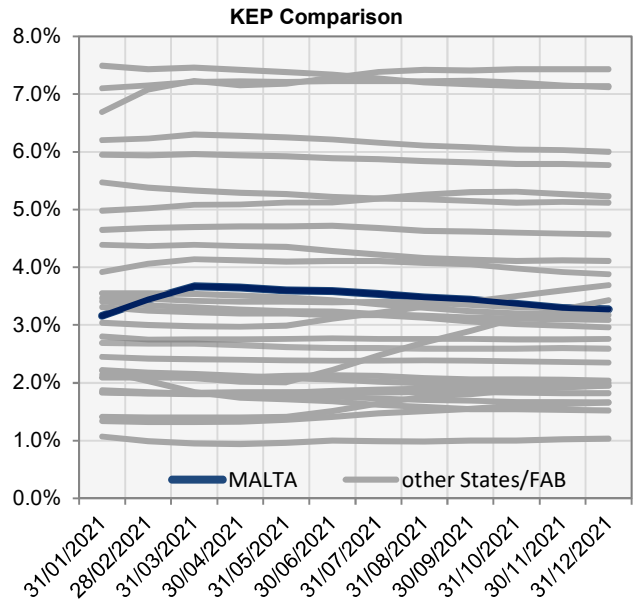
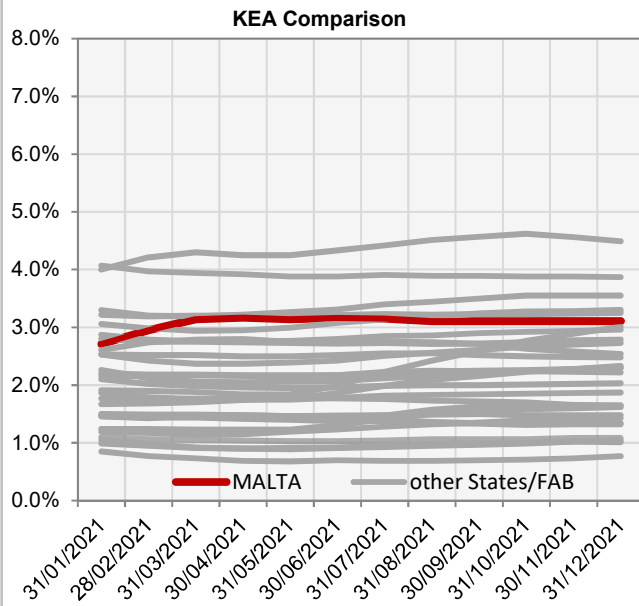
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>MATS</b>	100	D	D	D	D	D
<p>Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.</p>						
Observations						
<p>All five EoSM components of the ANSP meet, or exceed, already the 2024 target level. The maximum level of maturity has been reached.</p>						

KEA					
	2020	2021	2022	2023	2024
Target	1.46%	1.82%	1.80%	1.80%	1.80%
Actual performance	2.53%	3.11%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	2.71%	2.95%	3.14%	3.17%	3.14%	3.16%	3.15%	3.11%	3.11%	3.11%	3.11%	3.11%
KEP	3.16%	3.44%	3.67%	3.65%	3.60%	3.59%	3.54%	3.48%	3.44%	3.37%	3.30%	3.27%
KES	2.20%	2.40%	2.51%	2.46%	2.44%	2.44%	2.40%	2.37%	2.36%	2.33%	2.30%	2.29%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**1. Overview**

The scope of RP3 monitoring for Malta comprises the main airport (LMML), where traffic in 2021, regardless of an increase of 33% with respect to 2020, was still 44 % lower than in 2019. In accordance with IR (EU) 2019/317 and the traffic volume, additional taxi-out and ASMA times are not monitored at this airport and the environmental performance focuses only on the share of arrivals applying CDO. The share of CDO flights is still in the higher range of all observed values in 2021.

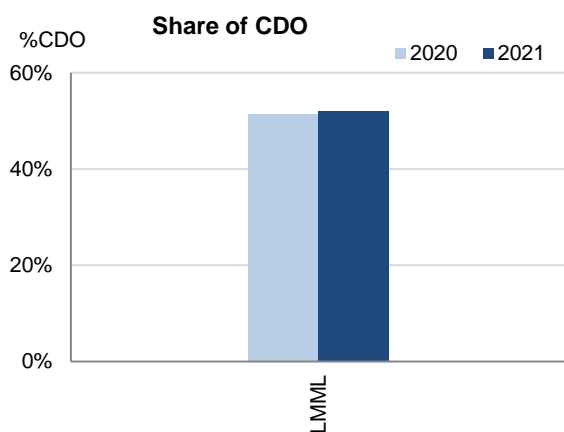
**2. Additional Taxi-Out Time**

This indicator is not monitored for airports below 80 000 IFR movements average during the 2016-2018 period, so it is not monitored for any airport in this state.

**3. Additional ASMA Time**

This indicator is not monitored for airports below 80 000 IFR movements average during the 2016-2018 period, so it is not monitored for any airport in this state.

**4. Share of arrivals applying CDO**



The share of CDO flights at Malta (LMML) increased very slightly to 51.9% which is well above the overall RP3 value in 2021 (30.5%) and in the higher range of all observed values in 2021. The monthly values increased from March to values above 55% at the end of the year.

**5. Appendix**

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Malta/Luqa-LMML	-	-				-	-				51%	52%			

Update on Military dimension of the plan					
Negligible impact of military operations and training on either environment or capacity.					
Military - related measures implemented or planned to improve capacity					
Nil					
PI#6 Effective use of reserved or segregated airspace - national level					
Ratio PI#6	2020	2021	2022	2023	2024
Malta					
PI#6 Effective use of reserved or segregated airspace (per ACC)					
Ratio PI#6	2020	2021	2022	2023	2024
Malta ACC	16%				
Initiatives implemented or planned to improve PI#6					
Airspace segregation is as requested by the military.					
PI#7 Rate of planning via available airspace structures - national level					
Ratio PI#7	2020	2021	2022	2023	2024
Malta					
PI#7 Rate of planning via available airspace structures (per ACC)					
Ratio PI#7	2020	2021	2022	2023	2024
Malta ACC					
Initiatives implemented or planned to improve PI#7					
Segregated areas are NOTAMED as Danger Areas and Restrictions / EU Regulations are applied. NSA monitoring and oversight activities to confirm effectiveness.					
PI#8 Rate of using available airspace structures - national level					
Ratio PI#8	2020	2021	2022	2023	2024
Malta					
PI#8 Rate of using available airspace structures (per ACC)					
Ratio PI#8	2020	2021	2022	2023	2024
Malta ACC					
Initiatives implemented or planned to improve PI#8					
Segregated areas are NOTAMED as Danger Areas and Restrictions / EU Regulations are applied.					



Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.02	0.01	0.01	0.01	0.01		
<b>Actual performance</b>	0.00	0.00					
<b>NSA's assessment of capacity performance</b>							
Capacity demands were low and therefore the forecasted target of 0.01 was not met.							
<b>Monitoring process for capacity performance</b>							
No information provided.							
<b>Capacity Planning</b>							
Sector demand is calculated on daily basis and during peaks of traffic, sectors are collapsed.							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned 2021 Perf Plan</b>	-	-	30	39	38	38	
<b>Planned 2022 Perf Plan</b>				39	38	38	
<b>Actual</b>	32	30	30				
<b>Application of Corrective Measures for Capacity (if applicable)</b>							
No information provided							
<b>Summary of capacity performance</b>							
Malta experienced an increase in traffic from 56k flights in 2020 to 72k flights in 2021, with zero ATFM delay. However, traffic levels were still substantially below the 130k flights in 2019.							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.02	0.01	0.01	0.01	0.01		
<b>Deadband +/-</b>	-	-	[0-0.05]	[0-0.05]	[0-0.05]		
<b>Actual performance</b>	0.00	0.00					
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.							

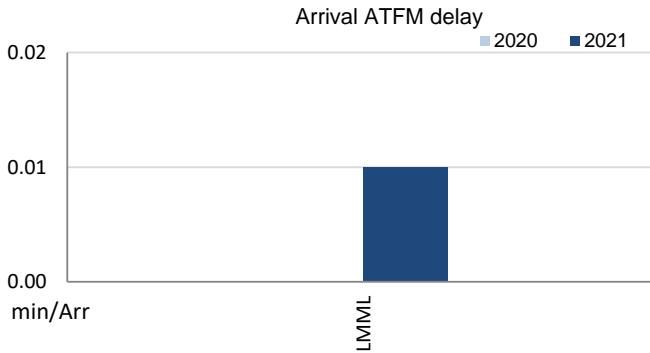
1. Overview

The scope of RP3 monitoring for Malta comprises the main airport (LMML), where traffic in 2021, regardless of an increase of 33% with respect to 2020, was still 44 % lower than in 2019.

In accordance with IR (EU) 2019/317 and the traffic volume, pre-departure delays are not monitored at Malta and the capacity performance monitoring focuses on arrival ATFM delay and slot adherence.

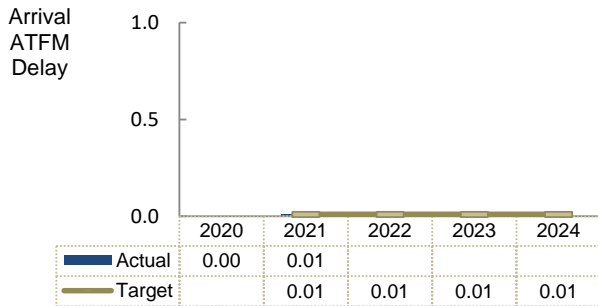
Average arrival ATFM delays in 2021 was 0.01 min/arr, compared to 0 min/arr in 2020.  
 ATFM slot adherence has deteriorated (2021: 96.6%; 2020: 97.1%).

2. Arrival ATFM Delay



Malta-Luqa (LMML) registered some delays in 2021, all in September and all attributed to special event. This resulted in an annual average for Malta of 0.01 min/arr.

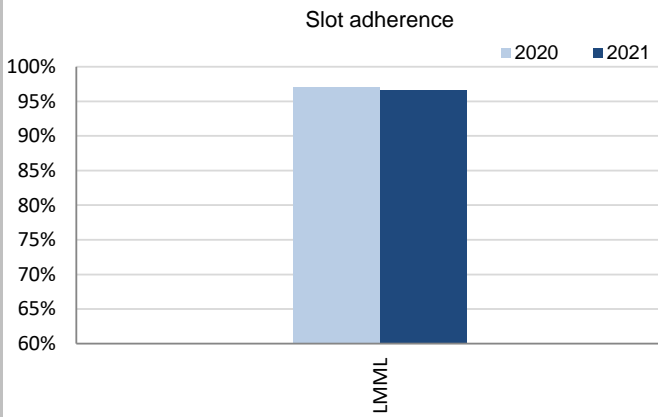
3. Arrival ATFM Delay – National Target and Incentive Scheme



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

#### 4. ATFM Slot Adherence



With the drastic drop in traffic, the share of regulated departures from Malta virtually disappeared until July 2021. Malta's ATFM slot compliance was 96.6%, slightly worse than in 2020 (97.1%). With regard to the 3.4% of flights that did not adhere, 1.5% was early and 1.9% was late.

According to the Maltese monitoring report: *ATFM is monitored through the ANSP. The ANSP has an internal target of 95% compliance which is higher than the target stipulated in Article 11 of EC255. NMIR Statistics are monitored on weekly basis and investigations are carried out for major slot busts.*

#### 5. ATC Pre-departure Delay

This indicator is not monitored for airports below 80 000 IFR movements annual average during the 2016-2018 period, so it is not monitored for any airport in Malta.

#### 6. All Causes Pre-departure Delay

This indicator is not monitored for airports below 80 000 IFR movements annual average during the 2016-2018 period, so it is not monitored for any airport in Malta.

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Malta/Luqa-LMML	0	0.01				97.1%	96.6%				-	-				-	-			

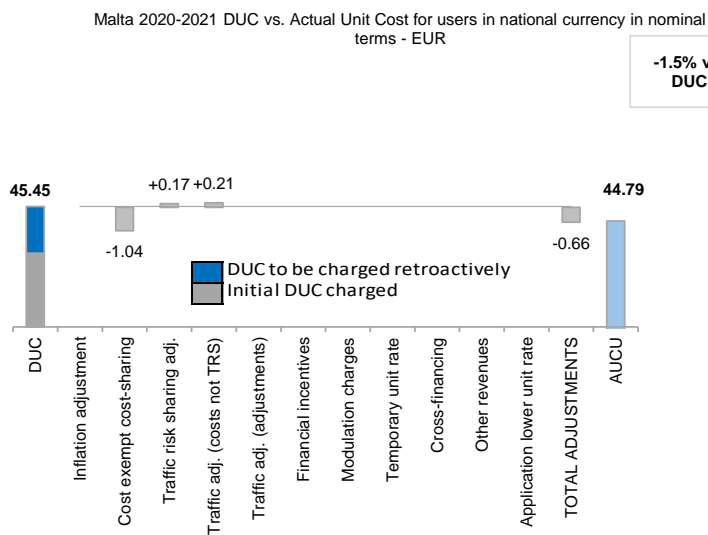
1. Contextual economic information: en route air navigation services						
· Malta ECZ represents 0.4% of the SES en route ANS actual costs in 2019 · National currency: EUR · Performance Plan: RP3 draft performance plan dated 1 February 2022 and found inconsistent as per Commission Decision (EU) 2022/728 of 13 April 2022 Malta has submitted a revised RP3 draft performance plan in July 2022, currently under assessment.			· FAB: BLUE MED FAB			
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Malta: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)	20,127,208	21,864,744	41,991,952	23,764,564	23,778,505	25,626,024
Inflation %	0.8%	0.7%		4.7%	2.8%	2.1%
Inflation index (100 in 2017)	104.1	104.8		109.7	112.8	115.1
Real en route costs (EUR2017)	19,569,513	21,155,781	40,725,294	22,250,004	21,740,183	23,058,376
Total en route service units	395,964	528,000	923,964	811,000	1,006,000	1,044,000
<b>Real en route DUC per service unit (EUR2017)</b>	<b>49.42</b>	<b>40.07</b>	<b>44.08</b>	<b>27.44</b>	<b>21.61</b>	<b>22.09</b>
Malta: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)	20,127,208	20,373,568	40,500,776			
Inflation %	0.8%	0.7%				
Inflation index (100 in 2017)	104.1	104.8				
Real en route costs (EUR2017)	19,569,513	19,686,846	39,256,359			
Total en route service units	395,964	503,699	899,664			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>49.42</b>	<b>39.08</b>	<b>43.63</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)	0	-1,491,176	-1,491,176			
in value	0	-1,491,176	-1,491,176			
in %	-	-6.8%	-3.6%			
Inflation %	0.0 p.p.	0.0 p.p.				
in p.p.	0.0 p.p.	0.0 p.p.				
Inflation index (100 in 2017)	0.0 p.p.	0.0 p.p.				
in p.p.	0.0 p.p.	0.0 p.p.				
Real en route costs (EUR2017)	0	-1,468,935	-1,468,935			
in value	0	-1,468,935	-1,468,935			
in %	-	-6.9%	-3.6%			
Total en route service units	0	-24,301	-24,301			
in value	0	-24,301	-24,301			
in %	-	-4.6%	-2.6%			
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>0.00</b>	<b>-0.98</b>	<b>-0.44</b>			
in value	0.00	-0.98	-0.44			
in %	-	-2.5%	-1.0%			
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs DUC</b> In the combined year 2020-2021, the AUC was lower than the planned DUC (-1.0%, or -0.44€). This results from the combination of lower than planned TSUs (-2.6%) and lower than planned en route costs in real terms (-3.6%, or -1.5 M€2017).						
<b>En route service units</b> The difference between actual and planned TSUs (-2.6%) falls outside of the ±2% dead band. Hence, the resulting loss is shared between the ANSP and airspace users, with the ANSP bearing a loss of -0.8 M€ (see items 10 to 13).						
<b>En route costs by entity at charging zone level</b> Actual real en route costs for 2020-2021 are -3.6% (-1.5 M€2017) lower than planned. This reflects the lower than planned costs for all the entities in the charging zone: main ANSP - MATS (-4.2%, or -1.5 M€2017) and the NSA/EUROCONTROL (-0.2%).						
<b>En route costs for the main ANSP (MATS) at charging zone level</b> The lower than planned en route costs in real terms for MATS in 2020-2021 reflects a combination of: - slightly higher staff costs (+0.1%); - lower other operating costs (-4.3%); - significantly lower depreciation costs (-16.3%); and, - much lower cost of capital (-15.1%), reflecting lower than planned asset base.						

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	27.81
DUC to be charged retroactively	17.64
<b>DUC</b>	<b>45.45</b>
Inflation adjustment	0.00
Cost exempt from cost-sharing	-1.04
Traffic risk sharing adjustment	0.17
Traffic adj. (costs not TRS)	0.21
Traffic adj. (adjustments)*	-
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	-
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-0.66
<b>AUCU</b>	<b>44.79</b>
<b>AUCU vs. DUC</b>	<b>-1.5%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

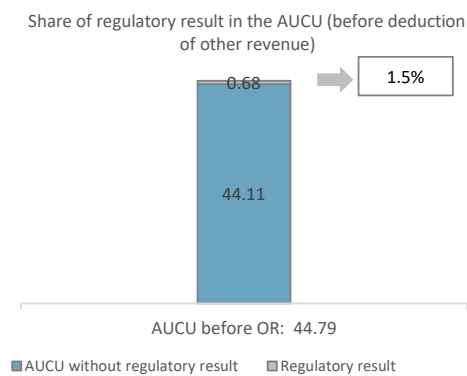
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-928	-1.03
Competent authorities and qualified entities costs	69	0.08
Eurocontrol costs	-81	-0.09
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-940</b>	<b>-1.04</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level



ANSP(S)	EUR '000	EUR/SU
MATS	610	0.68
<b>METSP(s)</b>	<b>EUR '000</b>	<b>EUR/SU</b>
Malta MET	0	0.00
<b>Total charging zone</b>	<b>610</b>	<b>0.68</b>
<b>Actual cost for users***</b>	<b>40,293</b>	<b>44.79</b>
<b>Regulatory result (% AUCU)</b>	<b>1.5%</b>	<b>1.5%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (44.79€) is -1.5% lower than the nominal DUC (45.45€) which includes DUC initially charged: 27.81€; and to be charged: 17.64€. The difference between these two figures is due to:

- the addition resulting from the traffic risk sharing adjustment (+0.17€/SU) and the traffic adjustment (+0.21€/SU) for the costs not subject to traffic risk sharing to be charged in future years; and,
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-1.04€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU is 1.5%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

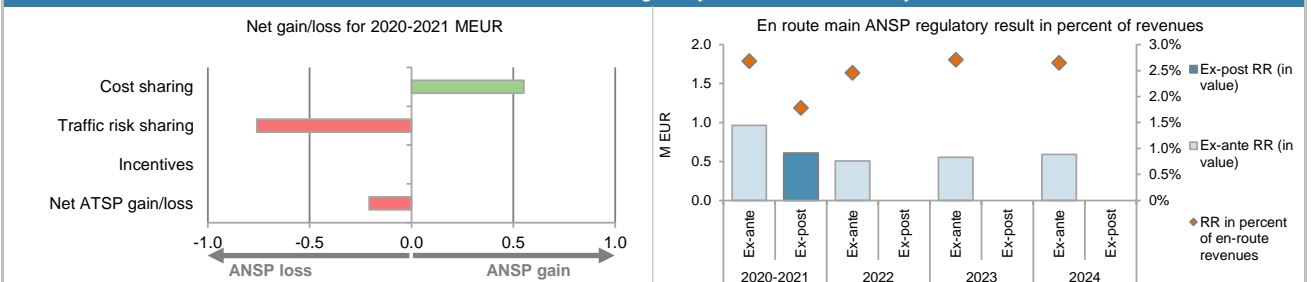
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	1,479			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	0			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-928			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>551</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	-2.6%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	34,696			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>-759</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>-208</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

MATS planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	10,917	12,436	23,354	12,976	13,885	14,757
Proportion of financing through equity (in %)	91%	95%	93%	98%	100%	100%
RoE pre-tax rate (in %)	5.0%	4.0%	4.4%	4.0%	4.0%	4.0%
RoE (in value)	495	470	964	505	555	590
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>495</b>	<b>470</b>	<b>964</b>	<b>505</b>	<b>555</b>	<b>590</b>
<b>Revenue for the en route charging zone</b>	<b>17,253</b>	<b>18,775</b>	<b>36,027</b>	<b>20,598</b>	<b>20,539</b>	<b>22,313</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>2.9%</b>	<b>2.5%</b>	<b>2.7%</b>	<b>2.5%</b>	<b>2.7%</b>	<b>2.6%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>5.0%</b>	<b>4.0%</b>	<b>4.4%</b>	<b>4.0%</b>	<b>4.0%</b>	<b>4.0%</b>
MATS actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	10,917	8,544	19,461			
Proportion of financing through equity (in %)	91%	95%	93%			
RoE pre-tax rate (in %)	5.0%	4.0%	4.5%			
RoE (in value)	495	324	818			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	-208	-208			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>495</b>	<b>116</b>	<b>610</b>			
<b>Revenue for the en route charging zone</b>	<b>17,253</b>	<b>17,087</b>	<b>34,340</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>2.9%</b>	<b>0.7%</b>	<b>1.8%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>5.0%</b>	<b>1.4%</b>	<b>3.4%</b>			

13. Focus on the main ANSP regulatory result on en route activity



MATS net loss on en route activity in the Maltese charging zone in the combined year 2020-2021

MATS's net loss amounts to -0.2 ME, as a combination of a gain of +0.6 ME arising from the cost sharing mechanism and a loss of -0.8 ME arising from the traffic risk sharing mechanism.

MATS overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net loss from the en route activity mentioned above (-0.2 ME) and the actual RoE (+0.8 ME) amounts to +0.6 ME (1.8% of the en route revenues). The resulting ex-post rate of return on equity is 3.4%, which is lower than the 4.4% planned in the PP.

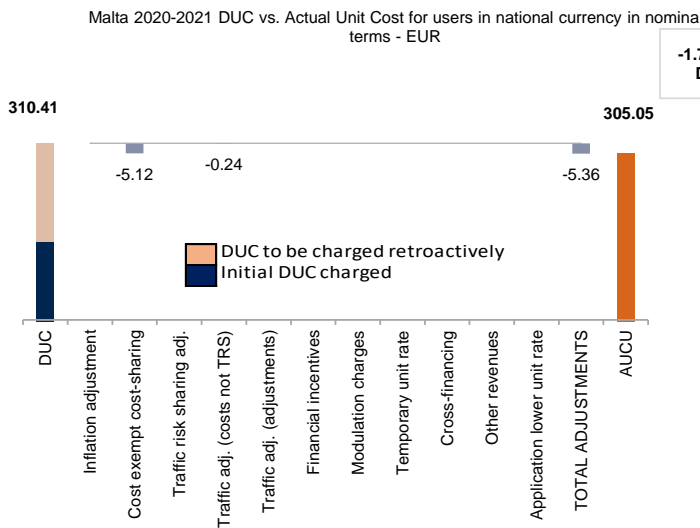
1. Contextual economic information: terminal air navigation services							
<ul style="list-style-type: none"> <li>Malta TCZ represents 0.4% of the SES terminal ANS actual costs in 2019</li> <li>Number of airports in charging zone in 2021: 1 of which:                             <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 1</li> <li>Airports with more than 80,000 IFR mvmts: 0</li> </ul> </li> <li>National currency: EUR</li> <li>Performance Plan: See item 1 for the en route charging zone(s).</li> </ul>							
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level							
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.</p>							
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)							
Malta: Data from RP3 Performance Plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal EUR)		5,058,181	5,349,338	10,407,520	5,757,104	6,088,716	6,673,787
Inflation %		0.8%	0.7%		4.7%	2.8%	2.1%
Inflation index (100 in 2017)		104.1	104.8		109.7	112.8	115.1
Real terminal costs (EUR2017)		4,913,948	5,167,669	10,081,618	5,374,588	5,565,036	5,999,409
Total terminal service units		14,528	19,000	33,528	31,000	35,000	36,000
<b>Real terminal DUC per service unit (EUR2017)</b>		<b>338.24</b>	<b>271.98</b>	<b>300.69</b>	<b>173.37</b>	<b>159.00</b>	<b>166.65</b>
Malta: Actual data from Reporting Tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal EUR)		5,058,181	4,548,640	9,606,821			
Inflation %		0.8%	0.7%				
Inflation index (100 in 2017)		104.1	104.8				
Real terminal costs (EUR2017)		4,913,948	4,394,907	9,308,855			
Total terminal service units		14,528	19,269	33,797			
<b>Real terminal AUC per service unit (EUR2017)</b>		<b>338.24</b>	<b>228.09</b>	<b>275.44</b>			
Difference between Actuals and Planned		2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal EUR)	in value	0	-800,698	-800,698			
	in %	-	-15.0%	-7.7%			
Inflation %	in p.p.	0.0 p.p.	0.0 p.p.				
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	0.0 p.p.				
Real terminal costs (EUR2017)	in value	0	-772,763	-772,763			
	in %	-	-15.0%	-7.7%			
Total terminal service units	in value	0	269	269			
	in %	-	+1.4%	+0.8%			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-43.90</b>	<b>-25.26</b>			
	<b>in %</b>	<b>-</b>	<b>-16.1%</b>	<b>-8.4%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>						
	<b>in %</b>						
4. Focus on terminal DUC monitoring at charging zone level							
<p><b>AUC vs DUC</b> In the combined year 2020-2021, the AUC for Malta TCZ was lower than the planned DUC (-8.4%, or -25.26€). This results from the combination of slightly higher than planned TNSUs (+0.8%) and lower than planned terminal costs in real terms (-7.7%, or -0.8 M€2017).</p>							
<p><b>Terminal service units</b> The difference between actual and planned TNSUs (+0.8%) falls within the ±2% dead band. Hence, the resulting gain of 0.1 M€ is entirely retained by the main ANSP (see items 10 to 14).</p>							
<p><b>Terminal costs by entity at charging zone level</b> Actual real terminal costs for 2020-2021 in the Maltese TCZ are -7.7% (-0.8 M€2017) lower than planned. This reflects lower than planned costs for all the entities in the TCZ: the main ANSP - MATS (-9.1%, or -0.8 M€2017), other ANSP – MIA (-0.8%) and the costs for the NSA (-0.7%).</p>							
<p><b>Terminal costs for the main ANSP (MATS) in the Maltese TCZ</b> The lower than planned terminal costs in real terms for MATS in 2020-2021 reflects a combination of:</p> <ul style="list-style-type: none"> <li>- lower staff costs (-1.9%);</li> <li>- much lower other operating costs (-19.8%), which are understood to reflect cost-cutting measures implemented during the COVID-19 pandemic;</li> <li>- lower depreciation costs (-10.9%) attributable to the fact that MATS had suspended all CAPEX projects during the pandemic; and,</li> <li>- significantly lower cost of capital (-16.1%), which is understood to reflect lower than planned asset base.</li> </ul>							

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	154.52
DUC to be charged retroactively	155.89
<b>DUC</b>	<b>310.41</b>
Inflation adjustment	0.00
Cost exempt from cost-sharing	-5.12
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.24
Traffic adj. (adjustments)*	0.00
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	0.00
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-5.36
<b>AUCU</b>	<b>305.05</b>
<b>AUCU vs. DUC</b>	<b>-1.7%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

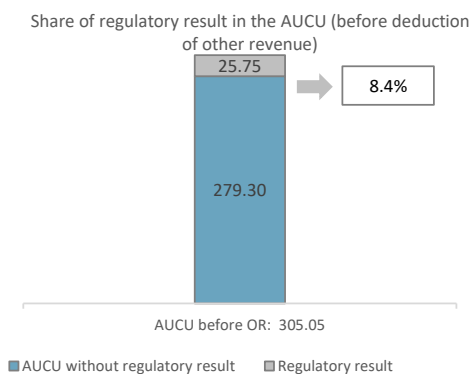
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-167	-4.94
Competent authorities and qualified entities costs	-6	-0.18
Eurocontrol costs	0	0.00
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-173</b>	<b>-5.12</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ANSP(S)	EUR '000	EUR/SU
MATS	855	25.29
MIA	16	0.46
<b>METSP(s)</b>	<b>EUR '000</b>	<b>EUR/SU</b>
<b>Total charging zone</b>	<b>870</b>	<b>25.75</b>
<b>Actual cost for users***</b>	<b>10,310</b>	<b>305.05</b>
<b>Regulatory result (% AUCU)</b>	<b>8.4%</b>	<b>8.4%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (305.05€) in Malta TCZ is -1.7% lower than the nominal DUC (310.41€) which includes DUC initially charged: 154.52€; and to be charged: 155.89€. The difference between these two figures is due to:

- the deduction of the traffic adjustment (-0.24€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-5.12€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU is 8.4% in the TCZ.



## 10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

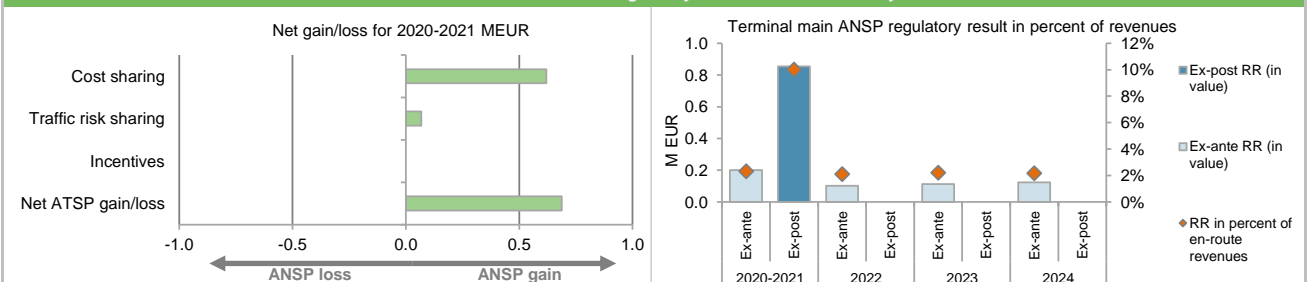
## 11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	787			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	0			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-167			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>620</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.8%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	8,440			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>68</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>687</b>			

## 12. Regulatory result (RR) for the main ANSP at charging zone level

MATS planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	2,236	2,606	4,842	2,619	2,837	3,090
Proportion of financing through equity (in %)	91%	95%	93%	98%	100%	100%
RoE pre-tax rate (in %)	5.0%	4.0%	4.4%	4.0%	4.0%	4.0%
RoE (in value)	101	98	200	102	113	124
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>101</b>	<b>98</b>	<b>200</b>	<b>102</b>	<b>113</b>	<b>124</b>
<b>Revenue for the terminal charging zone</b>	<b>4,177</b>	<b>4,461</b>	<b>8,639</b>	<b>4,836</b>	<b>5,152</b>	<b>5,721</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>2.4%</b>	<b>2.2%</b>	<b>2.3%</b>	<b>2.1%</b>	<b>2.2%</b>	<b>2.2%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>5.0%</b>	<b>4.0%</b>	<b>4.4%</b>	<b>4.0%</b>	<b>4.0%</b>	<b>4.0%</b>
MATS actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	2,236	1,750	3,986			
Proportion of financing through equity (in %)	91%	95%	93%			
RoE pre-tax rate (in %)	5.0%	4.0%	4.5%			
RoE (in value)	101	66	167			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	687	687			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>101</b>	<b>753</b>	<b>855</b>			
<b>Revenue for the terminal charging zone</b>	<b>4,177</b>	<b>4,362</b>	<b>8,539</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>2.4%</b>	<b>17.3%</b>	<b>10.0%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>5.0%</b>	<b>45.3%</b>	<b>23.1%</b>			

## 13. Focus on main ANSP regulatory result on terminal activity



## MATS net gain on terminal activity in the Maltese TCZ in the combined year 2020-2021

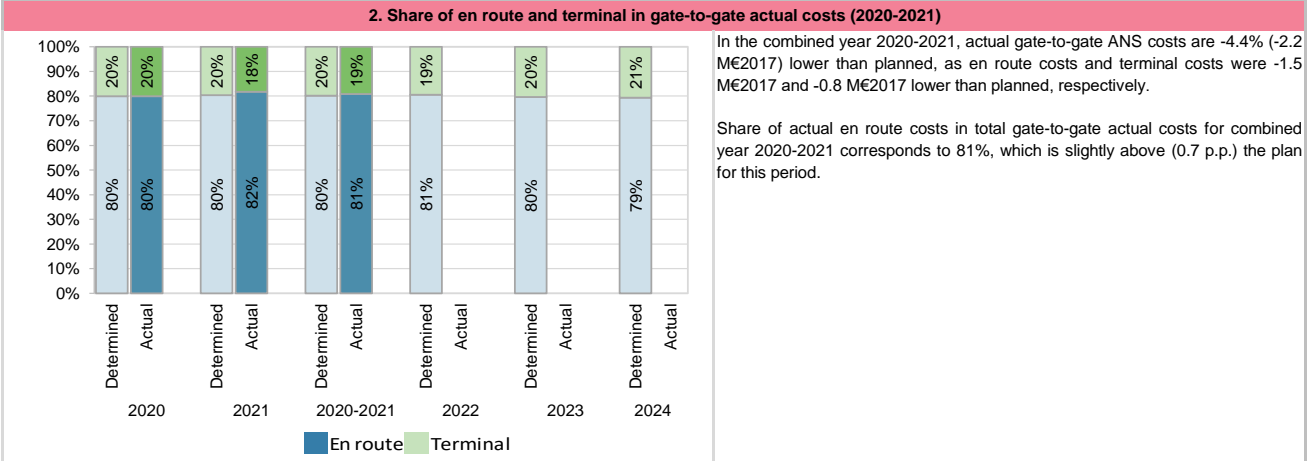
MATS's net gain amounts to +0.7 M€, as a combination of a gain of +0.6 M€ arising from the cost sharing mechanism and a gain of +0.1 M€ arising from the traffic risk sharing mechanism.

## MATS overall regulatory results (RR) for the terminal activity

Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+0.7 M€) and the actual RoE (+0.2 M€) amounts to +0.9 M€ (10.0% of the terminal revenues in TCZ). The resulting ex-post rate of return on equity is 23.1%, which is much higher than the 4.4% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
MIA planned regulatory result (EUR '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	0	0	0	0	0	0
Revenue for the terminal charging zone	474	470	944	492	496	500
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
MIA actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	0	16	16			
Revenue for the terminal charging zone	474	478	952			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	3.3%	1.6%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Overall regulatory results (RR) for the terminal activity for the other ANSP in the charging zone</b>						
For the other ANSP in the charging zone – Malta International Airport (MIA), the overall ex-post regulatory result for the combined year 2020-2021 amounted to +0.02 M€, which represents 1.6% of the terminal revenues. It should be noted that MIA does not charge cost of capital.						

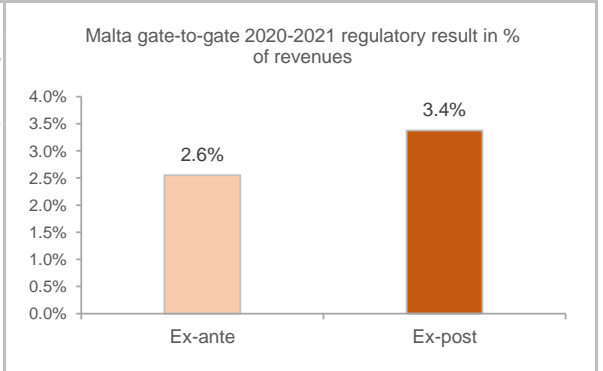
1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1: Malta		En route charging zone 2: N/A					
Terminal charging zone 1: Malta		Terminal charging zone 2:					
Malta: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		19,569,513	21,155,781	40,725,294	22,250,004	21,740,183	23,058,376
Real terminal costs (EUR2017)		4,913,948	5,167,669	10,081,618	5,374,588	5,565,036	5,999,409
Real gate-to-gate costs (EUR2017)		24,483,461	26,323,450	50,806,911	27,624,592	27,305,219	29,057,785
En route share (%)		79.9%	80.4%	80.2%	80.5%	79.6%	79.4%
Malta: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		19,569,513	19,686,846	39,256,359			
Real terminal costs (EUR2017)		4,913,948	4,394,907	9,308,855			
Real gate-to-gate costs (EUR2017)		24,483,461	24,081,753	48,565,214			
En route share (%)		79.9%	81.8%	80.8%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017)							
in value		0	-2,241,697	-2,241,697			
in %		0.0%	-8.5%	-4.4%			
En route share							
in p.p.		0.0 p.p.	1.4 p.p.	0.7 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In EUR '000							
ANSP(S)	RR	Ex-ante			Ex-post		
		Revenues	RR % revenues	RR	Revenues	RR % revenues	
MATS	1,164	44,666	2.6%	1,465	42,879	3.4%	
MIA	0	944	0.0%	16	952	1.6%	
METS(P)	RR	Revenues	RR % revenues	RR	Revenues	RR % revenues	
<b>Total</b>	<b>1,164</b>	<b>45,610</b>	<b>2.6%</b>	<b>1,481</b>	<b>43,831</b>	<b>3.4%</b>	

For the ANSPs providing services in the Maltese charging zones covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +1.5 M€ (see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 3.4% of gate-to-gate ANS revenues.

This is higher than the planned RR for the combined year 2020-2021 included in the performance plan of +1.2 M€ (corresponding to some 2.6% of gate-to-gate ANS revenues).



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# **Annual Monitoring Report 2021**

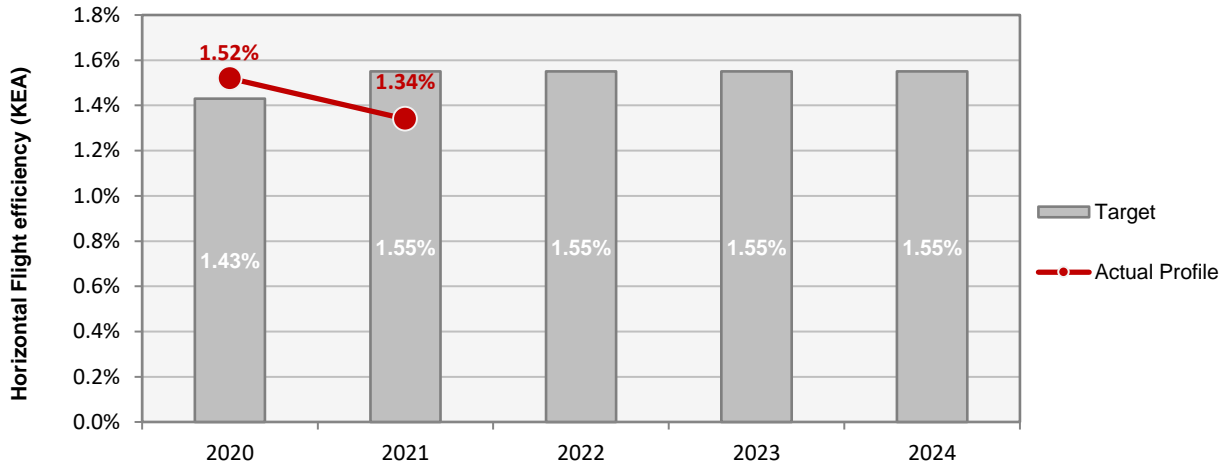
## Local level view

### Norway

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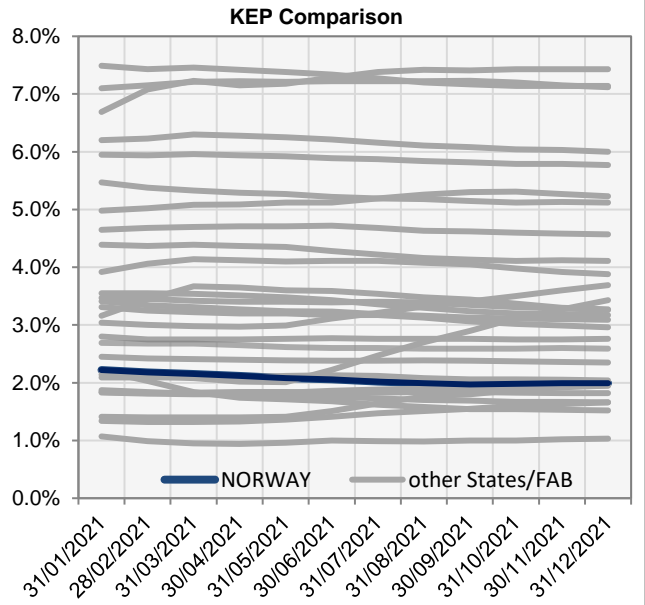
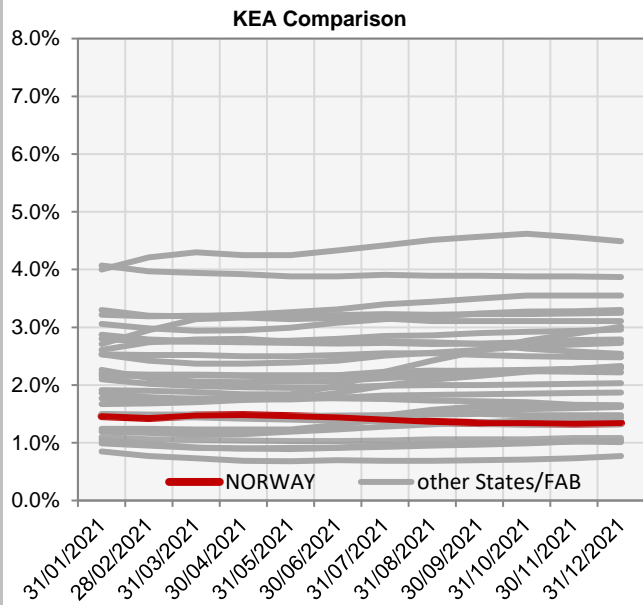
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>Avinor</b>	94	D	C	D	C	C
<p>Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.</p>						
Observations						
<p>All five EoSM components of the ANSP meet, or exceed, already the 2024 target level. No changed in maturity has been observed from the levels reported in 2020.</p> <p>IMPORTANT: EASA/European Commission did not received the verified questionnaire from the NSA on time. This is an important step to receive confirmation that the self-evaluated questionnaire by the ANSP has been actually verified. It should be sent in due time to allow proper and timely drafting of the Monitoring Report.</p>						

KEA					
	2020	2021	2022	2023	2024
Target	1.43%	1.55%	1.55%	1.55%	1.55%
Actual performance	1.52%	1.34%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	1.46%	1.43%	1.47%	1.48%	1.46%	1.44%	1.40%	1.36%	1.34%	1.34%	1.33%	1.34%
KEP	2.22%	2.18%	2.15%	2.12%	2.08%	2.06%	2.02%	1.99%	1.97%	1.98%	1.99%	1.99%
KES	2.01%	2.00%	1.98%	1.96%	1.95%	1.94%	1.91%	1.89%	1.88%	1.90%	1.92%	1.92%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.



**1. Overview**

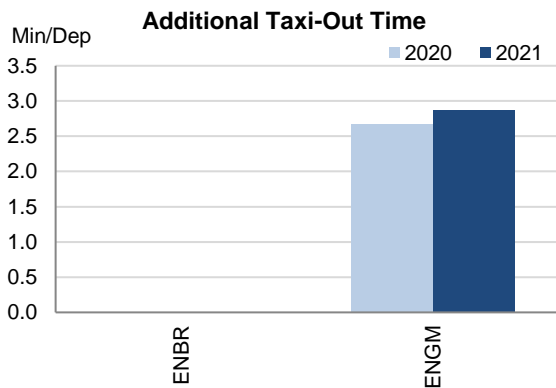
Norway has identified four airports as subject to RP2 monitoring. However, in accordance with IR (EU) 2019/317 and the traffic figures, only two of these airports (Oslo (EGNM) and Bergen (ENBR)) must be monitored for additional taxi-out and ASMA times. Oslo (A-CDM implemented) is the only Norwegian airport that has finished the full implementation of the Airport Operator Data Flow required for the monitoring of additional times. As reported in RP2, it seems the ATM system is not ready to implement the APDF at Bergen. Avinor Flysikring AS, the service provider in Norway, is still considering alternate solution, but needs to take into account the additional cost required. Norway's monitoring report does not provide any explanation on the measures planned to solve this situation.

Traffic at the ensemble of these four Norwegian airports in 2021 was still 40% lower than in 2019.

Additional ASMA times at Oslo remain low but the taxi operation is heavily influenced by de-icing operation in the winter months, resulting in one of the highest additional taxi-out times in the SES area.

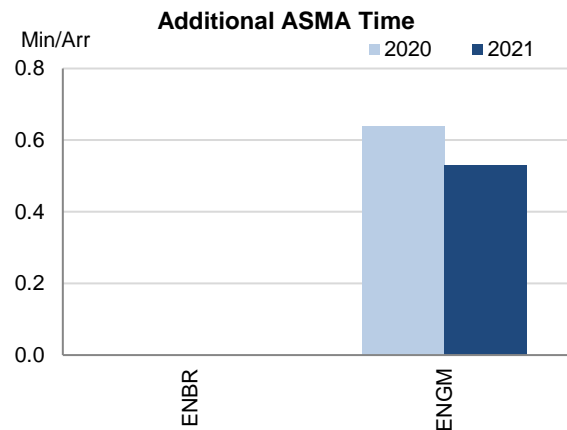
The share of CDO flights is still in the higher range of all observed values in 2021. Like in 2020, Norway has the highest share of CDO flights when calculated by State (69.9%).

**2. Additional Taxi-Out Time**



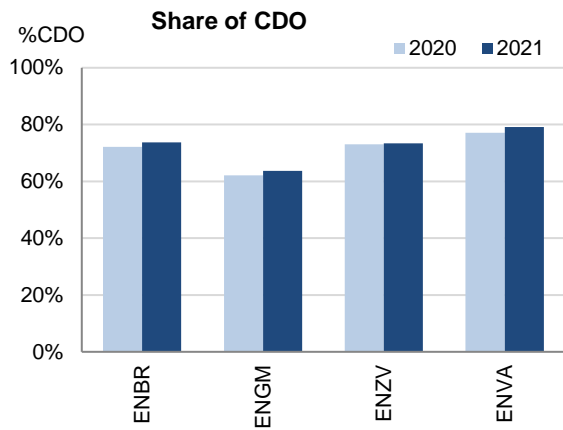
The additional taxi-out times at Oslo have slightly increased (ENGM; 2019: 3.92 min/dep.; 2020: 2.68 min/dep. ;ENGM; 2021: 2.87 min/dep.) The annual average is influenced by the performance during the winter months due to de-icing. The longest additional times were observed in January and December with more than 7 min/dep.

**3. Additional ASMA Time**



Additional ASMA times at Oslo (ENGM; 2019: 1.03 min/arr.; 2020: 0.64 min/arr.; 2021: 0.53 min/arr.) further decreased in 2021. These times were nearly zero between May and September averaging 0.19 min/arr. but at the end of the year these times increased again.

#### 4. Share of arrivals applying CDO



All airports have very high shares of CDO flights with all airports having more than double the overall RP3 value in 2021 (30.5%).

Although the monthly values decreased towards the end of the year, the yearly values have increased with respect to 2020 by 0.4-2.1 percentage points.

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Bergen/Flesland-ENBR	n/a	n/a				n/a	n/a				72%	74%			
Oslo/Gardermoen-ENGM	2.68	2.87				0.64	0.53				62%	64%			
Stavanger/Sola-ENZV	-	-				-	-				73%	73%			
Trondheim/Vaernes-ENVA	-	-				-	-				77%	79%			

**Update on Military dimension of the plan**

LARA has been implemented and Civil/Military Airspace Committee maintain a continued focus on the effectiveness of the booking procedures.

The AMC procedure has been revised establishing new and larger areas in southern Norway with a design that is optimized to cater to civilian traffic flows. The civil/military airspace continually work on optimizing the airspace structure to minimize the impact of military air operations on civilian air traffic. LARA has been deployed to both civil and military users and further integration into the ATM system is ongoing.

**Military - related measures implemented or planned to improve capacity**

The civil/military airspace continually work on optimizing the airspace structure to minimize the impact of military air operations on civilian air traffic. LARA has been deployed to both civil and military users and further integration into the ATM system is ongoing.

**PI#6 Effective use of reserved or segregated airspace - national level**

Ratio PI#6	2020	2021	2022	2023	2024
Norway	56%	57%			

**PI#6 Effective use of reserved or segregated airspace (per ACC)**

Ratio PI#6	2020	2021	2022	2023	2024
Bodo ACC					
Oslo ACC					
Stavanger ACC					

**Initiatives implemented or planned to improve PI#6**

The civil/military airspace continually work on optimizing the airspace structure to minimize the impact of military air operations on civilian air traffic. LARA has been deployed to both civil and military users and further integration into the ATM system is ongoing.

**PI#7 Rate of planning via available airspace structures - national level**

Ratio PI#7	2020	2021	2022	2023	2024
Norway					

**PI#7 Rate of planning via available airspace structures (per ACC)**

Ratio PI#7	2020	2021	2022	2023	2024
Bodo ACC					
Oslo ACC					
Stavanger ACC					

**Initiatives implemented or planned to improve PI#7**

No data available

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Norway					

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Bodo ACC					
Oslo ACC					
Stavanger ACC					

**Initiatives implemented or planned to improve PI#8**

No data available

Minutes of ATFM en-route delay						
	2020	2021	2022	2023	2024	Observations
National Target	0.08	0.06	0.08	0.11	0.11	
Actual performance	0.01	0.00				

**NSA's assessment of capacity performance**

The actual en-route atfm delay per flight of 0,00 min./flt. in 2021 was significant below the national target set to 0,06 min./flt. Actual performance was so far in RP3 much better than capacity target.

**Monitoring process for capacity performance**

Frequently at national level.

**Capacity Planning**

Norway has been developing ATC capacity over years, and is in position to provide more capacity than the national reference values. The cost optimum capacity for en route delay per flight for Avinor ANS is between 0,18 min./flt. and 0,11 min./flt., but for the airspace users this would be unacceptable. This view is based on the fact that a large portion of the overall traffic is transition flights with little leeway in terms of delays. Based on consultation meetings with the airspace users and Avinor ANS during the en route delay is set to between 0,08 min./flt and 0,11 min./flt. in RP3.

Avinor ANS has over the last years been increasing capacity, in order to being able to shift to new technology without major operational consequences for the airspace users.

**ATCO in OPS (FTE)**

Bodo ACC	2019	2020	2021	2022	2023	2024	Observations
Planned (Perf Plan)	32.7	30.7	37	41	42	42	* Norway has previously reported 36,7 FTE ATCOs for 2020 in ENBD ACC.
Actual	46.3	31*	31				

Oslo ACC	2019	2020	2021	2022	2023	2024	Observations
Planned (Perf Plan)	103.0	71.2	82	98	100	104	* Norway has previously reported 73,1 FTE ATCOs for 2020 in ENOSE ACC.
Actual	105.2	71*	90				

Stavanger ACC	2019	2020	2021	2022	2023	2024	Observations
Planned (Perf Plan)	30.0	19.4	20	29	31	31	* Norway has previously reported 25,5 FTE ATCOs for 2020 in ENOSW ACC.
Actual	36.2	19*	27				

The reduction in the number of ATCO FTEs from 2019 to 2020 is due to cost efficiency measures as a consequence of Covid-19, mainly furloughs, but also voluntary redundancy agreements.

**Application of Corrective Measures for Capacity (if applicable)**

Not applicable.

**Summary of capacity performance**

Norway experienced an increase in traffic from 346k flights in 2020 to 376k flights in 2021, with zero ATFM delay. However, traffic levels were still substantially below the 595k flights in 2019.

No explanation was provided for the considerable discrepancies between actual operational ATCO FTEs reported for 2020 in the 2020 monitoring report and what has been reported for the same year in the latest annual monitoring report.

**En route Capacity Incentive Scheme**

	2020	2021	2022	2023	2024	Observations
<b>National Capacity target</b>	0.08	0.06	0.08	0.11	0.11	
<b>Deadband +/-</b>	-	-	[0.05-0.11]	[0.08-0.14]	[0.08-0.14]	
<b>Actual performance</b>	0.01	0.00				

In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the

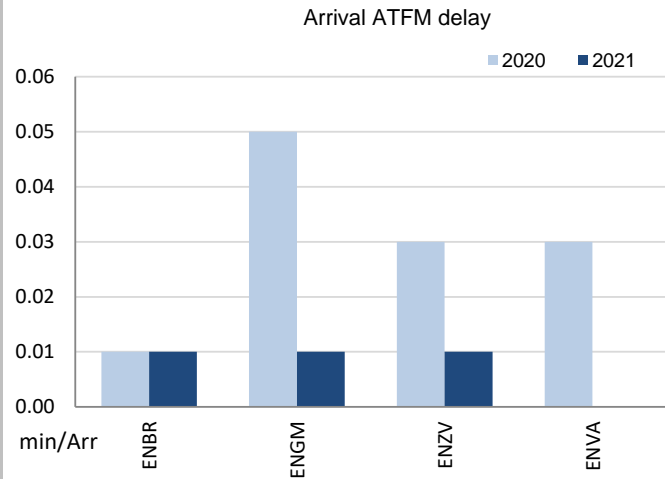
1. Overview

Norway has identified four airports as subject to RP2 monitoring. However, in accordance with IR (EU) 2019/317 and the traffic figures, only two of these airports (Oslo (EGNM) and Bergen (ENBR)) must be monitored for pre-departure delays. Oslo (A-CDM implemented) is the only Norwegian airport that has finished the full implementation of the Airport Operator Data Flow required for the monitoring of these pre-departure delays. As reported in RP2, it seems the ATM system is not ready to implement the APDF at Bergen. Avinor Flysikring AS, the service provider in Norway, is still considering alternate solution, but needs to take into account the additional cost required.

Traffic at the ensemble of these four Norwegian airports in 2021 was still 40% lower than in 2019.

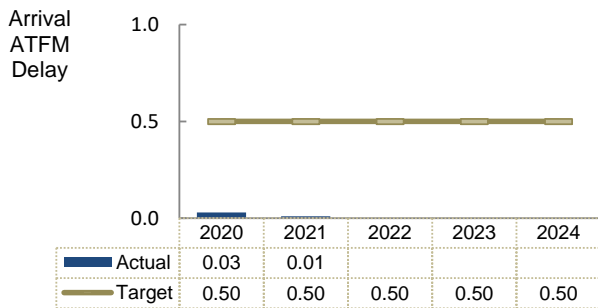
Average arrival ATFM delays in 2021 was 0.01 min/arr, compared to 0.03 min/arr in 2020. ATFM slot adherence has slightly improved (2021: 98.6%; 2020: 98.4%).

2. Arrival ATFM Delay



Arrival ATFM delays in 2021 decreased and became marginal at all Norwegian airports and disappeared at Trondheim (ENVA). Oslo (ENGM; 2019: 0.31 min/arr; 2020: 0.05 min/arr; 2021: 0.01 min/arr) only observed marginal delays in the last two months of the year with 95% attributed to weather. Bergen (ENBR) registered weather related delays only in January, and Stavanger (ENZV) only had 21 minutes of delay in March attributed to ATC equipment.

3. Arrival ATFM Delay – National Target and Incentive Scheme

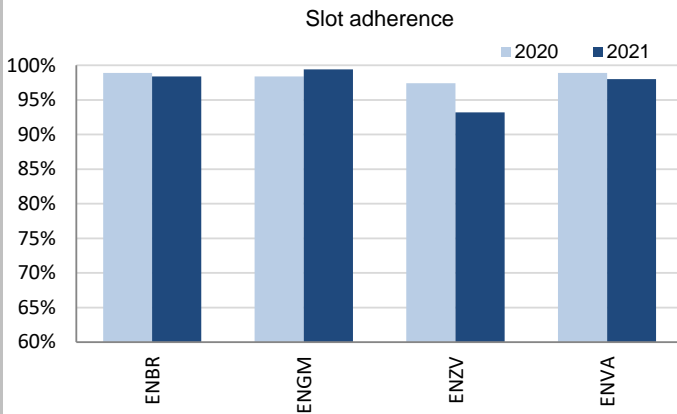


The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

According to the Norwegian monitoring report: *The actual terminal and airport ANS ATFM arrival delay per flight of 0,01 min./flt. in 2021 is significant below the national target set to 0,50 min./flt. Actual performance was so far in RP3 much better than the terminal capacity target*

#### 4. ATFM Slot Adherence



With the drastic drop in traffic, the share of regulated departures from Norwegian airports virtually disappeared until July 2021. All Norwegian airports showed adherence above 93% and the national average was 98.6%, very similar to the observed performance in 2020 (98.4%). With regard to the 1.4% of flights that did not adhere, 1% was early and 0.4% was late.

#### 5. ATC Pre-departure Delay

The calculation of the ATC pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF) which is properly implemented at Oslo but not implemented at Bergen. Therefore the monitoring of this indicator in Norway is limited to Oslo.

The performance at Oslo remains good and similar to the 2020 value (ENGM; 2019: 0.14 min/dep.; 2020: 0.05 min/dep.; 2021: 0.06 min/dep.)

#### 6. All Causes Pre-departure Delay

The calculation of the All causes pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF) which is properly implemented at Oslo but not implemented at Bergen. Therefore the monitoring of this indicator in Norway is limited to Oslo.

The total (all causes) delay in the actual off block time at Oslo increased in 2021 (ENGM: 2020: 5.01 min/dep.; 2021: 6.74 min/dep.) but still resulting in the lowest value among the RP3 monitored airports. The highest delays per flight were observed in December, averaging more than 12 min/dep.

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Bergen/Flesland-ENBR	0.01	0.01				98.9%	98.4%				n/a	n/a				n/a	n/a			
Oslo/Gardermoen-ENGM	0.05	0.01				98.4%	99.4%				0.05	0.06				5.01	6.74			
Stavanger/Sola-ENZV	0.03	0.01				97.4%	93.2%				-	-				-	-			
Trondheim/Vaernes-ENVA	0.03	0				98.9%	98.0%				-	-				-	-			



1. Contextual economic information: en route air navigation services						
Norway ECZ represents 1.9% of the SES en route ANS actual costs in 2019			FAB: NEFAB			
National currency:	NOK	Exchange rates (1 EUR=)	2017: 9.32776 NOK	2020: 10.7208 NOK	2021: 10.1591 NOK	
Performance Plan:	RP3 performance plan dated 17 November 2021					
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Norway: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal NOK)	1,062,829,022	1,137,252,345	2,200,081,367	1,214,521,187	1,237,546,593	1,268,465,176
Inflation %	1.2%	2.2%		2.0%	2.0%	2.0%
Inflation index (100 in 2017)	106.6	109.0		111.2	113.4	115.6
Real en route costs (NOK2017)	1,012,905,492	1,067,536,208	2,080,441,700	1,120,940,259	1,125,662,157	1,136,639,931
Total en route service units	1,229,871	1,406,724	2,636,595	2,048,218	2,316,485	2,472,291
<b>Real en route DUC per service unit (NOK2017)</b>	<b>823.59</b>	<b>758.88</b>	<b>789.06</b>	<b>547.28</b>	<b>485.94</b>	<b>459.75</b>
<b>Real en route DUC per service unit (EUR2017)</b>	<b>88.29</b>	<b>81.36</b>	<b>84.59</b>	<b>58.67</b>	<b>52.10</b>	<b>49.29</b>
Norway: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal NOK)	1,062,829,022	1,144,598,776	2,207,427,797			
Inflation %	1.2%	3.9%				
Inflation index (100 in 2017)	106.6	110.8				
Real en route costs (NOK2017)	1,012,905,492	1,060,231,867	2,073,137,358			
Total en route service units	1,229,871	1,445,483	2,675,354			
<b>Real en route AUC per service unit (NOK2017)</b>	<b>823.59</b>	<b>733.48</b>	<b>774.90</b>			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>88.29</b>	<b>78.63</b>	<b>83.07</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal NOK)	in value	0	7,346,431	7,346,431		
	in %	-	+0.6%	+0.3%		
Inflation %	in p.p.	0.0 p.p.	1.7 p.p.			
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	1.8 p.p.			
Real en route costs (NOK2017)	in value	0	-7,304,341	-7,304,341		
	in %	-	-0.7%	-0.4%		
Total en route service units	in value	0	38,759	38,759		
	in %	-	+2.8%	+1.5%		
<b>Real en route unit cost per service unit (NOK2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-25.40</b>	<b>-14.16</b>		
	<b>in %</b>	<b>-</b>	<b>-3.3%</b>	<b>-1.8%</b>		
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-2.72</b>	<b>-1.52</b>		
	<b>in %</b>	<b>-</b>	<b>-3.3%</b>	<b>-1.8%</b>		
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs. DUC</b>			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%   Threshold +10%</p> <p>Dead-band -2%   Dead-band +2%</p> <p>+1.5%</p>			
<p>In the combined year 2020-2021, the en route AUC was -1.8% (or -14.16 NOK2017, -1.52 €2017) lower than the planned DUC. This results from the combination of higher than planned TSUs (+1.5%) and slightly lower than planned en route costs in real terms (-0.4%, or -7.3 MNOK2017, -0.8 M€2017).</p> <p><b>En route service units</b></p> <p>The difference between actual and planned TSUs (+1.5%) falls within the ±2% dead band. Hence the resulting additional revenue is kept by the ANSPs (see items 10 to 14).</p> <p><b>En route costs by entity at charging zone level</b></p> <p>Actual real en route costs are -0.4% (or -0.8 M€2017) lower than planned. This is driven by the NSA/EUROCONTROL (-6.7%, or -1.2 M€2017) and the MET service provider (-8.0%, or -0.2 M€2017), while actual costs of the main ANSP (Avinor) and the other ANSP (KJE) are close to planned costs (+0.3% and -0.7%, respectively).</p> <p><b>En route costs for the main ANSP (Avinor) at charging zone level</b></p> <p>The slightly higher than planned en route costs in real terms for Avinor (+0.3%, or +0.6 M€2017) result from the combination of:</p> <ul style="list-style-type: none"> <li>- slightly lower staff costs (-0.6%);</li> <li>- higher other operating costs (+7.2%), mainly explained by the decommissioning of radar components (one-off effect), increase in rent at Bodo ACC relating to security and capitalisation of ADQ-investment (capitalized in the mother company Avinor AS and accounted as an intercompany purchase/other operating costs in Avinor ANS);</li> <li>- lower depreciation (-3.0%), mainly due to the radar components decommissioning;</li> <li>- higher cost of capital (+4.0%), driven by a higher investment level mainly relating to the new ATM system and the NORWAM project; and,</li> <li>- slightly lower than planned deduction for VFR exempted flights (-1.1%).</li> </ul>			<p><b>Costs by entity at ECZ level (M€2017):</b></p> <p><b>Costs by nature for main ANSP (M€2017):</b></p>			

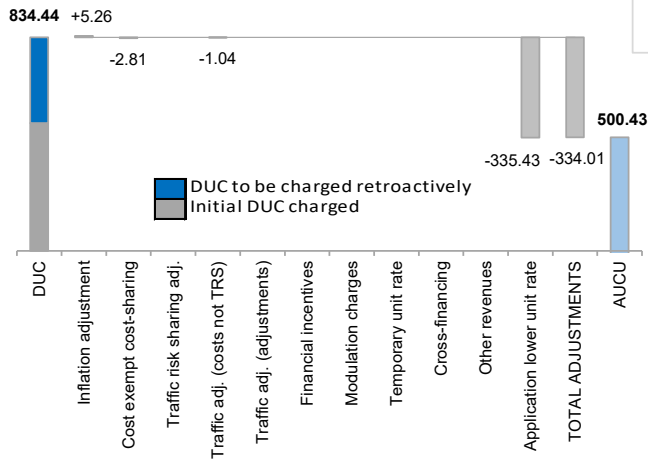
5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level

Norway 2020-2021 DUC vs. Actual Unit Cost for users in national currency in nominal terms - NOK



Components of the AUCU	NOK/SU	EUR/SU
Initial DUC charged	499.01	47.97
DUC to be charged retroactively	335.43	32.09
<b>DUC</b>	<b>834.44</b>	<b>80.06</b>
Inflation adjustment	5.26	0.52
Cost exempt from cost-sharing	-2.81	-0.28
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	-1.04	-0.10
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	0.00	0.00
Application of lower unit rate	-335.43	-32.09
Total adjustments	-334.01	-31.95
<b>AUCU</b>	<b>500.43</b>	<b>48.11</b>
<b>AUCU vs. DUC</b>	<b>-40.0%</b>	<b>-39.9%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

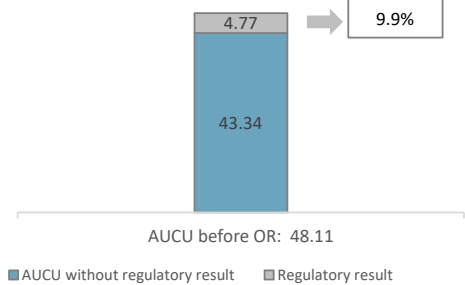
7. En route costs exempt from cost sharing

		NOK '000	EUR '000	NOK/SU	EUR/SU
by item	New and existing investments	3,534	348	1.32	0.13
	Competent authorities and qualified entities costs	-193	-19	-0.07	-0.01
	Eurocontrol costs	-10,851	-1,068	-4.06	-0.40
	Pension costs	0	0	0.00	0.00
	Interest on loans	0	0	0.00	0.00
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>-7,510</b>	<b>-739</b>	<b>-2.81</b>	<b>-0.28</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	NOK '000	EUR '000	NOK/SU	EUR/SU
Avinor	129,722	12,547	48.49	4.69
KJE	215	21	0.08	0.01
METSP(s)	NOK '000	EUR '000	NOK/SU	EUR/SU
Norway MET	2,032	200	0.76	0.07
<b>Total charging zone</b>	<b>131,969</b>	<b>12,768</b>	<b>49.33</b>	<b>4.77</b>
<b>Actual cost for users***</b>	<b>1,338,832</b>	<b>128,702</b>	<b>500.43</b>	<b>48.11</b>
<b>Regulatory result (% AUCU)</b>	<b>9.9%</b>	<b>9.9%</b>	<b>9.9%</b>	<b>9.9%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (500.43NOK or 48.11€) is significantly lower (-40.0%) than the nominal DUC (834.44NOK or 80.06€), which includes DUC initially charged: 499.01NOK or 47.97€; and to be charged: 335.43NOK or 32.09€. The difference between these two figures (-334.01NOK/SU or -31.95€/SU) is due to:

- the application of a lower unit rate (-335.43NOK/SU or -32.09€/SU), which offsets fully the DUC to be charged retroactively and reflects the decision of Norway to not recover from airspace users the losses in en route revenues linked with Covid-19 pandemic;
  - the positive inflation adjustment resulting from higher than planned inflation (+5.26NOK/SU or +0.52€/SU);
  - the impact of adjustments resulting from the costs exempt from cost-sharing mechanism (-2.81NOK/SU or -0.28€/SU); and,
  - the deduction for the traffic adjustment (-1.04NOK/SU or -0.10€/SU) for the costs not subject to traffic risk sharing to be reimbursed to airspace users in future years.
- The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 9.9%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (NOK '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	-20,153			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	13,735			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	3,534			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>-2,885</b>			
Traffic risk sharing (NOK '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	1.5%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	2,001,581			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>29,424</b>			
Incentives (NOK '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (NOK '000)</b>	<b>26,539</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>2,612</b>			

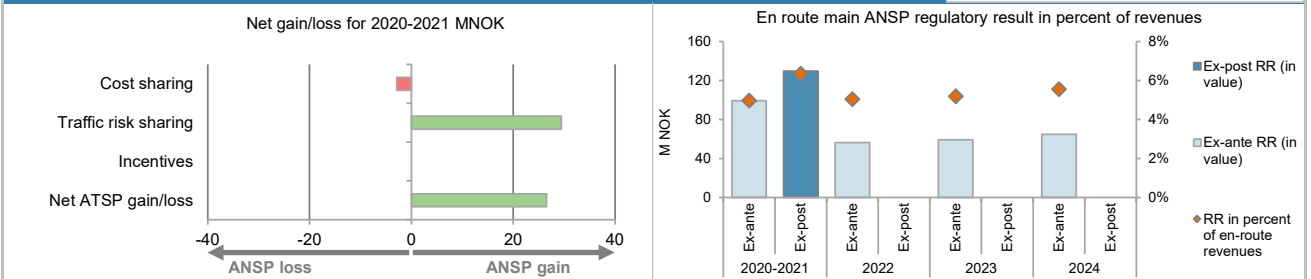
12. Regulatory result (RR) for the main ANSP at charging zone level

Avinor planned regulatory result (NOK '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	1,054,273	1,378,474	2,432,746	1,378,597	1,449,380	1,590,886
Proportion of financing through equity (in %) *see Note 1	40%	40%	40%	40%	40%	40%
RoE pre-tax rate (in %)	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%
RoE (in value)	43,014	56,242	99,256	56,247	59,135	64,908
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>43,014</b>	<b>56,242</b>	<b>99,256</b>	<b>56,247</b>	<b>59,135</b>	<b>64,908</b>
<b>Revenue for the en route charging zone</b>	<b>971,539</b>	<b>1,030,041</b>	<b>2,001,581</b>	<b>1,117,358</b>	<b>1,139,383</b>	<b>1,169,597</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>4.4%</b>	<b>5.5%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.2%</b>	<b>5.5%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>10.2%</b>	<b>10.2%</b>	<b>10.2%</b>	<b>10.2%</b>	<b>10.2%</b>	<b>10.2%</b>
Avinor actual regulatory result (NOK '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	1,054,273	1,474,720	2,528,993			
Proportion of financing through equity (in %) *see Note 1	40%	40%	40%			
RoE pre-tax rate (in %)	10.2%	10.2%	10.2%			
RoE (in value)	43,014	60,169	103,183			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	26,539	26,539			
<b>Ex-post regulatory result (+/-) for the en route charging zone *see Note 2</b>	<b>43,014</b>	<b>86,707</b>	<b>129,722</b>			
<b>Revenue for the en route charging zone</b>	<b>971,539</b>	<b>1,076,733</b>	<b>2,048,273</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>4.4%</b>	<b>8.1%</b>	<b>6.3%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>10.2%</b>	<b>14.7%</b>	<b>12.8%</b>			

**Note 1:** Ex-ante and ex-post RoE are computed based on the notional gearing of 60% debt used in the RP3 PP. The actual gearing of Avinor should be reported.

**Note 2:** Ex-post regulatory result should be seen in the light of the decision of the State of Norway to not recover from airspace users the losses in en-route revenues linked with the Covid-19 Pandemic. This decision generated losses of -897 MNOK for entities providing services in the en route charging zone (-797 MNOK for Avinor), which will be covered by the State of Norway.

13. Focus on the main ANSP regulatory result on en route activity



Avinor net gain on activity in Norway en route charging zone in the combined year 2020-2021

A net gain of Avinor of +26.5 MNOK (+2.6 M€), results from a combination of a loss of -2.9 MNOK arising from the cost sharing mechanism and a gain of +29.4 MNOK arising from the traffic risk sharing mechanism.

Avinor overall regulatory results (RR) for the en route activity

Ex-post, the overall RR corresponding to the net gain from the en route activity mentioned above (+26.5 MNOK) and the RoE (+103.2 MNOK) amounts to a gain of +129.7 MNOK (6.3% of the en route revenues). The resulting ex-post rate of return on equity is 12.8%. Please see also **Note 2** above.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
<b>KJE planned regulatory result (NOK '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	3,827	6,000	9,827	6,092	6,184	6,276
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>KJE actual regulatory result (NOK '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	215	215			
Revenue for the en route charging zone	3,827	6,244	10,071			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	3.4%	2.1%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Norway MET planned regulatory result (NOK '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	10,239	14,431	24,670	14,724	15,019	15,320
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Norway MET actual regulatory result (NOK '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	2,032	2,032			
Revenue for the en route charging zone	10,239	14,671	24,910			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	13.9%	8.2%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSPs planned regulatory result (NOK '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	14,067	20,431	34,497	20,816	21,203	21,597
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total other ANSPs actual regulatory result (NOK '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	2,247	2,247	*see also Note 2 in item 12		
Revenue for the en route charging zone	14,067	20,915	34,982			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	10.7%	6.4%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSPs overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for the other ANSPs (KJE and MET service provider) in the en route charging zone of Norway amounts to a gain of +2.2 MNOK (6.4% of the corresponding en route revenues). See also Note 2 in item 12.						

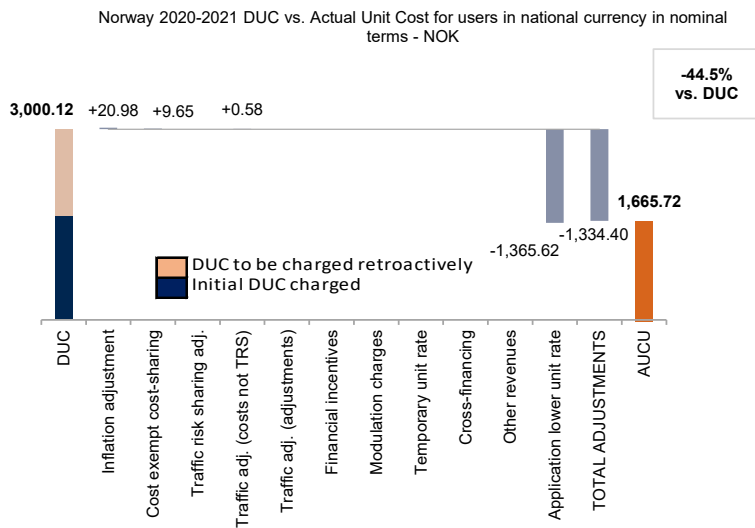
1. Contextual economic information: terminal air navigation services																				
· Norway TCZ represents 3.9% of the SES terminal ANS actual costs in 2019 · Number of airports in charging zone in 2021: 4 of which: <ul style="list-style-type: none"> <li>· Airports with fewer than 80,000 IFR mvmts: 2</li> <li>· Airports with more than 80,000 IFR mvmts: 2</li> </ul>																				
· National currency: NOK Exchange rates (1 EUR=) 2017: 9.32776 NOK 2020: 10.7208 NOK 2021: 10.1591 NOK · Performance Plan: See item 1 for the en route charging zone(s).																				
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level																				
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.																				
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.																				
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)																				
Norway: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D														
Terminal costs (nominal NOK)	409,579,091	411,164,202	820,743,293	409,243,459	430,889,417	446,675,240														
Inflation %	1.2%	2.2%		2.0%	2.0%	2.0%														
Inflation index (100 in 2017)	106.6	109.0		111.2	113.4	115.6														
Real terminal costs (NOK2017)	388,508,806	382,988,070	771,496,875	374,977,851	388,790,356	396,881,896														
Total terminal service units	134,330	139,240	273,570	204,803	240,423	258,338														
<b>Real terminal DUC per service unit (NOK2017)</b>	<b>2,892.20</b>	<b>2,750.56</b>	<b>2,820.11</b>	<b>1,830.92</b>	<b>1,617.11</b>	<b>1,536.29</b>														
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>310.06</b>	<b>294.88</b>	<b>302.34</b>	<b>196.29</b>	<b>173.37</b>	<b>164.70</b>														
Norway: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A														
Terminal costs (nominal NOK)	409,579,091	418,799,778	828,378,869																	
Inflation %	1.2%	3.9%																		
Inflation index (100 in 2017)	106.6	110.8																		
Real terminal costs (NOK2017)	388,508,806	385,000,690	773,509,496																	
Total terminal service units	134,330	136,797	271,127																	
<b>Real terminal AUC per service unit (NOK2017)</b>	<b>2,892.20</b>	<b>2,814.39</b>	<b>2,852.94</b>																	
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>310.06</b>	<b>301.72</b>	<b>305.85</b>																	
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024														
Terminal costs (nominal NOK)	in value 0	7,635,576	7,635,576																	
	in % -	+1.9%	+0.9%																	
Inflation %	in p.p. 0.0 p.p.	1.7 p.p.																		
Inflation index (100 in 2017)	in p.p. 0.0 p.p.	1.8 p.p.																		
Real terminal costs (NOK2017)	in value 0	2,012,620	2,012,620																	
	in % -	+0.5%	+0.3%																	
Total terminal service units	in value 0	-2,443	-2,443																	
	in % -	-1.8%	-0.9%																	
<b>Real terminal unit cost per service unit (NOK2017)</b>	<b>in value 0.00</b>	<b>63.83</b>	<b>32.83</b>																	
	<b>in % -</b>	<b>+2.3%</b>	<b>+1.2%</b>																	
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value 0.00</b>	<b>6.84</b>	<b>3.52</b>																	
	<b>in % -</b>	<b>+2.3%</b>	<b>+1.2%</b>																	
4. Focus on terminal DUC monitoring at charging zone level																				
<b>AUC vs. DUC</b> In the combined year 2020-2021, the terminal AUC was +1.2% (or +32.83 NOK2017, +3.52 €2017) higher than the planned DUC. This results from the combination of slightly lower than planned TNSUs (-0.9%) and slightly higher than planned terminal costs in real terms (+0.3%, or +2.0 MNOK2017, +0.2 ME2017).																				
<b>Terminal service units</b> The difference between actual and planned TNSUs (-0.9%) falls within the ±2% dead band. Hence the resulting loss in terminal revenue is borne by the ANSPs (see items 10 to 14).			<b>Costs by entity at TCZ level (ME2017):</b> <table border="1"> <tr><td>Main ANSP</td><td>-0.1%</td></tr> <tr><td>Other ANSP(s)</td><td></td></tr> <tr><td>METSP(s)</td><td>18.9%</td></tr> <tr><td>NSA</td><td>-2.8%</td></tr> <tr><td>Total CZ</td><td>0.3%</td></tr> </table>				Main ANSP	-0.1%	Other ANSP(s)		METSP(s)	18.9%	NSA	-2.8%	Total CZ	0.3%				
Main ANSP	-0.1%																			
Other ANSP(s)																				
METSP(s)	18.9%																			
NSA	-2.8%																			
Total CZ	0.3%																			
<b>Terminal costs by entity at charging zone level</b> Actual real terminal costs are +0.3% (or +0.2 ME2017) higher than planned. This is driven by the MET service provider (+18.9%, or +0.3 ME2017), while the actual costs of the main ANSP (Avinor) and the NSA are close to the determined costs (-0.1% and -2.8%, respectively).			<b>Costs by nature for main ANSP (ME2017):</b> <table border="1"> <tr><td>Staff costs</td><td>0.9%</td></tr> <tr><td>Other operating costs</td><td>-3.8%</td></tr> <tr><td>Depreciation</td><td>2.8%</td></tr> <tr><td>Cost of capital</td><td>0.8%</td></tr> <tr><td>Exceptional costs</td><td></td></tr> <tr><td>VFR exempted flights</td><td>-0.6%</td></tr> <tr><td>Total Main ANSP</td><td>-0.1%</td></tr> </table>				Staff costs	0.9%	Other operating costs	-3.8%	Depreciation	2.8%	Cost of capital	0.8%	Exceptional costs		VFR exempted flights	-0.6%	Total Main ANSP	-0.1%
Staff costs	0.9%																			
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Exceptional costs																				
VFR exempted flights	-0.6%																			
Total Main ANSP	-0.1%																			
<b>Terminal costs for the main ANSP (Avinor) at charging zone level</b> The slightly lower than planned terminal costs in real terms for Avinor (-0.1%, or -0.1 ME2017) result from the combination of: <ul style="list-style-type: none"> <li>- slightly higher staff costs (+0.9%);</li> <li>- lower other operating costs (-3.8%), mainly due to cost-savings in travel expenses and external support;</li> <li>- slightly higher depreciation and cost of capital (+2.8% and +0.8%, respectively), due to the higher cost of investment relating to the new radar at Oslo airport and IT equipment; and,</li> <li>- slightly lower than planned deduction for VFR exempted flights (-0.6%).</li> </ul>																				

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The Actual Unit Cost for Users (AUCU) reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	NOK/SU	EUR/SU
Initial DUC charged	1,634.51	156.75
DUC to be charged retroactively	1,365.62	130.84
<b>DUC</b>	<b>3,000.12</b>	<b>287.59</b>
Inflation adjustment	20.98	2.07
Cost exempt from cost-sharing	9.65	0.95
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	0.58	0.06
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	0.00	0.00
Application of lower unit rate	-1,365.62	-130.84
Total adjustments	-1,334.40	-127.77
<b>AUCU</b>	<b>1,665.72</b>	<b>159.82</b>
<b>AUCU vs. DUC</b>	<b>-44.5%</b>	<b>-44.4%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

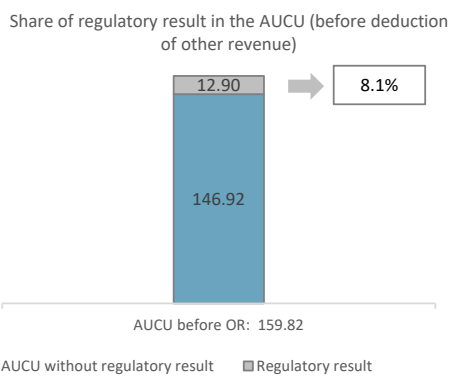
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

		NOK '000	EUR '000	NOK/SU	EUR/SU
by item	New and existing investments	2,665	262	9.83	0.97
	Competent authorities and qualified entities costs	-47	-5	-0.17	-0.02
	Eurocontrol costs	0	0	0.00	0.00
	Pension costs	0	0	0.00	0.00
	Interest on loans	0	0	0.00	0.00
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>2,618</b>	<b>258</b>	<b>9.65</b>	<b>0.95</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	NOK '000	EUR '000	NOK/SU	EUR/SU
Avinor	39,756	3,805	146.63	14.03
METSP(s)	NOK '000	EUR '000	NOK/SU	EUR/SU
Norway-MET	-3,114	-307	-11.48	-1.13
<b>Total charging zone</b>	<b>36,642</b>	<b>3,498</b>	<b>135.15</b>	<b>12.90</b>
<b>Actual cost for users***</b>	<b>451,623</b>	<b>43,332</b>	<b>1,665.72</b>	<b>159.82</b>
<b>Regulatory result (% AUCU)</b>	<b>8.1%</b>	<b>8.1%</b>	<b>8.1%</b>	<b>8.1%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (1,665.72NOK or 159.82€) is significantly lower (-44.5%) than the nominal DUC (3,000.12NOK or 287.59€), which includes DUC initially charged: 1,634.51NOK or 156.75€; and to be charged: 1,365.62NOK or 130.84€. The difference between these two figures (-1,334.40NOK/SU or -127.77€/SU) is due to:

- the application of a lower unit rate (-1,365.62NOK/SU or -130.84€/SU), which offsets fully the DUC to be charged retroactively and reflects the decision of Norway to not recover from airspace users the losses in terminal revenues linked with the Covid-19 pandemic;
- the positive inflation adjustment resulting from higher than planned inflation (+20.98NOK/SU or +2.07€/SU);
- the impact of adjustments resulting from the costs exempt from cost-sharing mechanism (+9.65NOK/SU or +0.95€/SU); and,
- the addition for the traffic adjustment (+0.58NOK/SU or +0.06€/SU) for the costs not subject to traffic risk sharing to be charged to airspace users in future years.

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 8.1%.

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (NOK '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	-4,434			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	5,553			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	2,665			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>3,784</b>			
Traffic risk sharing (NOK '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	-0.9%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	803,043			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>-7,171</b>			
Incentives (NOK '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (NOK '000)</b>	<b>-3,386</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>-333</b>			

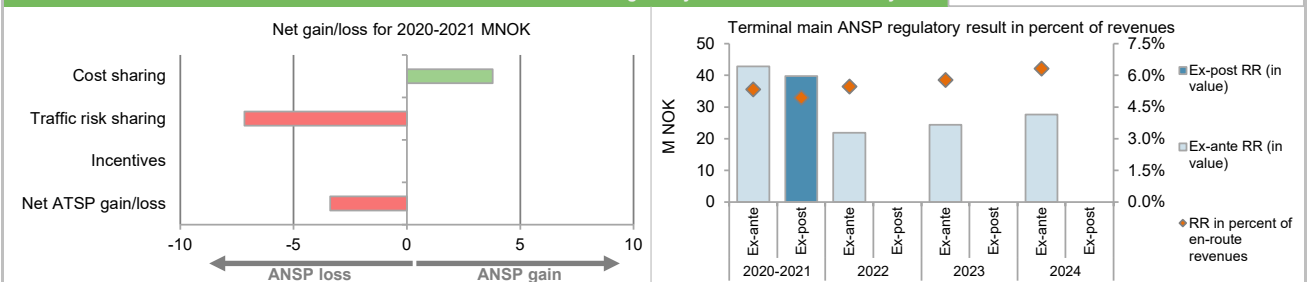
12. Regulatory result (RR) for the main ANSP at charging zone level

Avinor planned regulatory result (NOK '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	516,798	531,951	1,048,749	535,908	597,361	676,414
Proportion of financing through equity (in %) *see Note 1	40%	40%	40%	40%	40%	40%
RoE pre-tax rate (in %)	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%
RoE (in value)	21,085	21,704	42,789	21,865	24,372	27,598
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>21,085</b>	<b>21,704</b>	<b>42,789</b>	<b>21,865</b>	<b>24,372</b>	<b>27,598</b>
<b>Revenue for the terminal charging zone</b>	<b>400,825</b>	<b>402,218</b>	<b>803,043</b>	<b>400,118</b>	<b>421,581</b>	<b>437,181</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>5.3%</b>	<b>5.4%</b>	<b>5.3%</b>	<b>5.5%</b>	<b>5.8%</b>	<b>6.3%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>10.2%</b>	<b>10.2%</b>	<b>10.2%</b>	<b>10.2%</b>	<b>10.2%</b>	<b>10.2%</b>
Avinor actual regulatory result (NOK '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	516,798	540,607	1,057,404			
Proportion of financing through equity (in %) *see Note 1	40%	40%	40%			
RoE pre-tax rate (in %)	10.2%	10.2%	10.2%			
RoE (in value)	21,085	22,057	43,142			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	-3,386	-3,386			
<b>Ex-post regulatory result (+/-) for the terminal charging zone *see Note 2</b>	<b>21,085</b>	<b>18,670</b>	<b>39,756</b>			
<b>Revenue for the terminal charging zone</b>	<b>400,825</b>	<b>403,266</b>	<b>804,091</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>5.3%</b>	<b>4.6%</b>	<b>4.9%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>10.2%</b>	<b>8.6%</b>	<b>9.4%</b>			

**Note 1:** Ex-ante and ex-post RoE are computed based on the notional gearing of 60% debt used in the RP3 PP. The actual gearing of Avinor should be reported.

**Note 2:** Ex-post regulatory result should be seen in the light of the decision of the State of Norway to not recover from airspace users the losses in terminal revenues linked with the Covid-19 Pandemic. This decision generated losses of -370 MNOK for entities providing services in the terminal charging zone (-359 MNOK for Avinor), which will be covered by the State of Norway.

13. Focus on main ANSP regulatory result on terminal activity



Avinor net loss on activity in Norway terminal charging zone in the combined year 2020-2021

Avinor incurred a net loss of -3.4 MNOK (-0.3 ME), resulting from a combination of a gain of +3.8 MNOK arising from the cost sharing mechanism and a loss of -7.2 MNOK arising from the traffic risk sharing mechanism.

Avinor overall regulatory results (RR) for the terminal activity

Ex-post, the overall RR corresponding to the net loss from the terminal activity mentioned above (-3.4 MNOK) and the RoE (+43.1 MNOK) amounts to a gain of +39.8 MNOK (4.9% of the terminal revenues). The resulting ex-post rate of return on equity is 9.4%. Please see also **Note 2** above.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Norway-MET planned regulatory result (NOK '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	0	0	0	0	0	0
Revenue for the terminal charging zone	7,930	8,104	16,034	8,266	8,431	8,600
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Norway-MET actual regulatory result (NOK '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	0	-3,114	-3,114	*see also Note 2 in item 12		
Revenue for the terminal charging zone	7,930	8,239	16,168			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	-37.8%	-19.3%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity</b>						
Ex-post, the overall RR for the other ANSP (MET service provider) in the terminal charging zone of Norway amounts to a loss of -3.1 MNOK (-19.3% of the corresponding terminal revenues). See also <b>Note 2</b> in item 12.						



1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1: Norway		En route charging zone 2:					
Terminal charging zone 1: Norway		Terminal charging zone 2:					
Norway: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		108,590,432	114,447,221	223,037,653	120,172,502	120,678,722	121,855,615
Real terminal costs (EUR2017)		41,650,815	41,058,954	82,709,769	40,200,204	41,680,999	42,548,468
Real gate-to-gate costs (EUR2017)		150,241,247	155,506,175	305,747,422	160,372,706	162,359,721	164,404,083
En route share (%)		72.3%	73.6%	72.9%	74.9%	74.3%	74.1%
Norway: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		108,590,432	113,664,145	222,254,578			
Real terminal costs (EUR2017)		41,650,815	41,274,721	82,925,536			
Real gate-to-gate costs (EUR2017)		150,241,247	154,938,866	305,180,113			
En route share (%)		72.3%	73.4%	72.8%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017) in value		0	-567,309	-567,309			
in %		0.0%	-0.4%	-0.2%			
En route share in p.p.		0.0 p.p.	-0.2 p.p.	-0.1 p.p.			
2. Share of en route and terminal in gate-to-gate actual costs (2020-2021)							
<p>In the combined year 2020-2021, actual gate-to-gate ANS costs are -0.2% (-0.6 M€2017) lower than planned, as en route costs were lower than planned by -0.8 M€2017 and terminal costs were higher than planned by +0.2 M€2017.</p> <p>The actual share of en route in gate-to-gate costs for the combined year 2020-2021 corresponds to 72.8%, which is slightly below (-0.1 p.p.) the plan for this period.</p>							
3. Gate-to-gate regulatory result (RR) 2020-2021							
In NOK '000							
ANSP(S)	Ex-ante			Ex-post			
	RR	Revenues	RR % revenues	RR	Revenues	RR % revenues	
Avinor	142,045	2,804,623	5.1%	169,477	2,852,363	5.9%	
KJE	0	9,827	0.0%	215	10,071	2.1%	
METSP(s)	RR	Revenues	RR % revenues	RR	Revenues	RR % revenues	
Norway MET	0	40,704	0.0%	-1,081	41,079	-2.6%	
<b>Total</b>	<b>142,045</b>	<b>2,855,154</b>	<b>5.0%</b>	<b>168,611</b>	<b>2,903,514</b>	<b>5.8%</b>	
<p>For the ANSPs providing services in the en route and terminal charging zones of Norway covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to a gain of +168.6 MNOK (+132.0 MNOK for en route and +36.6 for terminal), corresponding to 5.8% of gate-to-gate ANS revenues, compared to 5.0% included in the performance plan for RP3. See also Note 2 in item 12.</p>							
<p>Norway gate-to-gate 2020-2021 regulatory result in % of revenues</p>							

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# **Annual Monitoring Report 2021**

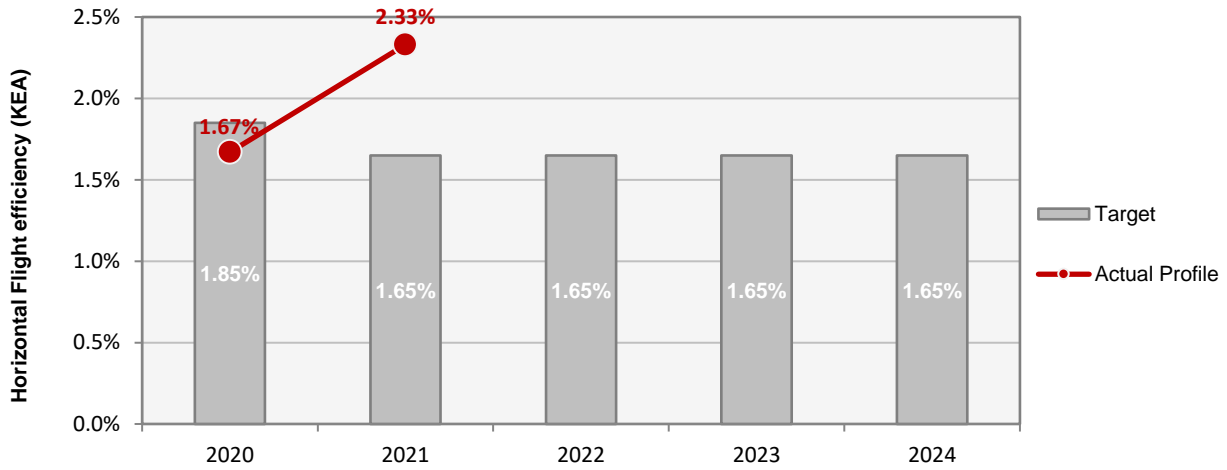
## Local level view

### Poland

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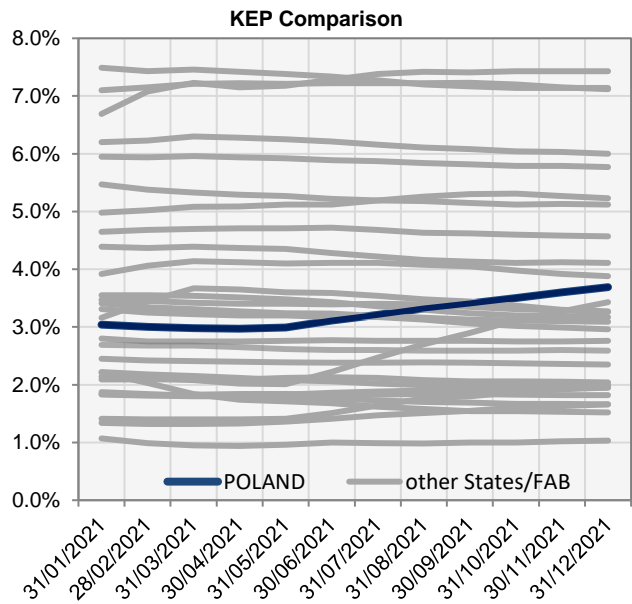
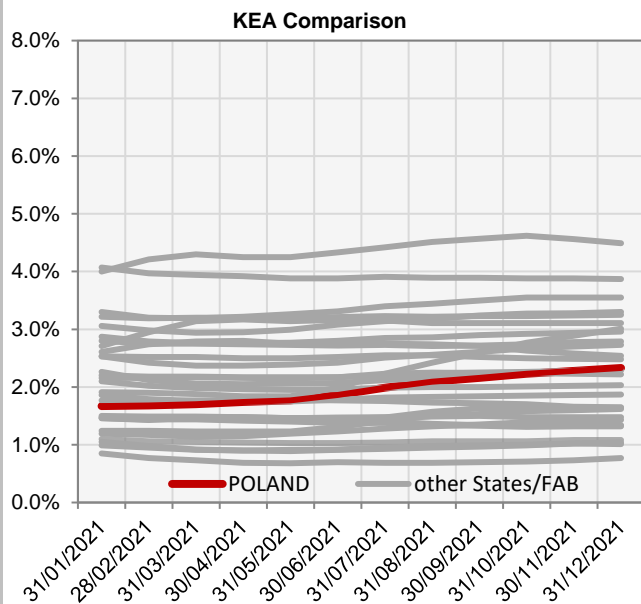
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>PANSA</b>	100	D	D	D	D	D
<b>Port Lotniczy Bydgoszcz S.A.</b>	76	C	C	C	C	C
<b>Warmia i Mazury sp. z o.o.</b>	77	C	C	C	C	C
Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.						
Observations						
<p>All five EoSM components of PANSA meet, or exceed, already the 2024 target level. Improvements in maturity has been observed with respect to 2020, reaching the maximum level of maturity possible.</p> <p>Four out of five EoSM components of Port Lotniczy Bydgoszcz meet already the 2024 target level. Only the component "Safety Risk Management" is below 2024 target level. Improvements in safety risk management are still expected during RP3 to achieve 2024 targets. Same situation is applicable to Warmia i Mazury.</p>						

KEA					
	2020	2021	2022	2023	2024
Target	1.85%	1.65%	1.65%	1.65%	1.65%
Actual performance	1.67%	2.33%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	1.67%	1.68%	1.70%	1.74%	1.77%	1.86%	1.99%	2.09%	2.16%	2.23%	2.28%	2.33%
KEP	3.04%	3.00%	2.98%	2.97%	2.99%	3.11%	3.21%	3.32%	3.41%	3.50%	3.60%	3.69%
KES	2.38%	2.33%	2.32%	2.32%	2.36%	2.47%	2.52%	2.57%	2.62%	2.67%	2.74%	2.79%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**1. Overview**

For Poland the scope of the RP3 monitoring comprises a total of 15 airports. However, in accordance with IR (EU) 2019/317 and the traffic figures, only the main airport Warsaw (EPWA) must be monitored for additional taxi-out and ASMA times.

The Airport Operator Data Flow, necessary for the monitoring of the additional times, is correctly established where required and the monitoring of all environment indicators can be performed.

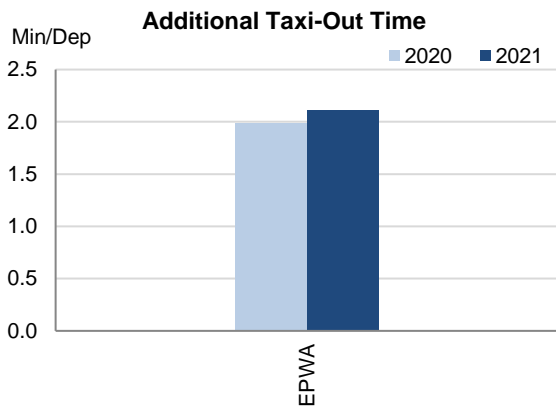
Traffic at the ensemble of these 15 airports in 2021, regardless of an increase of 22% with respect to 2020, was still 46 % lower than in 2019.

Additional taxi-out times are similar to last year's, while additional ASMA times have further improved.

The shares of CDO flights are in general relatively high in 2021, with (slight) changes with respect to 2020 depending on the airport.

According to the Polish monitoring report: *the situation will be continuously monitored by NSA based on the data derived from Pan-European ANS Performance data repository (<http://ansperformance.eu/data/>) and information provided by Polish Air Navigation Services Agency – PANSA.*

**2. Additional Taxi-Out Time**

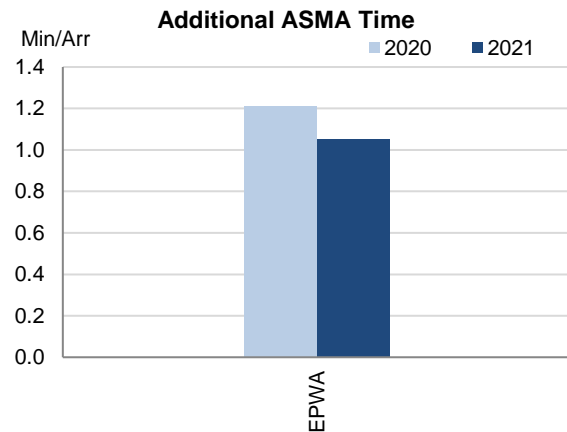


Additional taxi-out times at Warsaw (EPWA; 2019: 3.43 min/dep.; 2020: 1.99 min/dep.; 2021: 2.11 min/dep.) have slightly increased.

The annual average is influenced by the performance during the winter months due to de-icing. The longest additional times were observed in January, February and December with more than 5 min/dep., while in Summer they were somewhat above 1 min/dep.

The Polish NSA reports that *A-CDM was implemented in 2020 at Warsaw, which should also help reduce these additional taxi-out times. In addition, it is planned to implement a Traffic Complexity tool by 2022 and A-SMGCS by 2024.*

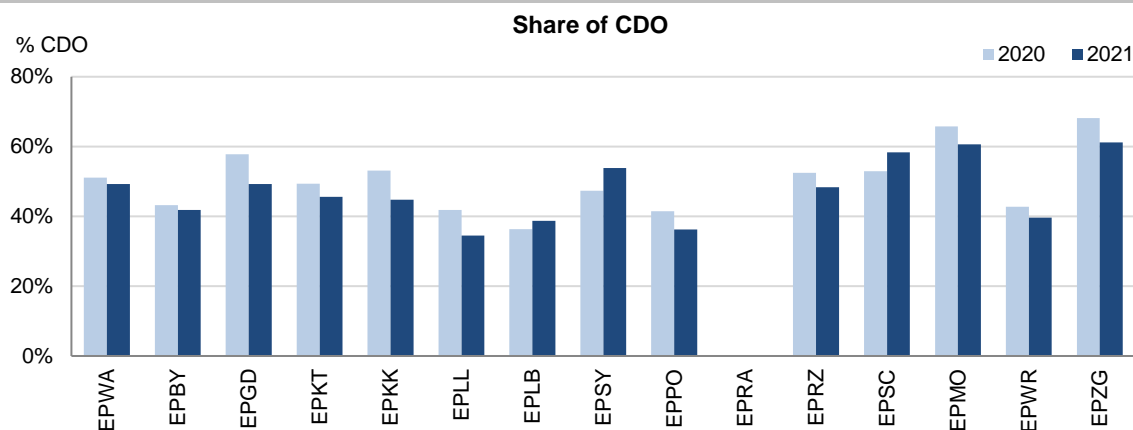
**3. Additional ASMA Time**



Additional times in the terminal airspace of Warsaw (EPWA; 2019: 2.09 min/arr.; 2020: 1.21 min/arr. 2021: 1.05 min/arr.) remained under 1 min/arr. in the first half of the year, but then increased in line with the traffic recovery.

The Polish NSA reports that Arrival Manager (AMAN) (2019) was implemented in 2019 and that a TMA reconfiguration & resectorization, including new SID/STAR procedures was implemented in 2021.

#### 4. Share of arrivals applying CDO



All airports have shares of CDO flights (well) above the overall RP3 value in 2021 (30.5%) with values ranging from 34.5% to 61.2%.

Lublin, Olsztyn-Mazury and Szczecin-Goleniów had higher values than in 2020 (EPLB: +2.3 percentage points; EPSY: +6.5 percentage points; EPSC: +5.4 percentage points) while the values for the other airports decreased (between -8.5 and -1.4 percentage points).

According to the Polish monitoring report: *Measures implemented before 2021:*

- Arrival Manager for EPWA (2019).

*Implemented in 2021:*

- New SID/STAR improved procedures for EPWA (2021);

- Electronic Flight Strip EFES implemented in: EPRZ, EPLB, EPSC, EPBY, EPLL, EPZG (2021).

*Planned:*

- Electronic Flight Strip EFES: EPMO (2022);

- EPKK, EPPO TMA's Reconfiguration & resectorisation (2022-23);

- New SID/STAR procedures for EPKK (2022);

- New SID/STAR procedures for EPRA (2023).

The situation will be continuously monitored by NSA based on the information provided by Polish Air Navigation Services Agency – PANSNA.

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Chopina w Warszawie-EPWA	1.99	2.11				1.21	1.05				51%	49%			
Bydgoszcz-EPBY	-	-				-	-				43%	42%			
Gdańsk im. Lecha Wałęsy-EPGD	-	-				-	-				58%	49%			
Katowice-Pyrzowice-EPKT	-	-				-	-				49%	46%			
Kraków-Balice-EPKK	-	-				-	-				53%	45%			
Łódź-EPLL	-	-				-	-				42%	35%			
Lublin-EPLB	-	-				-	-				36%	39%			
Olsztyn-Mazury-EPSY	-	-				-	-				47%	54%			
Poznań-Ławica-EPPO	-	-				-	-				42%	36%			
Radom-Sadków-EPRA	-	-				-	-				n/a	n/a			
Rzeszów-Jasionka-EPRZ	-	-				-	-				52%	48%			
Szczecin-Goleniów-EPSC	-	-				-	-				53%	58%			
Warszawa/Modlin-EPMO	-	-				-	-				66%	61%			
Wrocław-Strachowice-EPWR	-	-				-	-				43%	40%			
Zielona Góra-Babimost-EPZG	-	-				-	-				68%	61%			



**Update on Military dimension of the plan**

No new information provided as update.

**Military - related measures implemented or planned to improve capacity**

On strategic airspace management level all significant military exercises and permanent military areas are evaluated and analysed taking into account historic civil traffic flows and civil traffic predictions taking into account both entry count and occupancy.

The locations of the military activities are, whenever possible, designed not to affect the main traffic flows, ATC routes, DCTs and POLFRA connectivity and to have minimal or even no impact on capacity. Segmentation, time and level restrictions are imposed when needed to mitigate the impact in location in heavy traffic periods of day. If possible class C TRA airspace is implemented to minimize the impact on civil operations.

Further measures include:

- update of local ASM system/radar data added to visualize military activity in segregated areas. As a result, update of coordination procedures to reduce time required to release segregated areas back to civil traffic.
- implementation of closer cooperation between AMC Poland and FMP Warszawa in order to reduce as much as possible negative influence of segregated areas on civil traffic. Implementation of new coordination procedures (NPZ management) taking into account forecasted demand of civil traffic on segregated airspace allocation in time on day of the operations.

**PI#6 Effective use of reserved or segregated airspace - national level**

Ratio PI#6	2020	2021	2022	2023	2024
Poland	36%	36%			

**PI#6 Effective use of reserved or segregated airspace (per ACC)**

Ratio PI#6	2020	2021	2022	2023	2024
Warsaw ACC	36%	36%			

**Initiatives implemented or planned to improve PI#6**

On strategic airspace management level all significant exercises and permanent areas are evaluated and analyzed taking into account historic civil traffic flows and civil traffic predictions.

The impact, depending on scale, is consulted with the key stakeholders including neighboring states, aerodrome operators, aircraft operators, ATS, military, EUROCONTROL NM.

The lateral and vertical limits of the airspace elements published are designated considering the actual needs of users and nature of activities. All airspace elements shall be planned only for the time period necessary to perform the intended task. The user is obliged to specify precisely the period of activity of a selected element and all timely suspensions of activity between these periods

The locations of the activities are designed not to affect the main traffic flows, ATC routes, DCTs and POLFRA connectivity. Segmentation, time and level restrictions are imposed when needed to mitigate the impact in location in heavy traffic periods of day. If possible class C TRA airspace is implemented to minimize the impact on civil routing.

When the areas excess the set scale they are always divided into smaller modules/segments. Each of these segments is designed in order to fit particular activities without necessity to activate the whole area to perform specific assignments. The shape of these segments is always aligned with main civil traffic flows to minimize the horizontal flight inefficiency.

Further measures planned to be implemented include:

- improvement/automation of exchange of information about military activity in segregated areas, especially on tactical level. Update of coordination procedures and local ASM support tool/system which will reduce time required to release segregated areas back to civil traffic.
  - implementation of closer cooperation between AMC Poland and FMP Warszawa in order to reduce as much as possible negative influence of segregated areas on civil traffic. Implementation of new coordination procedures taking into account forecasted demand of civil traffic on segregated airspace allocation in time on day of the operations.
- Annual review of the efficiency of airspace utilization is conducted.

**PI#7 Rate of planning via available airspace structures - national level**

Ratio PI#7	2020	2021	2022	2023	2024
Poland	166%	122%			

**PI#7 Rate of planning via available airspace structures (per ACC)**

Ratio PI#7	2020	2021	2022	2023	2024
Warsaw ACC	166%	122%			

**Initiatives implemented or planned to improve PI#7**

The available flight planning options are constantly updated to allow Aircraft Operator (AO) to plan the most horizontally effective trajectory, even when the areas are active. Except ATS network and DCTs, the AOs have the possibility to plan in Free Route Airspace environment (POLFRA). Implementation of cross-border free route airspace operations within Lithuanian and Polish airspace (BALTIC FRA) and the cross border operations between BALTIC FRA and South East Europe FRA were implemented in 1Q 2022 which could further increase the planning opportunities.

The lateral and vertical limits of the airspace elements published are designated considering the actual needs of users and nature of activities. All airspace elements shall be planned only for the time period necessary to perform the intended task. The user is obliged to specify precisely the period of activity of a selected element and all timely suspensions of activity between these periods.

Segmentation, time and level restrictions are imposed when needed to mitigate the impact in location in heavy traffic periods of day. If possible class C TRA airspace is implemented to minimize the impact on civil routing. Special procedures are prepared including dynamic change of level or segment and creation of new temporary routings for avoidance of military traffic.

Further measures include:

- update of local ASM system/radar data added to visualize military activity in segregated areas. As a result, update of coordination procedures to reduce time required to release segregated areas back to civil traffic.
- implementation of closer cooperation between AMC Poland and FMP Warszawa in order to reduce as much as possible negative influence of segregated areas on civil traffic. Implementation of new coordination procedures (NPZ management) taking into account forecasted demand of civil traffic on segregated airspace allocation in time on day of the operations.

The situation will be continuously monitored by NSA based on the information provided by Polish Air Navigation Services Agency – PANSNA.

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Poland	83%	77%			

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Warsaw ACC	83%	77%			

**Initiatives implemented or planned to improve PI#8**

As for PI#7

Minutes of ATFM en-route delay						Observations
	2020	2021	2022	2023	2024	
<b>National Target</b>	0.30	0.07	0.12	0.12	0.12	
<b>Actual performance</b>	0.00	0.07				
<b>NSA's assessment of capacity performance</b>						
<p>Actual annual performance recorded in 2021 was in line with the target set for Poland in the revised RP3 performance plan. The target set for 2021 already took into account lower traffic levels following the outbreak of the COVID-19 pandemic. The delays recorded in 2021 were determined mostly by two factors: ATC Staffing and ATC Capacity. 2% of the delays were attributable to weather conditions. Majority of the delays was generated in December 2021 and was related to staffing issues at ACC Warszawa.</p> <p>The traffic reduction related to COVID-19 pandemic and actions undertaken by PANSAs to mitigate risks related to possible infection spread among employees as well as flexible roster planning responding to expected traffic evolution under the rolling NOP planning allowed for achieving very low value of delays in the period January-November 2021 in consequence to achieve the goal set for the year.</p>						
<b>Monitoring process for capacity performance</b>						
<p>The monitoring process in 2021 was conducted in accordance with Regulations (EU) 2019/317 and 2017/373 based on the information received from ANSPs. The data included ANSP's business and annual plans and their consistency with the PP. Despite the fact that the monitoring process was affected by COVID-19 pandemic, the monitoring activities of KPA CAPACITY were conducted systematically and covered, among the others, the following areas:</p> <ul style="list-style-type: none"> <li>- implementation of major projects aimed at increasing capacity and enhancing flight efficiency,</li> <li>- execution of employment plan, especially operational personnel,</li> <li>- execution of training plan,</li> <li>- ATCO productivity.</li> </ul> <p>The scope of the selected areas was chosen taking into account airspace users' remarks, as well as CAA own assessment. All the above supervision exercise was providing the CAA the awareness and knowledge on the ANSPs Performance. The monitoring was performed also by dedicated Polish NSA inspectors during routine inspections.</p>						

## Capacity Planning

Due to COVID-19 pandemic and related traffic drop, 2021 was (similarly as 2020) quite exceptional - also in terms of capacity planning. Capacity planning focused on mid and long-term planning based on STATFOR forecasts, NM data, PANSA simulations and internal recovery plan prepared by PANSA as well as short term planning (up to 4-6 weeks) under the NOP rolling planning initiative coordinated by the Network Manager. Rostering at PANSA also had to consider implementation of measures aimed at limiting the risk of virus spread among ATCOs.

Despite the traffic drop and along with the above mentioned flexible rolling short-term capacity planning, PANSA continued to implement initiatives aimed at improving capacity in FIR Warszawa to meet challenges related to traffic increase after the crisis as well as potential changes in traffic flows. These included the following:

- continuation of new ATCOs training (continued training process for trainees employed before the pandemic breakout, while plans for additional recruitments to start 2020+ were suspended/revised, considering lower traffic levels expected by end of RP3 as well as difficulties related to training caused by low levels of traffic and COVID restrictions; new recruitment process for ATCO trainees started in January 2022),
- continued adaptation of the air traffic management system (Pegasus\_21) to operational needs and modernisation of the ATM system,
- development of tools supporting ATCOs and flow management optimisation (including Traffic Complexity Tool and update of CAT system – implementation of CAT 3.0),
- continued investments in infrastructure (CNS) and technology allowing for optimisation of airspace structures and optimisation of coverage in the Polish airspace as well as supporting contingency,
- continued improvement of AMAN in Warsaw TMA,
- reorganisation of Warsaw TMA and Poznań TMA.

Plans for the following years of RP3 include, among others:

- reorganisation of ACC Warszawa sector configuration - three layer vertical division - to be implemented under staged approach (planned implementation postponed – new date to be decided),
- reorganisation of TMA Kraków in 2022 – new sectors, new SID/STAR procedures,
- continuation of training process for new ATCOs (new recruitment started 2022),
- refreshment training for current ATCOs to maintain their competence following the 2020-2021 significant traffic drop,
- adaptation of the air traffic management system to operational needs and modernisation of the ATM System,
- continued investments in infrastructure (CNS) and technology allowing for optimisation of airspace structures and optimisation of coverage in the Polish airspace as well as supporting resilience, scalability and flexibility of service provision,
- continuation of flexible rostering,
- evolving ACC sector configurations and management to cope with updated traffic forecasts,
- continued FMP dynamic management and ATFCM techniques including STAM,
- improvement of comprehensive airspace management.

### ATCO in OPS (FTE)

	2019	2020	2021	2022	2023	2024	Observations
<b>Planned (Perf Plan)</b>	-	-	173	183	189	194	
<b>Actual</b>	175	172	172				

The deviation from planned figure at the end of 2021 results from unplanned demise of one ACC ATCO and reduction of working time of another ACC ATCO.

### Application of Corrective Measures for Capacity (if applicable)

There are two streams of risks which are expected to impact delays level in 2022:

- Risks linked to War in Ukraine – possible increase in delays due to military activities, also linked to increased number of NATO flights in eastern part of the Polish airspace. Significant portion of this part of airspace is reserved for military flights (performed H24) thus unavailable for civil traffic.
- Risks linked to staffing issues in ACC and APP Warszawa.

Depending on further evolution of the military conflict and situation related to ATCOs in PANSAs, the impact may be also visible in 2023-2024 results.

On the risk related to impact of war in Ukraine, PANSAs implemented RAD measures and EU Restrictions that were aimed to reduce ATFCM delays within EPWW FIR sectors with limited capacity due to additional military activity.

On the risk related to ATCOs, PANSAs Management is running intensive negotiation process with the ATCO Trade Union.

### Summary of capacity performance

Poland experienced an increase in traffic from 377k flights in 2020 to 473k flights in 2021. However, traffic levels were still substantially below the 912k flights in 2019.

In 2021, Poland had 32k minutes of ATFM delay - with more than 90% attributed to ATC staffing. The vast majority of ATFM delays (29k) occurred in December 2021.

### En route Capacity Incentive Scheme

	2020	2021	2022	2023	2024	Observations
<b>National Capacity target</b>	0.30	0.07	0.12	0.12	0.12	
<b>Deadband +/-</b>	-	-	[0.096-0.144]	[0-0]	[0-0]	
<b>Actual performance</b>	0.00	0.07				

In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2023 to 2024.

1. Overview

For Poland the scope of the RP3 monitoring comprises a total of 15 airports. However, in accordance with IR (EU) 2019/317 and the traffic figures, only the main airport Warsaw (EPWA) must be monitored for the pre-departure delay indicators. The Airport Operator Data Flow, necessary for the monitoring of the pre-departure delays, is correctly established where required and the monitoring of these indicators can be performed.

Traffic at the ensemble of these 15 airports in 2021, regardless of an increase of 22% with respect to 2020, was still 46 % lower than in 2019.

EPRA has been closed for civil traffic due to airport extension project.

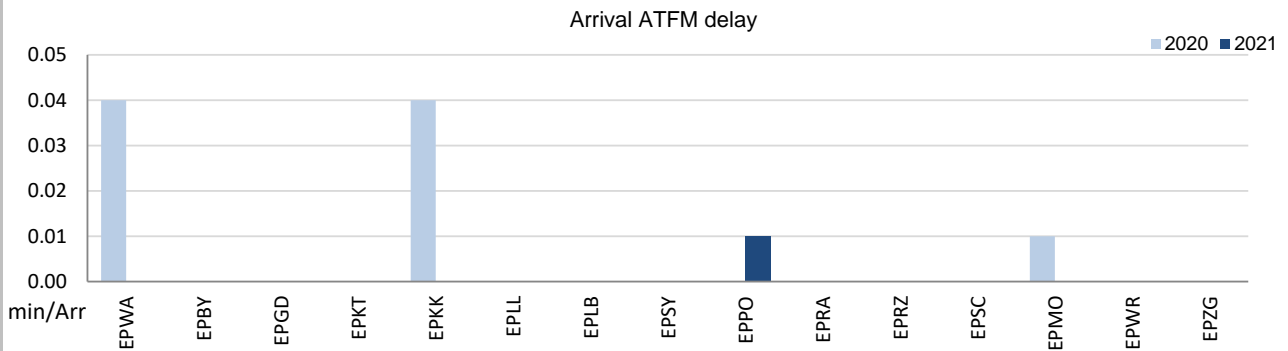
Average arrival ATFM delays in 2021 was 0.00 min/arr, compared to 0.02 min/arr in 2020.

ATFM slot adherence has improved (2021: 96.2%; 2020: 95.3%).

The Polish monitoring report mentions these measures planned to be implemented at Warsaw (EPWA) in 2022+:

- Traffic Complexity Tool (2022),
- A-SMGCS (2024).

2. Arrival ATFM Delay



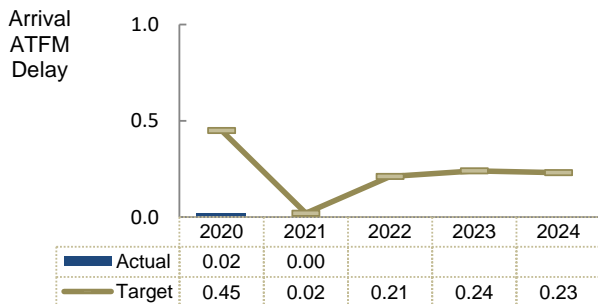
In average, arrival ATFM delays at Polish airports under monitoring have virtually disappeared in 2021.

The actual performance over 2021 was better than the target set in the revised RP3 performance plan.

From these marginal delays, ATC-related delays accounted for 60%, weather conditions generated 27% and aerodrome-related delays 13%.

At airport level, all airports accrued zero or nearly zero delays, with only Poznań-Ławica (EPPO) showing some marginal ATC capacity delays in July and September.

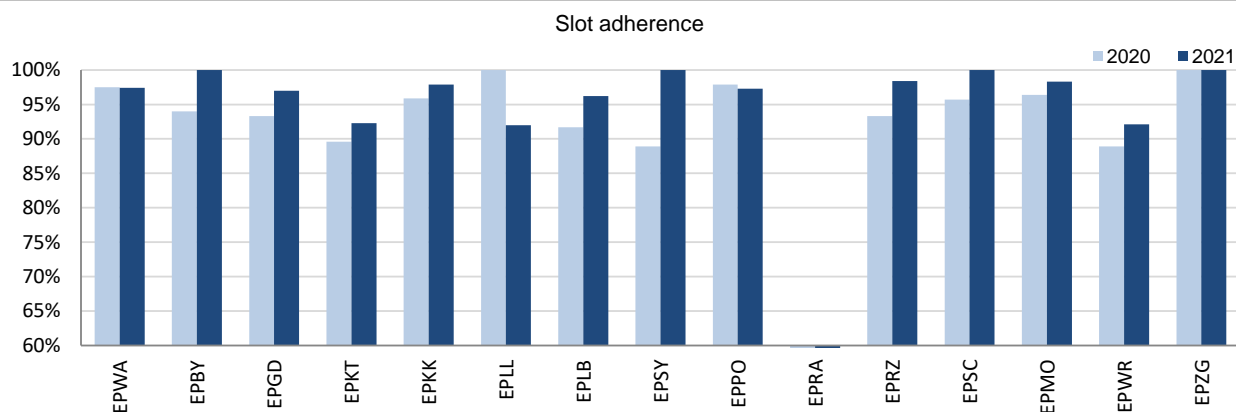
3. Arrival ATFM Delay – National Target and Incentive Scheme



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

#### 4. ATFM Slot Adherence



With the drastic drop in traffic, the share of regulated departures from Polish airports virtually disappeared until July 2021. Polish airports showed adherence between 88.9% and 100% and Warsaw (EPWA) reached 97.4%. The national average was 96.2%, slightly better than the previous year (95.3%). With regard to the 3.8% of flights that did not adhere, 2% was early and 1.8% was late.

According to the Polish monitoring report: *Performance achieved in 2021 should not be compared to previous years (before 2020). Due to COVID-19 pandemic and related traffic drop, data for 2021 is not reliable and not comparable to periods before the pandemic.*

#### 5. ATC Pre-departure Delay

The calculation of the ATC pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF) which is properly implemented at Warsaw. The quality of the airport data reported by EPWA has improved after the COVID crisis and it is possible again to calculate this indicator.

The annual value has decreased with respect to 2019 (EPWA: 2019: 0.87 min/dep; 2021: 0.59 min/dep) driven by the lower values in the first half of 2021. At monthly level and with the traffic recovery, the figures have increased and gotten closer to the 2019 values.

#### 6. All Causes Pre-departure Delay

Warsaw is the only Polish airport subject to the monitoring of this indicator.

The total (all causes) delay in the actual off block time at Warsaw increased in 2021 (EPWA: 2020: 9.32 min/dep.; 2021: 12.61 min/dep.). The highest delays per flight were observed in December, averaging almost 18 min/dep.

According to the Polish monitoring report: *Due to COVID-19 pandemic and related traffic reduction, data for 2021 is not reliable and not comparable to periods before 2020 (pre-pandemic).*

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Chopin w Warszawie-EPWA	0.04	0				97.5%	97.4%				n/a	0.59				9.32	12.61			
Bydgoszcz-EPBY	0	0				94.0%	100.0%				-	-				-	-			
Gdańsk im. Lecha Wałęsy-EPGD	0	0				93.3%	97.0%				-	-				-	-			
Katowice-Pyrzowice-EPKT	0	0				89.6%	92.3%				-	-				-	-			
Kraków-Balice-EPKK	0.04	0				95.9%	97.9%				-	-				-	-			
Łódź-EPLL	0	0				100.0%	92.0%				-	-				-	-			
Lublin-EPLB	0	0				91.7%	96.2%				-	-				-	-			
Olsztyn-Mazury-EPSY	0	0				88.9%	100.0%				-	-				-	-			
Poznań-Ławica-Eppo	0	0.01				97.9%	97.3%				-	-				-	-			
Radom-Sadków-EPRA	0	n/a				n/a	n/a				-	-				-	-			
Rzeszów-Jasionka-EPRZ	0	0				93.3%	98.4%				-	-				-	-			
Szczecin-Goleniów-EPSC	0	0				95.7%	100.0%				-	-				-	-			
Warszawa/Modlin-EPMO	0.01	0				96.4%	98.3%				-	-				-	-			
Wrocław-Strachowice-EPWR	0	0				88.9%	92.1%				-	-				-	-			
Zielona Góra-Babimost-EPZG	0	0				100.0%	100.0%				-	-				-	-			

1. Contextual economic information: en route air navigation services						
Poland ECZ represents 3.1% of the SES en route ANS actual costs in 2019			FAB: Baltic FAB			
National currency:	PLN	Exchange rates (1 EUR=)	2017: 4.25483 PLN	2020: 4.43996 PLN	2021: 4.55963 PLN	
Performance Plan:	RP3 draft performance plan dated 4 February 2022 and found consistent as per Commission Decision (EU) 2022/779 of 13 April 2022 The final version of the plan was adopted and published on 25 May 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317.					
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Poland: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal PLN)	770,873,178	832,074,098	1,602,947,276	875,857,917	914,029,458	950,341,024
Inflation %	3.7%	3.2%		2.5%	2.5%	2.5%
Inflation index (100 in 2017)	107.1	110.6		113.4	116.2	119.1
Real en route costs (PLN2017)	732,049,657	771,058,475	1,503,108,131	798,885,838	819,037,945	837,052,160
Total en route service units	2,145,811	2,549,306	4,695,117	3,990,970	4,762,963	5,129,508
<b>Real en route DUC per service unit (PLN2017)</b>	<b>341.15</b>	<b>302.46</b>	<b>320.14</b>	<b>200.17</b>	<b>171.96</b>	<b>163.18</b>
<b>Real en route DUC per service unit (EUR2017)</b>	<b>80.18</b>	<b>71.09</b>	<b>75.24</b>	<b>47.05</b>	<b>40.42</b>	<b>38.35</b>
Poland: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal PLN)	770,873,178	632,683,487	1,403,556,665			
Inflation %	3.7%	5.2%				
Inflation index (100 in 2017)	107.1	112.7				
Real en route costs (PLN2017)	732,049,657	583,327,811	1,315,377,467			
Total en route service units	2,145,811	2,585,928	4,731,739			
<b>Real en route AUC per service unit (PLN2017)</b>	<b>341.15</b>	<b>225.58</b>	<b>277.99</b>			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>80.18</b>	<b>53.02</b>	<b>65.34</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal PLN)	in value	0	-199,390,611	-199,390,611		
	in %	-	-24.0%	-12.4%		
Inflation %	in p.p.	0.0 p.p.	2.0 p.p.			
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	2.1 p.p.			
Real en route costs (PLN2017)	in value	0	-187,730,664	-187,730,664		
	in %	-	-24.3%	-12.5%		
Total en route service units	in value	0	36,622	36,622		
	in %	-	+1.4%	+0.8%		
<b>Real en route unit cost per service unit (PLN2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-76.88</b>	<b>-42.15</b>		
	<b>in %</b>	<b>-</b>	<b>-25.4%</b>	<b>-13.2%</b>		
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-18.07</b>	<b>-9.91</b>		
	<b>in %</b>	<b>-</b>	<b>-25.4%</b>	<b>-13.2%</b>		
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs. DUC</b>			<p>2020-2021 actual vs. planned TSUs</p>			
In the combined year 2020-2021, the en route AUC was lower by -13.2% (or -42.15 PLN2017 or 9.91 €2017) comparing to the DUC. This was in particular, the effect of the lower than planned en route costs in real terms (-12.5%, -187.7 MPLN2017 or -44.1 M€2017).						
<b>En route service units</b>			<p>Costs by entity at ECZ level (M€2017):</p>			
The difference between actual and planned TSU (+0.8%) is within the ±2% dead-band which results in additional revenues kept by the ANSPs.						
<b>En route costs by entity</b>			<p>Costs by nature for main ANSP (M€2017):</p>			
Actual en route costs are -12.5% lower than planned (-44.1 M€2017) which is mainly driven by the lower costs for PANSAs (-14.0% or -43.4 M€2017). Slightly lower actual costs are observed for NSA/EUROCONTROL, -2.1% (or -0.6 M€2017) and the METSPs, -1.0% (or -0.1 M€2017).						
<b>En-route costs for the main ANSP (PANSAs) at charging zone level</b>						
The lower than planned en route costs in real terms for PANSAs (-14.0%, or -43.4 M€2017) result from:						
- lower en route staff costs (by -18.3% or -39.0 M€2017), "resulting from a number of factors, including evolution of provisions also those for one-off elements of staff benefits reflected in the RP3 determined cost", lower remuneration costs (due to lower employment level) and lower actual level of bonuses and rewards;						
- lower en-route other operating costs (by -14.3% or -5.3 M€2017) resulting from costs cutting measures in 2021;						
- higher, by +2.4% (or +1.1 M€2017) depreciation due to the difference in the useful life of some assets;						
- lower, by -1.9% (or -0.3 M€2017) actual cost of capital due to slightly lower value of asset base;						
- lower deduction for the costs of exempted VFR flights (-9.7%).						

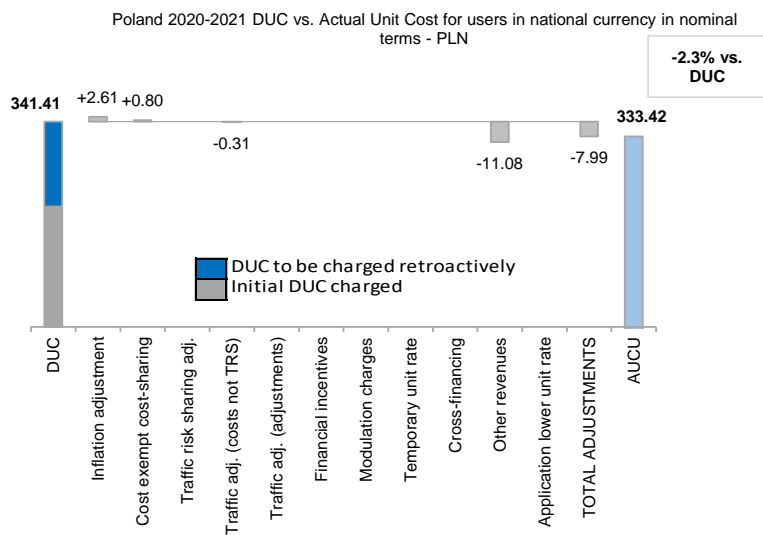


5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	PLN/SU	EUR/SU
Initial DUC charged	200.45	44.49
DUC to be charged retroactively	140.96	31.35
<b>DUC</b>	<b>341.41</b>	<b>75.85</b>
Inflation adjustment	2.61	0.57
Cost exempt from cost-sharing	0.80	0.17
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	-0.31	-0.07
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	-11.08	-2.46
Application of lower unit rate	0.00	0.00
Total adjustments	-7.99	-1.78
<b>AUCU</b>	<b>333.42</b>	<b>74.06</b>
<b>AUCU vs. DUC</b>	<b>-2.3%</b>	<b>-2.3%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

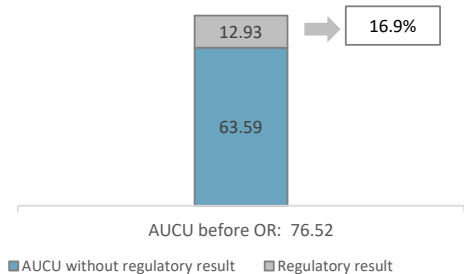
7. En route costs exempt from cost sharing

		PLN '000	EUR '000	PLN/SU	EUR/SU
by item	New and existing investments	5,552	1,218	1.17	0.26
	Competent authorities and qualified entities costs	153	33	0.03	0.01
	Eurocontrol costs	-2,749	-603	-0.58	-0.13
	Pension costs	0	0	0.00	0.00
	Interest on loans	811	178	0.17	0.04
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>3,766</b>	<b>826</b>	<b>0.80</b>	<b>0.17</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	PLN '000	EUR '000	PLN/SU	EUR/SU
PANSA	276,761	60,862	58.49	12.86
METSP(s)	PLN '000	EUR '000	PLN/SU	EUR/SU
Poland-MET IMWM	1,097	242	0.23	0.05
Poland-MET Radom Meteo	57	13	0.01	0.00
Poland-MET_WIM	12	3	0.00	0.00
Poland-MET BYDGOSZCZ	210	46	0.04	0.01
<b>Total charging zone</b>	<b>278,137</b>	<b>61,166</b>	<b>58.78</b>	<b>12.93</b>
<b>Actual cost for users***</b>	<b>1,630,065</b>	<b>362,092</b>	<b>344.50</b>	<b>76.52</b>
<b>Regulatory result (% AUCU)</b>	<b>17.1%</b>	<b>16.9%</b>	<b>17.1%</b>	<b>16.9%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (333.42 PLN or 74.06€) is -2.3% lower than the nominal DUC (341.41 PLN or 75.85€), which includes DUC initially charged: 200.45 PLN (or 44.49€); and to be charged: 140.96 PLN (or 31.35€). The difference between these two figures (-7.99 PLN/SU or -1.78€/SU) is due to:

- the positive inflation adjustment (+2.61 PLN/SU or +0.57€/SU) resulting from higher than planned inflation;
- the positive adjustment for costs exempt from cost-sharing (+0.80 PLN/SU or +0.17€/SU);
- the deduction of traffic adjustment (-0.31 PLN/SU or -0.07€/SU), for the costs not subject to traffic risk sharing to be reimbursed in future years; and
- the deduction of the other revenues (-11.08 PLN/SU or -2.46€/SU).

The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 17.1% (or 16.9% while calculating in EUR).

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

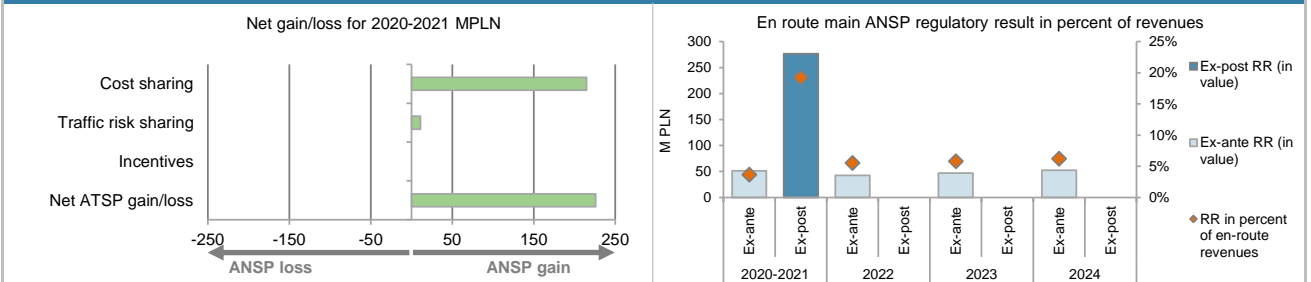
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (PLN '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	196,768			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	11,683			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	6,445			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>214,896</b>			
Traffic risk sharing (PLN '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.8%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	1,412,687			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>11,019</b>			
Incentives (PLN '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (PLN '000)</b>	<b>225,915</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>49,547</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

PANSA planned regulatory result (PLN '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	1,195,647	1,209,989	2,405,636	1,193,782	1,298,108	1,394,343
Proportion of financing through equity (in %)	97%	84%	90%	74%	71%	73%
RoE pre-tax rate (in %)	2.4%	2.4%	2.4%	4.9%	5.1%	5.2%
RoE (in value)	27,697	23,919	51,616	42,763	46,868	52,493
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>27,697</b>	<b>23,919</b>	<b>51,616</b>	<b>42,763</b>	<b>46,868</b>	<b>52,493</b>
<b>Revenue for the en route charging zone</b>	<b>678,018</b>	<b>734,669</b>	<b>1,412,687</b>	<b>777,208</b>	<b>812,630</b>	<b>847,116</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>4.1%</b>	<b>3.3%</b>	<b>3.7%</b>	<b>5.5%</b>	<b>5.8%</b>	<b>6.2%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.4%</b>	<b>4.9%</b>	<b>5.1%</b>	<b>5.2%</b>
PANSA actual regulatory result (PLN '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	1,195,647	1,080,451	2,276,098			
Proportion of financing through equity (in %)	97%	91%	94%			
RoE pre-tax rate (in %)	2.4%	2.4%	2.4%			
RoE (in value)	27,697	23,149	50,846			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	225,915	225,915			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>27,697</b>	<b>249,064</b>	<b>276,761</b>			
<b>Revenue for the en route charging zone</b>	<b>678,018</b>	<b>763,816</b>	<b>1,441,834</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>4.1%</b>	<b>32.6%</b>	<b>19.2%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>2.4%</b>	<b>25.4%</b>	<b>13.0%</b>			

13. Focus on the main ANSP regulatory result on en route activity



PANSA net gain on activity in the en route charging zone in the combined year 2020-2021

PANSA's net gain amounts to +225.9 MPLN (or +49.5 ME), mainly due to the gains of +214.9 MPLN from the cost sharing mechanism, and of +11.0 MPLN from the traffic risk sharing mechanism.

PANSA overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+49.5 ME) and the actual RoE (+50.8 MPLN or +11.2 ME) amounts to +276.8 MPLN or +60.9 ME (19.2% of the en route revenues). The resulting ex-post rate of return on equity is 13.0%, which is significantly higher than the 2.4% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
<b>Poland-MET IMWM planned regulatory result (PLN '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	299	334	632	113	175	176
Revenue for the en route charging zone	29,923	31,768	61,692	31,893	33,213	34,696
Ex-ante regulatory result (+/-) in percent of revenues	1.0%	1.1%	1.0%	0.4%	0.5%	0.5%
Ex-ante RoE pre-tax rate (in %)	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
<b>Poland-MET IMWM actual regulatory result (PLN '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	299	799	1,097			
Revenue for the en route charging zone	29,923	32,276	62,199			
Ex-post regulatory result (+/-) in percent of revenues	1.0%	2.5%	1.8%			
Ex-post RoE pre-tax rate (in %)	4.0%	9.5%	6.9%			
<b>Poland-MET Radom Meteo planned regulatory result (PLN '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	16	10	26	46	37	39
Revenue for the en route charging zone	299	320	619	324	1,231	1,188
Ex-ante regulatory result (+/-) in percent of revenues	5.3%	3.1%	4.1%	14.3%	3.0%	3.3%
Ex-ante RoE pre-tax rate (in %)	5.1%	4.8%	5.0%	4.9%	4.9%	4.9%
<b>Poland-MET Radom Meteo actual regulatory result (PLN '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	16	41	57			
Revenue for the en route charging zone	299	326	624			
Ex-post regulatory result (+/-) in percent of revenues	5.3%	12.5%	9.1%			
Ex-post RoE pre-tax rate (in %)	5.1%	19.7%	10.9%			
<b>Poland-MET_WIM planned regulatory result (PLN '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	12	11	23	30	31	29
Revenue for the en route charging zone	1,636	1,671	3,307	1,760	1,807	1,812
Ex-ante regulatory result (+/-) in percent of revenues	0.7%	0.7%	0.7%	1.7%	1.7%	1.6%
Ex-ante RoE pre-tax rate (in %)	5.1%	4.7%	4.9%	4.6%	4.6%	4.6%
<b>Poland-MET_WIM actual regulatory result (PLN '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	12	0	12			
Revenue for the en route charging zone	1,636	1,703	3,339			
Ex-post regulatory result (+/-) in percent of revenues	0.7%	0.0%	0.4%			
Ex-post RoE pre-tax rate (in %)	5.1%	0.1%	2.6%			
<b>Poland-MET BYDGOSZCZ planned regulatory result (PLN '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	52	48	100	53	53	47
Revenue for the en route charging zone	1,150	1,350	2,500	1,479	1,440	1,467
Ex-ante regulatory result (+/-) in percent of revenues	4.6%	3.5%	4.0%	3.6%	3.7%	3.2%
Ex-ante RoE pre-tax rate (in %)	6.8%	5.7%	6.3%	5.0%	4.7%	4.6%
<b>Poland-MET BYDGOSZCZ actual regulatory result (PLN '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	52	157	210			
Revenue for the en route charging zone	1,150	1,372	2,522			
Ex-post regulatory result (+/-) in percent of revenues	4.6%	11.5%	8.3%			
Ex-post RoE pre-tax rate (in %)	6.8%	18.9%	13.1%			
<b>Total other ANSPs</b>						
<b>Total other ANSPs planned regulatory result (PLN '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	379	402	781	242	295	292
Revenue for the en route charging zone	33,007	35,110	68,117	35,456	37,691	39,163
Ex-ante regulatory result (+/-) in percent of revenues	1.1%	1.1%	1.1%	0.7%	0.8%	0.7%
Ex-ante RoE pre-tax rate (in %)	4.3%	4.2%	4.2%	4.4%	4.3%	4.3%
<b>Total other ANSPs actual regulatory result (PLN '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	379	997	1,376			
Revenue for the en route charging zone	33,007	35,677	68,684			
Ex-post regulatory result (+/-) in percent of revenues	1.1%	2.8%	2.0%			
Ex-post RoE pre-tax rate (in %)	4.3%	10.3%	7.5%			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
For other ANSPs (4 METSPs - IMWM, Radom Meteo, MET WIM and MET Bydgoszcz) the overall ex-post regulatory results amounted to +1.4 MPLN (or +0.3 ME) which represents 2.0% of their actual en route revenues for the combined 2020-2021. This results in higher ex-post RoE of 7.5% comparing to ex-ante RoE at the level of 4.2%.						

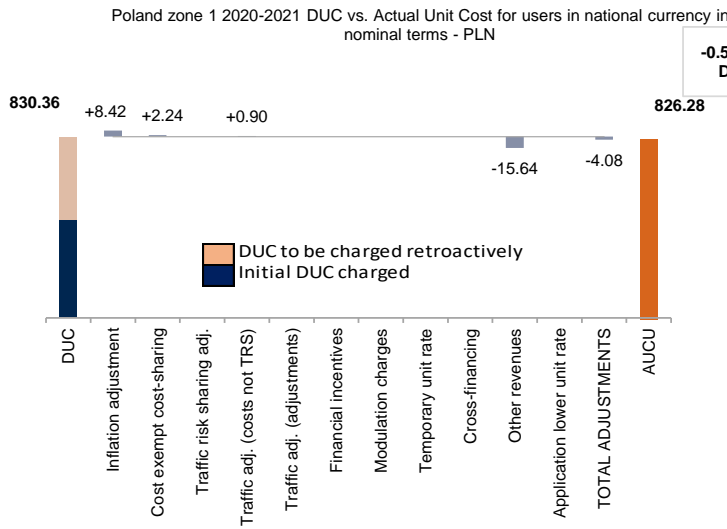
1. Contextual economic information: terminal air navigation services							
<ul style="list-style-type: none"> <li>Poland zone 1 TCZ represents 0.8% of the SES terminal ANS actual costs in 2019</li> <li>Number of airports in charging zone in 2021: 1 of which:                             <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 0</li> <li>Airports with more than 80,000 IFR mvmts: 1</li> </ul> </li> <li>National currency: PLN Exchange rates (1 EUR=) 2017: 4.25483 PLN 2020: 4.43996 PLN 2021: 4.55963 PLN</li> <li>Performance Plan: See item 1 for the en route charging zone(s).</li> </ul>							
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level							
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.</p>							
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)							
Poland zone 1: Data from RP3 Performance Plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal PLN)		33,255,751	48,543,917	81,799,669	48,871,242	50,173,711	52,624,872
Inflation %		3.7%	3.2%		2.5%	2.5%	2.5%
Inflation index (100 in 2017)		107.1	110.6		113.4	116.2	119.1
Real terminal costs (PLN2017)		31,377,540	44,507,345	75,884,885	44,037,508	44,320,933	45,668,485
Total terminal service units		43,637	54,873	98,511	87,356	96,630	103,108
<b>Real terminal DUC per service unit (PLN2017)</b>		<b>719.05</b>	<b>811.09</b>	<b>770.32</b>	<b>504.11</b>	<b>458.67</b>	<b>442.92</b>
<b>Real terminal DUC per service unit (EUR2017)</b>		<b>169.00</b>	<b>190.63</b>	<b>181.05</b>	<b>118.48</b>	<b>107.80</b>	<b>104.10</b>
Poland zone 1: Actual data from Reporting Tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal PLN)		33,255,751	34,465,013	67,720,764			
Inflation %		3.7%	5.2%				
Inflation index (100 in 2017)		107.1	112.7				
Real terminal costs (PLN2017)		31,377,540	31,310,379	62,687,919			
Total terminal service units		43,637	53,296	96,933			
<b>Real terminal AUC per service unit (PLN2017)</b>		<b>719.05</b>	<b>587.49</b>	<b>646.71</b>			
<b>Real terminal AUC per service unit (EUR2017)</b>		<b>169.00</b>	<b>138.08</b>	<b>152.00</b>			
Difference between Actuals and Planned		2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal PLN)	in value	0	-14,078,905	-14,078,905			
	in %	-	-29.0%	-17.2%			
Inflation %	in p.p.	0.0 p.p.	2.0 p.p.				
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	2.1 p.p.				
Real terminal costs (PLN2017)	in value	0	-13,196,966	-13,196,966			
	in %	-	-29.7%	-17.4%			
Total terminal service units	in value	0	-1,578	-1,578			
	in %	-	-2.9%	-1.6%			
<b>Real terminal unit cost per service unit (PLN2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-223.61</b>	<b>-123.61</b>			
	<b>in %</b>	<b>-</b>	<b>-27.6%</b>	<b>-16.0%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-52.55</b>	<b>-29.05</b>			
	<b>in %</b>	<b>-</b>	<b>-27.6%</b>	<b>-16.0%</b>			
4. Focus on terminal DUC monitoring at charging zone level							
<p><b>AUC vs. DUC</b> In the combined year 2020-2021, the terminal AUC for TCZ1 was lower by -16.0% (-123.61 PLN or -29.05€2017) comparing to the DUC. This was in particular the effect of the lower than planned terminal costs in real terms (-17.4%, -13.2 M€2017 or -3.1 M€2017) for TCZ1.</p> <p><b>Terminal service units for the zone</b> The difference between actual and planned TNSU for the zone (-1.6%) is within the ±2% dead-band, which results in a loss borne by ANSPs.</p> <p><b>Terminal costs by entity for the zone</b> Actual terminal costs are -17.4% lower than planned (-3.1 M€2017) which is mainly driven by the lower costs for PANSA (-18.8% or -3.1 M€2017). Slightly lower actual costs are observed in the IMWM (METSP), -0.8%. For the NSA costs are higher by +4.8%.</p> <p><b>Terminal costs for the main ANSP (PANSA) at charging zone level</b> The lower than planned terminal costs for TCZ1 in real terms for PANSA (-18.8%, or -3.1 M€2017) result from:                      - lower en route staff costs for TCZ1 (by -19.6% or -2.5 M€2017), "resulting from a number of factors, including evolution of provisions also those for one-off elements of staff benefits reflected in the RP3 determined cost", lower remuneration costs (due to lower employment level) and lower actual level of bonuses and rewards;                      - lower terminal other operating costs for the zone (by -36.1% or -0.7 M€2017), resulting from costs cutting measures in 2021;                      - higher, by +1.0% (or +0.02 M€2017) depreciation costs due to the difference in the useful life of some assets;                      - lower, by -0.9% cost of capital due to slightly lower value of asset base.</p>				<p>2020-2021 actual vs. planned TNSUs</p>			
				<p>Costs by entity at TCZ level (M€2017):</p>			
				<p>Costs by nature for main ANSP (M€2017):</p>			

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	PLN/SU	EUR/SU
Initial DUC charged	451.40	100.18
DUC to be charged retroactively	378.96	83.93
<b>DUC</b>	<b>830.36</b>	<b>184.11</b>
Inflation adjustment	8.42	1.85
Cost exempt from cost-sharing	2.24	0.49
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	0.90	0.20
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	-15.64	-3.47
Application of lower unit rate	0.00	0.00
Total adjustments	-4.08	-0.94
<b>AUCU</b>	<b>826.28</b>	<b>183.17</b>
<b>AUCU vs. DUC</b>	<b>-0.5%</b>	<b>-0.5%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

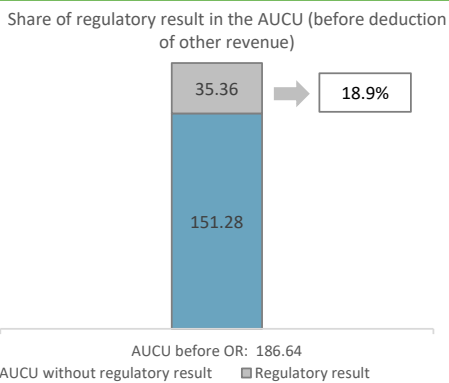
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

		PLN '000	EUR '000	PLN/SU	EUR/SU
by item	New and existing investments	89	20	0.92	0.20
	Competent authorities and qualified entities costs	98	21	1.01	0.22
	Eurocontrol costs	0	0	0.00	0.00
	Pension costs	0	0	0.00	0.00
	Interest on loans	31	7	0.32	0.07
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>217</b>	<b>48</b>	<b>2.24</b>	<b>0.49</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	PLN '000	EUR '000	PLN/SU	EUR/SU
PANSA	15,581	3,422	160.74	35.30
METSP(s)	PLN '000	EUR '000	PLN/SU	EUR/SU
MET IMWM	27	6	0.28	0.06
<b>Total charging zone</b>	<b>15,608</b>	<b>3,428</b>	<b>161.02</b>	<b>35.36</b>
<b>Actual cost for users***</b>	<b>81,610</b>	<b>18,092</b>	<b>841.93</b>	<b>186.64</b>
<b>Regulatory result (% AUCU)</b>	<b>19.1%</b>	<b>18.9%</b>	<b>19.1%</b>	<b>18.9%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit costs for TCZ1 incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (826.28 PLN or 183.17€) is -0.5% lower than the nominal DUC (830.36 PLN or 184.11€), which includes DUC initially charged (451.40 PLN or 100.18€) and DUC to be charged retroactively (378.96 PLN or 83.93€). The difference between these two figures (-4.08 PLN/SU or -0.94 €/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+8.42 PLN/SU or +1.85€/SU);
- the positive adjustment for costs exempt from cost-sharing (+2.24 PLN/SU or +0.49€/SU), to be charged to the airspace users in future years;
- the positive traffic adjustments for costs not subject to traffic risk sharing (+0.90 PLN/SU or +0.20€/SU), to be charged to the airspace users in future years; and
- the deduction of the other revenues (-15.64 PLN/SU or - 3.47€/SU).

The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 19.1% (or 18.9% while calculating in EUR).

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

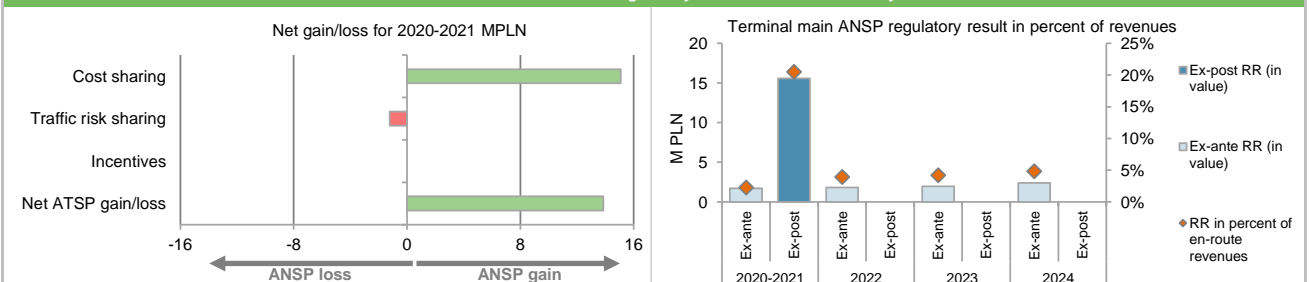
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (PLN '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	14,183			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	782			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	120			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>15,085</b>			
Traffic risk sharing (PLN '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	-1.6%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	76,334			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>-1,223</b>			
Incentives (PLN '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (PLN '000)</b>	<b>13,863</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>3,040</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

PANSA planned regulatory result (PLN '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	35,874	45,389	81,263	50,460	54,865	63,974
Proportion of financing through equity (in %)	97%	84%	89%	74%	71%	73%
RoE pre-tax rate (in %)	2.4%	2.4%	2.4%	4.9%	5.1%	5.2%
RoE (in value)	831	897	1,728	1,808	1,981	2,408
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>831</b>	<b>897</b>	<b>1,728</b>	<b>1,808</b>	<b>1,981</b>	<b>2,408</b>
<b>Revenue for the terminal charging zone</b>	<b>30,567</b>	<b>45,767</b>	<b>76,334</b>	<b>46,070</b>	<b>47,322</b>	<b>49,697</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>2.7%</b>	<b>2.0%</b>	<b>2.3%</b>	<b>3.9%</b>	<b>4.2%</b>	<b>4.8%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.4%</b>	<b>4.9%</b>	<b>5.1%</b>	<b>5.2%</b>
PANSA actual regulatory result (PLN '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	35,874	41,407	77,281			
Proportion of financing through equity (in %)	97%	91%	93%			
RoE pre-tax rate (in %)	2.4%	2.4%	2.4%			
RoE (in value)	831	887	1,718			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	13,863	13,863			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>831</b>	<b>14,750</b>	<b>15,581</b>			
<b>Revenue for the terminal charging zone</b>	<b>30,567</b>	<b>45,447</b>	<b>76,014</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>2.7%</b>	<b>32.5%</b>	<b>20.5%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>2.4%</b>	<b>39.3%</b>	<b>21.6%</b>			

13. Focus on main ANSP regulatory result on terminal activity



PANSA net gain on activity in the TCZ1 in the combined year 2020-2021

PANSA's net gain amounts to +13.9 MPLN (or +3.0 ME), as a result of gains of +15.1 MPLN from the cost sharing mechanism, and the loss of -1.2 MPLN from the traffic risk sharing mechanism.

PANSA overall regulatory results (RR) for the terminal activity in TCZ1

Ex-post, the overall RR taking into account the net gain from the activity mentioned above (+3.0 ME) and the actual RoE (+1.7 MPLN or +0.4 ME) amounts to +15.6 MPLN or +3.4 ME (20.5% of the terminal revenues for TCZ1). The resulting ex-post rate of return on equity is 21.6% which is higher than the 2.4% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
MET IMWM planned regulatory result (PLN '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	0	0	0	0	0	0
Revenue for the terminal charging zone	1,682	1,741	3,423	1,727	1,747	1,791
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
MET IMWM actual regulatory result (PLN '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	0	27	27			
Revenue for the terminal charging zone	1,682	1,774	3,457			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	1.5%	0.8%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity for TCZ1</b>						
No cost of capital was calculated for the MET IMWM for RP3. Ex post, the overall RR corresponds to the net gain from the TCZ1 activity (+0.03 MPLN). It presents 0.8% of total IMWM revenues.						

1. Contextual economic information: terminal air navigation services						
<ul style="list-style-type: none"> <li>Poland zone 2 TCZ represents 2.2% of the SES terminal ANS actual costs in 2019</li> <li>Number of airports in charging zone in 2021: 14 of which:                             <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 14</li> <li>Airports with more than 80,000 IFR mvmts: 0</li> </ul> </li> <li>National currency: PLN Exchange rates (1 EUR=) 2017: 4.25483 PLN 2020: 4.43996 PLN 2021: 4.55963 PLN</li> <li>Performance Plan: See item 1 for the en route charging zone(s).</li> </ul>						
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.</p>						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Poland zone 2: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal PLN)	107,007,850	153,280,891	260,288,740	149,058,558	150,166,336	149,863,037
Inflation %	3.7%	3.2%		2.5%	2.5%	2.5%
Inflation index (100 in 2017)	107.1	110.6		113.4	116.2	119.1
Real terminal costs (PLN2017)	101,339,514	140,933,556	242,273,070	134,684,632	133,096,739	130,519,058
Total terminal service units	62,352	76,368	138,720	123,910	131,402	141,942
<b>Real terminal DUC per service unit (PLN2017)</b>	<b>1,625.29</b>	<b>1,845.45</b>	<b>1,746.49</b>	<b>1,086.95</b>	<b>1,012.90</b>	<b>919.52</b>
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>381.99</b>	<b>433.73</b>	<b>410.47</b>	<b>255.46</b>	<b>238.06</b>	<b>216.11</b>
Poland zone 2: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal PLN)	107,007,850	115,643,459	222,651,309			
Inflation %	3.7%	5.2%				
Inflation index (100 in 2017)	107.1	112.7				
Real terminal costs (PLN2017)	101,339,514	105,409,039	206,748,553			
Total terminal service units	62,352	78,808	141,160			
<b>Real terminal AUC per service unit (PLN2017)</b>	<b>1,625.29</b>	<b>1,337.54</b>	<b>1,464.64</b>			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>381.99</b>	<b>314.36</b>	<b>344.23</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal PLN)	in value 0	-37,637,432	-37,637,432			
	in % -	-24.6%	-14.5%			
Inflation %	in p.p. 0.0 p.p.	2.0 p.p.				
Inflation index (100 in 2017)	in p.p. 0.0 p.p.	2.1 p.p.				
Real terminal costs (PLN2017)	in value 0	-35,524,517	-35,524,517			
	in % -	-25.2%	-14.7%			
Total terminal service units	in value 0	2,440	2,440			
	in % -	+3.2%	+1.8%			
<b>Real terminal unit cost per service unit (PLN2017)</b>	<b>in value 0.00</b>	<b>-507.91</b>	<b>-281.85</b>			
	<b>in % -</b>	<b>-27.5%</b>	<b>-16.1%</b>			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value 0.00</b>	<b>-119.37</b>	<b>-66.24</b>			
	<b>in % -</b>	<b>-27.5%</b>	<b>-16.1%</b>			
4. Focus on terminal DUC monitoring at charging zone level						
<p><b>AUC vs. DUC</b></p> <p>In combined year 2020-2021, the terminal AUC for TCZ2 was lower by -16.1% (-281.85 PLN2017 or -66.24 €2017) comparing to the DUC. This was in particular the effect of the lower than planned terminal costs in real terms (-14.7%, -35.5 M PLN2017 or -8.3 M €2017) for TCZ2.</p> <p><b>Terminal service units for the zone</b></p> <p>The difference between actual and planned TNSU for the zone (+1.8%) is within the ±2% dead-band, which results in additional revenues kept by the ANSPs.</p> <p><b>Terminal costs by entity for the zone</b></p> <p>Actual terminal costs are -14.7% lower than planned (-8.3 M €2017) which is mainly driven by the lower costs for PANSAs (-18.2% or -8.2 M €2017). Slightly lower actual costs were observed for the METSPs in the zone (-1.0% or -0.09 M €2017), other ATSPs in the zone (-3.4% or -0.03 M €2017) and the NSA (-0.1%).</p> <p><b>Terminal costs for the main ANSP (PANSAs) at charging zone level</b></p> <p>The lower than planned TCZ2 costs in real terms for PANSAs (-18.2%, or -8.2M €2017) result from:</p> <ul style="list-style-type: none"> <li>- lower en route staff costs for TCZ2 (by -20.4% or -6.3 M €2017), "resulting from a number of factors, including evolution of provisions also those for one-off elements of staff benefits reflected in the RP3 determined cost", lower remuneration costs (due to lower employment level) and lower actual level of bonuses and rewards;</li> <li>- lower terminal other operating costs for the zone (by -32.3% or -2.1 M €2017), resulting from costs cutting measures in 2021;</li> <li>- higher, by +2.9% (or +0.2 M €2017) depreciation costs due to the difference in the useful life of some assets;</li> <li>- slightly higher, by +0.4% costs of capital due to slightly lower value of asset base.</li> </ul>			<p>2020-2021 actual vs. planned TNSUs</p>			
<p>Costs by nature for main ANSP (M€2017):</p>			<p>Costs by entity at TCZ level (M€2017):</p>			

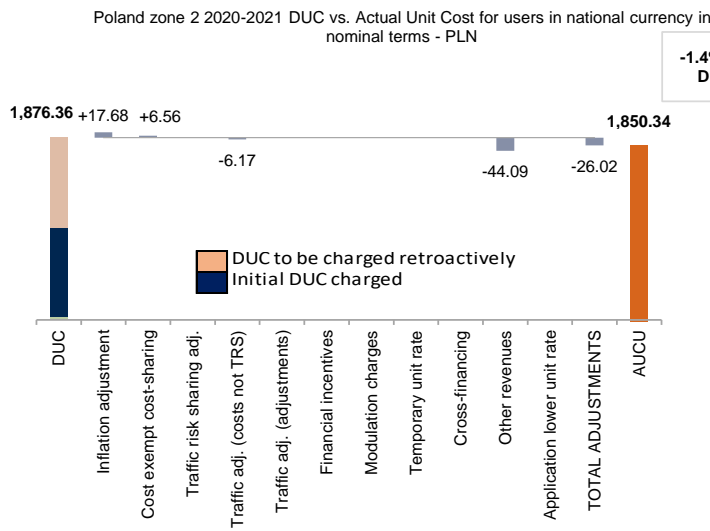


5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	PLN/SU	EUR/SU
Initial DUC charged	927.80	205.90
DUC to be charged retroactively	948.56	210.17
<b>DUC</b>	<b>1,876.36</b>	<b>416.08</b>
Inflation adjustment	17.68	3.88
Cost exempt from cost-sharing	6.56	1.44
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	-6.17	-1.35
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	-44.09	-9.79
Application of lower unit rate	0.00	0.00
Total adjustments	-26.02	-5.82
<b>AUCU</b>	<b>1,850.34</b>	<b>410.25</b>
<b>AUCU vs. DUC</b>	<b>-1.4%</b>	<b>-1.4%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

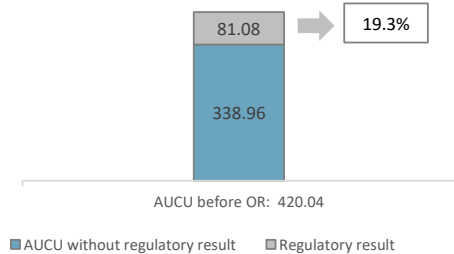
7. Terminal costs exempt from cost sharing

		PLN '000	EUR '000	PLN/SU	EUR/SU
by item	New and existing investments	852	187	6.04	1.32
	Competent authorities and qualified entities costs	-5	-1	-0.04	-0.01
	Eurocontrol costs	0	0	0.00	0.00
	Pension costs	0	0	0.00	0.00
	Interest on loans	79	17	0.56	0.12
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>926</b>	<b>203</b>	<b>6.56</b>	<b>1.44</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ATSP(S)	PLN '000	EUR '000	PLN/SU	EUR/SU
PANSA	50,422	11,077	357.20	78.47
ANSP-BYDGOSZCZ	39	9	0.27	0.06
ANSP Warmia-Mazury	257	57	1.82	0.40
METSP(s)	PLN '000	EUR '000	PLN/SU	EUR/SU
MET IMWM	1,028	228	7.28	1.61
MET Radom Meteo	19	4	0.13	0.03
MET-BYDGOSZCZ	316	70	2.24	0.49
MET-Warmia-Mazury	3	1	0.02	0.01
<b>Total charging zone</b>	<b>52,084</b>	<b>11,445</b>	<b>368.97</b>	<b>81.08</b>
<b>Actual cost for users***</b>	<b>267,418</b>	<b>59,293</b>	<b>1,894.43</b>	<b>420.04</b>
<b>Regulatory result (% AUCU)</b>	<b>19.5%</b>	<b>19.3%</b>	<b>19.5%</b>	<b>19.3%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit costs for TC22 incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (1,850.34 PLN or 410.25€) is -1.4% lower than the nominal DUC (1,876.36 PLN or 416.08€), which represent DUC initially charged (927.80 PLN or 205.90€) and DUC to be charged retroactively (948.56 PLN or 210.17€). The difference between these two figures (-26.02 PLN/SU or -5.82€/SU) is due to:

- a positive inflation adjustment resulting from higher than planned inflation (+17.68 PLN/SU or +3.88€/SU);
- the positive adjustment for costs exempt from cost-sharing (+6.56 PLN/SU or +1.44€/SU), to be charged to the airspace users in future years;
- the deduction of traffic adjustments for costs not subject to traffic risk sharing (-6.17 PLN/SU or -1.35€/SU) to be reimbursed to the airspace users in future years;
- the deduction of the other revenues (-44.09 PLN/SU or -9.79€/SU).

The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 19.5% (or 19.3% while calculating in EUR).

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

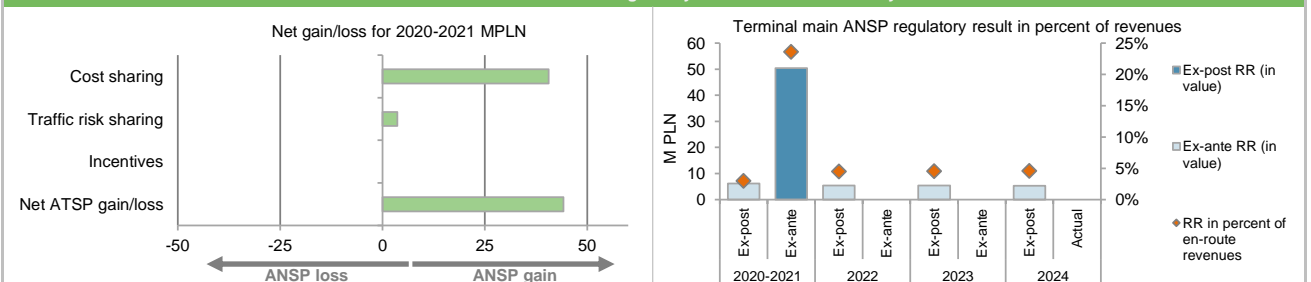
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (PLN '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	37,491			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	2,091			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	996			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>40,577</b>			
Traffic risk sharing (PLN '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	1.8%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	206,915			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>3,640</b>			
Incentives (PLN '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (PLN '000)</b>	<b>44,217</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>9,697</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

PANSA planned regulatory result (PLN '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	137,408	151,116	288,524	150,544	148,661	141,373
Proportion of financing through equity (in %)	97%	84%	90%	74%	71%	73%
RoE pre-tax rate (in %)	2.4%	2.4%	2.4%	4.9%	5.1%	5.2%
RoE (in value)	3,183	2,987	6,170	5,393	5,367	5,322
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>3,183</b>	<b>2,987</b>	<b>6,170</b>	<b>5,393</b>	<b>5,367</b>	<b>5,322</b>
<b>Revenue for the terminal charging zone</b>	<b>81,110</b>	<b>125,805</b>	<b>206,915</b>	<b>120,531</b>	<b>118,990</b>	<b>115,879</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>3.9%</b>	<b>2.4%</b>	<b>3.0%</b>	<b>4.5%</b>	<b>4.5%</b>	<b>4.6%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.4%</b>	<b>4.9%</b>	<b>5.1%</b>	<b>5.2%</b>
PANSA actual regulatory result (PLN '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	137,408	141,064	278,472			
Proportion of financing through equity (in %)	97%	91%	94%			
RoE pre-tax rate (in %)	2.4%	2.4%	2.4%			
RoE (in value)	3,183	3,022	6,205			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	44,217	44,217			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>3,183</b>	<b>47,239</b>	<b>50,422</b>			
<b>Revenue for the terminal charging zone</b>	<b>81,110</b>	<b>132,532</b>	<b>213,642</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>3.9%</b>	<b>35.6%</b>	<b>23.6%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>2.4%</b>	<b>37.0%</b>	<b>19.3%</b>			

13. Focus on main ANSP regulatory result on terminal activity



PANSA net gain on activity in the TCZ2 in the combined year 2020-2021

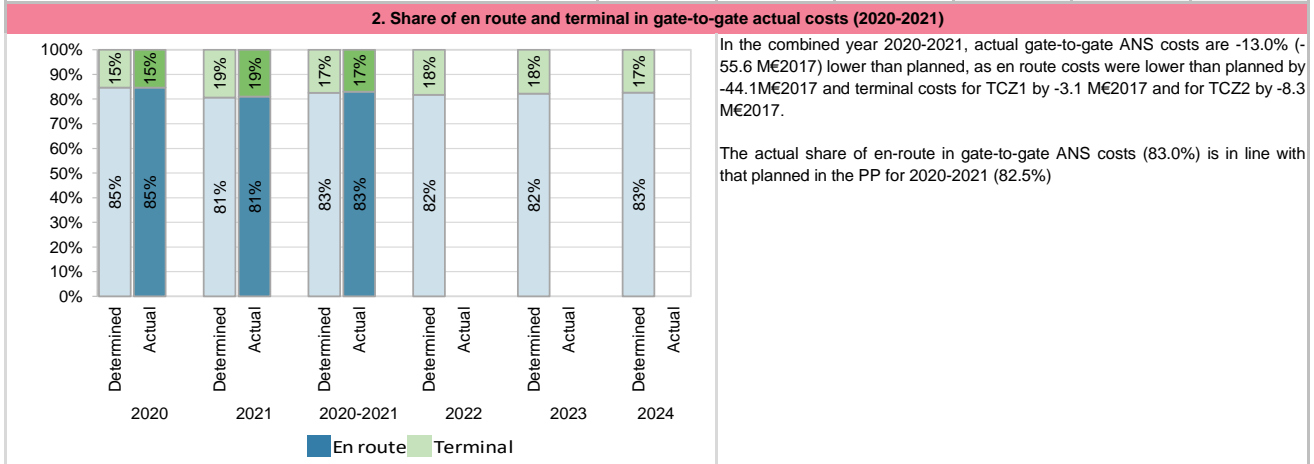
PANSA's net gain amounts to +44.2 MPLN (or +9.7 ME), due to gains of +40.6 MPLN from the cost sharing mechanism, and gains of +3.6 MPLN from the traffic risk sharing mechanism.

PANSA overall regulatory results (RR) for the terminal activity in TCZ2

Ex-post, the overall RR taking into account the net gain from the activity mentioned above (+9.7 ME) and the actual RoE (+6.2 MPLN or +1.4 ME) amounts to +50.4 MPLN or +11.1 ME (23.6% of the terminal revenues for TCZ2). The resulting ex-post rate of return on equity is 19.3% which is higher than the 2.4% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
<b>BYDGOSZCZ (ANSP/MET) planned regulatory result (PLN '000)</b>						
	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	84	77	161	89	128	203
Revenue for the terminal charging zone	1,863	2,068	3,931	2,684	2,918	3,673
Ex-ante regulatory result (+/-) in percent of revenues	4.5%	3.7%	4.1%	3.3%	4.4%	5.5%
Ex-ante RoE pre-tax rate (in %)	6.6%	5.6%	6.1%	4.9%	5.4%	6.5%
<b>BYDGOSZCZ (ANSP/MET) actual regulatory result (PLN '000)</b>						
	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	84	271	355			
Revenue for the terminal charging zone	1,863	2,114	3,977			
Ex-post regulatory result (+/-) in percent of revenues	4.5%	12.8%	8.9%			
Ex-post RoE pre-tax rate (in %)	6.6%	19.6%	13.4%			
<b>MAZURY (ANSP/MET) planned regulatory result (PLN '000)</b>						
	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	55	53	107	70	68	130
Revenue for the terminal charging zone	2,639	3,019	5,658	3,196	3,264	3,827
Ex-ante regulatory result (+/-) in percent of revenues	2.1%	1.7%	1.9%	2.2%	2.1%	3.4%
Ex-ante RoE pre-tax rate (in %)	5.1%	4.7%	4.9%	4.6%	4.6%	4.6%
<b>MAZURY (ANSP/MET) actual regulatory result (PLN '000)</b>						
	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	55	206	260			
Revenue for the terminal charging zone	2,639	3,130	5,769			
Ex-post regulatory result (+/-) in percent of revenues	2.1%	6.6%	4.5%			
Ex-post RoE pre-tax rate (in %)	5.1%	24.4%	13.6%			
<b>MET IMWM planned regulatory result (PLN '000)</b>						
	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	416	416	832	160	215	231
Revenue for the terminal charging zone	16,988	17,846	34,834	17,942	18,437	19,852
Ex-ante regulatory result (+/-) in percent of revenues	2.4%	2.3%	2.4%	0.9%	1.2%	1.2%
Ex-ante RoE pre-tax rate (in %)	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
<b>MET IMWM actual regulatory result (PLN '000)</b>						
	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	416	612	1,028			
Revenue for the terminal charging zone	16,988	18,095	35,083			
Ex-post regulatory result (+/-) in percent of revenues	2.4%	3.4%	2.9%			
Ex-post RoE pre-tax rate (in %)	4.0%	5.7%	4.9%			
<b>MET RADOM planned regulatory result (PLN '000)</b>						
	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	5	3	9	15	55	58
Revenue for the terminal charging zone	100	107	206	108	1,828	1,764
Ex-ante regulatory result (+/-) in percent of revenues	5.3%	3.1%	4.1%	14.3%	3.0%	3.3%
Ex-ante RoE pre-tax rate (in %)	5.1%	4.8%	5.0%	4.9%	4.9%	4.9%
<b>MET RADOM actual regulatory result (PLN '000)</b>						
	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	5	14	19			
Revenue for the terminal charging zone	100	109	208			
Ex-post regulatory result (+/-) in percent of revenues	5.3%	12.5%	9.1%			
Ex-post RoE pre-tax rate (in %)	5.1%	19.7%	10.9%			
<b>Total other ANSPs planned regulatory result (PLN '000)</b>						
	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	560	549	1,109	335	465	622
Revenue for the terminal charging zone	21,590	23,039	44,629	23,930	26,445	29,117
Ex-ante regulatory result (+/-) in percent of revenues	2.6%	2.4%	2.5%	1.4%	1.8%	2.1%
Ex-ante RoE pre-tax rate (in %)	4.4%	4.2%	4.3%	4.4%	4.5%	4.8%
<b>Total other ANSPs actual regulatory result (PLN '000)</b>						
	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	560	1,102	1,662			
Revenue for the terminal charging zone	21,590	23,447	45,037			
Ex-post regulatory result (+/-) in percent of revenues	2.6%	4.7%	3.7%			
Ex-post RoE pre-tax rate (in %)	4.4%	8.4%	6.4%			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity for TCZ2</b>						
For other ANSPs (2 ATSPs and 4 METSPs) the overall ex-post regulatory results amounted to +1.7 MPLN (or +0.4 ME) which represents +3.7% of their actual terminal revenues for the combined 2020-2021 for TCZ2. This results in a higher ex-post RoE at the level of 6.4%, comparing to planned 4.3%.						

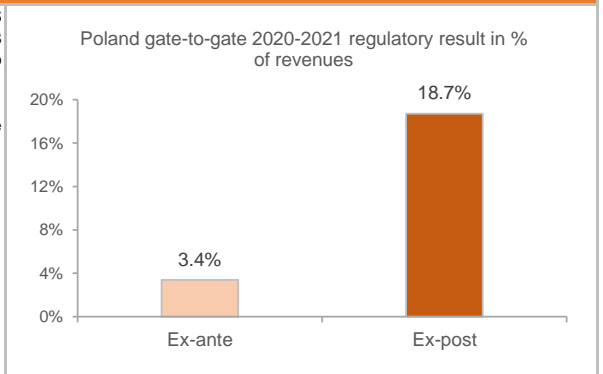
1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1:	Poland	En route charging zone 2:	N/A				
Terminal charging zone 1:	Poland zone 1	Terminal charging zone 2:	Poland zone 2				
Poland: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		172,051,447	181,219,573	353,271,019	187,759,755	192,496,044	196,729,872
Real terminal costs (EUR2017)		31,192,093	43,583,622	74,775,715	42,004,531	41,697,946	41,408,832
Real gate-to-gate costs (EUR2017)		203,243,540	224,803,194	428,046,734	229,764,286	234,193,991	238,138,704
En route share (%)		84.7%	80.6%	82.5%	81.7%	82.2%	82.6%
Poland: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		172,051,447	137,097,795	309,149,242			
Real terminal costs (EUR2017)		31,192,093	32,132,757	63,324,850			
Real gate-to-gate costs (EUR2017)		203,243,540	169,230,552	372,474,092			
En route share (%)		84.7%	81.0%	83.0%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017)	in value	0	-55,572,643	-55,572,643			
	in %	0.0%	-24.7%	-13.0%			
En route share	in p.p.	0.0 p.p.	0.4 p.p.	0.5 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In PLN '000	ANSP(S)	Ex-ante			Ex-post		
		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	PANSA	59,515	1,695,936	3.5%	342,764	1,731,489	19.8%
	Poland zone 2-ANSP-BYDGOSZCZ	17	643	2.7%	39	661	5.8%
	Poland zone 2-ANSP Warmia-Mazury	90	3,224	2.8%	257	3,312	7.8%
	<b>METSP(s)</b>	<b>RR</b>	<b>Revenues</b>	<b>RR % revenues</b>	<b>RR</b>	<b>Revenues</b>	<b>RR % revenues</b>
	Poland-MET IMWM	1,464	99,948	1.5%	2,152	100,738	2.1%
	Poland-MET Radom Meteo	34	825	4.1%	76	832	9.1%
	Poland-MET_WIM	40	5,741	0.7%	15	5,795	0.3%
	Poland-MET BYDGOSZCZ	244	5,787	4.2%	526	5,837	9.0%
	<b>Total</b>	<b>61,405</b>	<b>1,812,105</b>	<b>3.4%</b>	<b>345,829</b>	<b>1,848,666</b>	<b>18.7%</b>

For the ANSPs providing services in the charging zones of Poland covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +345.8 MPLN (see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 18.7% of gate-to-gate ANS revenues.

This is higher than the planned RR for the combined 2020-2021 year included in the performance plan (3.4%).



# **Annual Monitoring Report 2021**

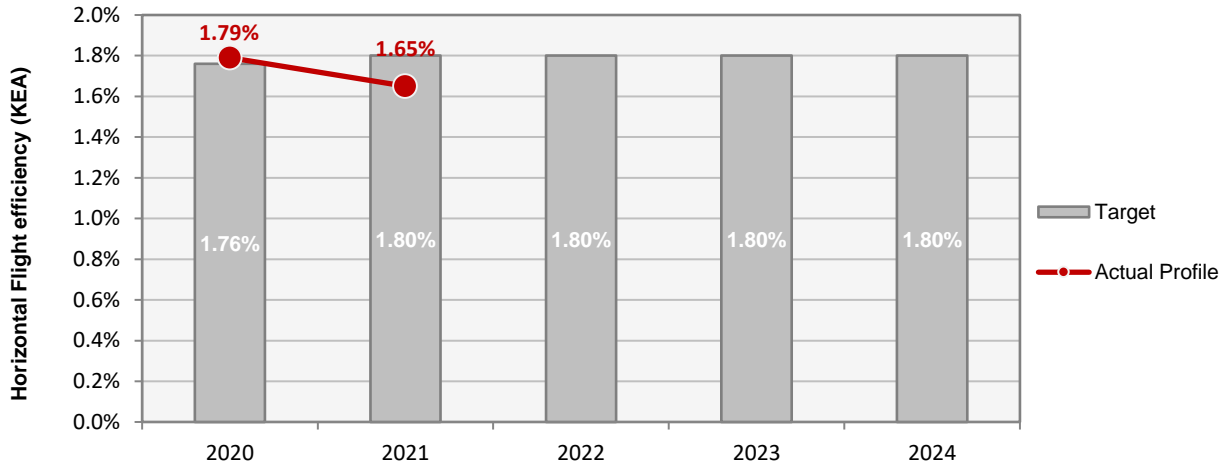
## Local level view

### Portugal

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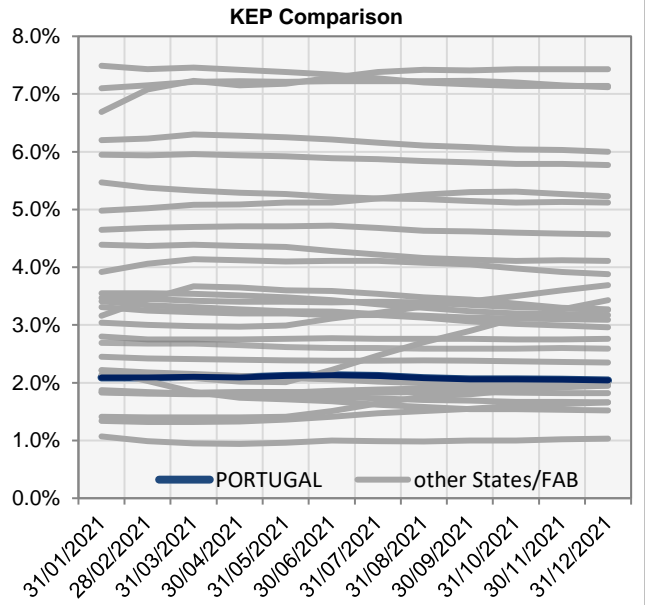
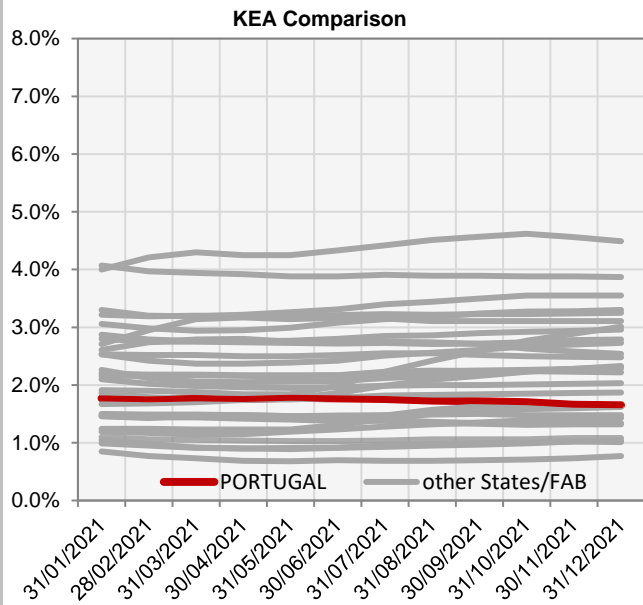
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>NAV Portugal</b>	99	D	D	D	D	C
Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.						
Observations						
All five EoSM components of the ANSP meet, or exceed, already the 2024 target level. Improvements in maturity has been observed with respect to 2020 in "Safety Culture".						

KEA					
	2020	2021	2022	2023	2024
Target	1.76%	1.80%	1.80%	1.80%	1.80%
Actual performance	1.79%	1.65%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	1.77%	1.75%	1.77%	1.76%	1.78%	1.77%	1.76%	1.73%	1.72%	1.70%	1.66%	1.65%
KEP	2.09%	2.09%	2.10%	2.09%	2.12%	2.13%	2.12%	2.08%	2.06%	2.06%	2.05%	2.04%
KES	1.83%	1.82%	1.83%	1.84%	1.87%	1.89%	1.89%	1.86%	1.85%	1.86%	1.85%	1.85%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.



**1. Overview**

The scope of RP3 monitoring for Portugal comprises 10 airports. However, in accordance with IR (EU) 2019/317 and the traffic figures, only two of these airports (Lisbon (LPPT) and Porto (LPPR)) must be monitored for additional taxi-out and ASMA times.

The Airport Operator Data Flow, necessary for the monitoring of the additional times, is correctly established where required and the monitoring of all environment indicators can be performed.

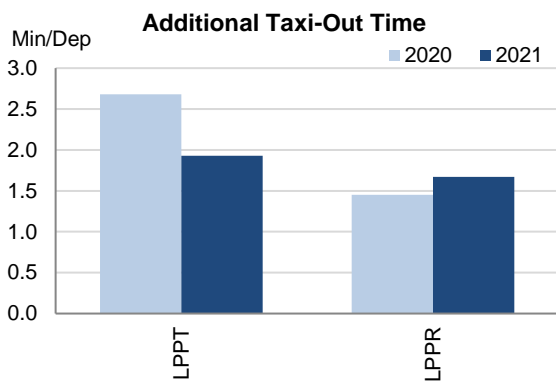
Traffic at these 10 airports, that had increased considerably during RP2, and regardless of an increase versus 2020 of 32% was still in 2021 42% lower than in 2019.

At annual level the additional times at Lisbon improved once again in 2021, while the performance at Porto was very similar to the previous year both in taxi-out and ASMA.

The shares of CDO flights are relatively high in 2021 with most airports having a reduction in the share of CDO flights.

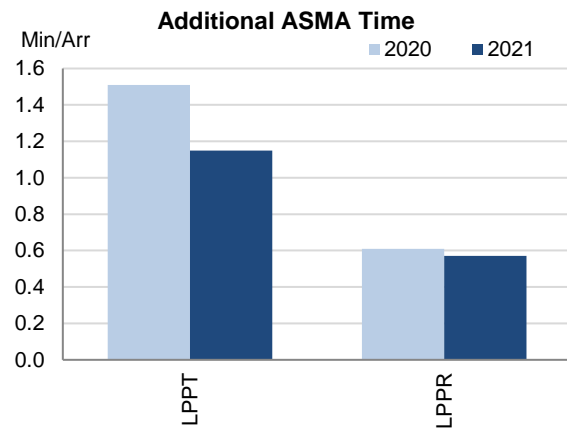
According to the Portuguese monitoring report *the reduction of traffic during 2021, in the aftermath of COVID-19 pandemic, does not allow for an adequate representative level for the additional times indicators.*

**2. Additional Taxi-Out Time**



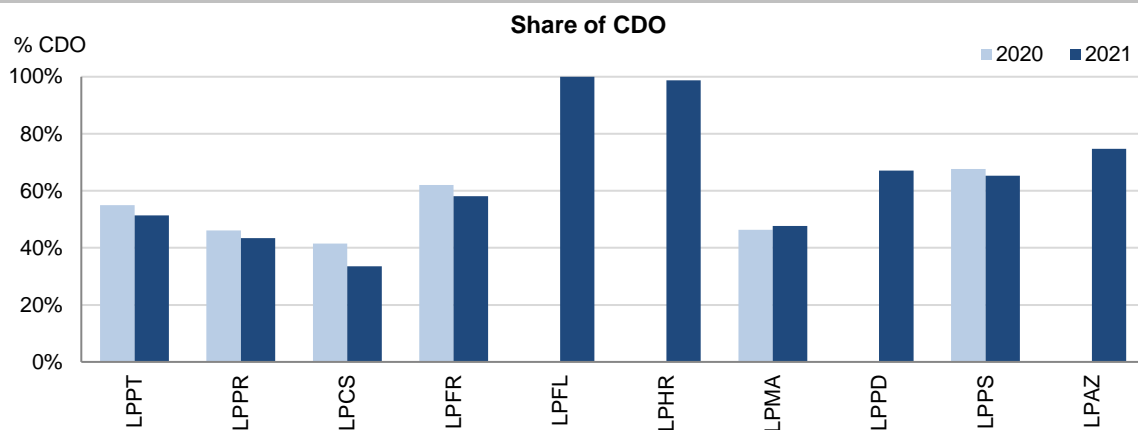
Additional taxi-out times at Lisbon (LPPT; 2019: 3.96 min/dep.; 2020: 2.68 min/dep.; 2021: 1.93 min/dep.) decreased for the second year in a row. This decrease is driven by the performance during the first 4 months, considerably better than in 2020. However, in the second part of the year the additional taxi-out times increased in line with the traffic recovery, averaging 2.21 min/arr. between June and December. A similar monthly evolution with respect to 2020 was observed at Porto, where the additional taxi-out times in October and December averaged 2.54 min/dep.

**3. Additional ASMA Time**



Like the additional taxi-out times, the additional times in the terminal airspace at Lisbon (LPPT; 2019: 2.75 min/arr.; 2020: 1.51 min/arr.; 2021: 1.15 min/arr.) further decreased in 2021 due to the much better performance in the first 3 months of the year 2021 compared with 2020. At Porto (LPPR; 2019: 1.34 min/arr.; 2020: 0.61 min/arr.; 2021: 0.57 min/arr.) the additional ASMA times were around 0.50 min/arr. for most of the year, reaching or exceeding 1 min/arr. only during May and December.

#### 4. Share of arrivals applying CDO



All airports have shares of CDO flights (well) above the overall RP3 value in 2021 (30.5%), ranging from 33.5% (Cascais - LPCS) to 100.0% (Flores - LPFL). It should however be noted that Flores and Horta had a limited number of flights in 2021: respectively 1 and 158 arrivals.

All airports that were monitored in 2020 have a reduction of the share of CDO flights, except for Madeira, which had an increase of 1.3 percentage points.

The monthly values at Cascais decreased significantly from 50.9% in March to 26.1% in December.

According to the Portuguese monitoring report: *CDO is the basis for the arrival route structuring within Lisbon FIR. Nonetheless, most of the times a shorter route is provided to the arriving traffic. Since these shorter routes are not covered by the STARs, the resulting final CDO percentage is negatively affected, even though the traffic is flying more efficient and shorter routes.*

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Lisbon-LPPT	2.68	1.93				1.51	1.15				55%	51%			
Porto-LPPR	1.45	1.67				0.61	0.57				46%	43%			
Cascais-LPCS	-	-				-	-				42%	34%			
Faro-LPFR	-	-				-	-				62%	58%			
Flores-LPFL	-	-				-	-				n/a	100%			
Horta-LPHR	-	-				-	-				n/a	99%			
Madeira-LPMA	-	-				-	-				46%	48%			
Ponta Delgada-LPPD	-	-				-	-				n/a	67%			
Porto Santo-LPPS	-	-				-	-				68%	65%			
Santa Maria-LPAZ	-	-				-	-				n/a	75%			

**Update on Military dimension of the plan**

Information from 2020 report repeated. No new information provided as an update.

**Military - related measures implemented or planned to improve capacity**

Environment: The military are updating the CNS equipment to be able to fly on more efficient routes, especially when operating as General Air Traffic. In this sense, several fleets are being modified to comply with the latest CNS requirements and new aircraft are scheduled for delivery soon.

Regarding airspace design, Portugal is currently undergoing a major restructuring of its airspace structures in order to improve its overall capacity and adequacy to both military and civil requirements.

Capacity: As already mentioned in the environment KPA, a major airspace restructuring is currently ongoing in Portugal, involving all the main stakeholders, in order to accommodate for both the military and civil requirements.

**PI#6 Effective use of reserved or segregated airspace - national level**

Ratio PI#6	2020	2021	2022	2023	2024
Portugal		*			

\* Unable to compute PI#6: Portugal only reported number of hours used, not the number of hours airspace was allocated.

**PI#6 Effective use of reserved or segregated airspace (per ACC)**

Ratio PI#6	2020	2021	2022	2023	2024
Lisbon ACC		*			

\* Unable to compute PI#6: Portugal only reported number of hours used, not the number of hours airspace was allocated.

**Initiatives implemented or planned to improve PI#6**

No information reported.

**PI#7 Rate of planning via available airspace structures - national level**

Ratio PI#7	2020	2021	2022	2023	2024
Portugal					

**PI#7 Rate of planning via available airspace structures (per ACC)**

Ratio PI#7	2020	2021	2022	2023	2024
Lisbon ACC					

**Initiatives implemented or planned to improve PI#7**

LARA interfaces and associated statistic tools are in the final stages of implementation by the ANSP.

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Portugal					

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Lisbon ACC					

**Initiatives implemented or planned to improve PI#8**

LARA interfaces and associated statistic tools are in the final stages of implementation by the ANSP.

Minutes of ATFM en-route delay						
	2020	2021	2022	2023	2024	Observations
<b>National Target</b>	0.23	0.09	0.13	0.13	0.13	
<b>Actual performance</b>	0.25	0.07				

**NSA's assessment of capacity performance**

During the first quarter of 2021 the traffic levels were still highly affected by the COVID 19 pandemic restrictions, but increased steadily to reach levels close to those of 2019 (only 16% below). Thus, even though the level of achievement has been very close to the required target, the unexpected continuous traffic increase throughout the year led to a final result that could lead to an interpretation of a very small annual variation. It is important not to overlook the fact that the target initially set was derived from a traffic forecast that was expected to still show COVID 19 limitations. However, these were not as relevant as expected, thus the forecast traffic numbers were underestimated.

**Monitoring process for capacity performance**

ANAC has established a procedure to monitor capacity that consists in quarterly reports by the ANSP and follow-up meetings to established the need of corrective measures if and whenever necessary.

**Capacity Planning**

The initially low traffic volumes of 2021 combined with rigorous planning of ATCO rostering (in order to balance the operational and training needs of the new system), created the conditions for the ANSP not to exceed the target set for 2021. Nonetheless, at some points when the traffic was close to the 2019 values, the ANSP was under pressure to accommodate traffic demand.

**ATCO in OPS (FTE)**

	2019	2020	2021	2022	2023	2024	Observations
<b>Planned (Perf Plan)</b>	-	-	153	163	175	182	
<b>Actual</b>	146	148	147				

The delta between the expected number of new ATCOs and the actual final figure is mainly the result of three factors:

- 1 -A longer period of training caused by the effect of the pandemic that, not only forced several interruptions in the training process and thus prolonging the normal training period, but also created a non-standard traffic demand, thus making it more difficult to qualify the ATCOs with the required proficiency level to cope with 2019 traffic numbers. As such 3 ATCOs began working in the OPS room in January and February of 2022, instead of 2021.
- 2 -The early retirement of several ATCOs, due to health reasons and lack of motivation associated with the traffic reduction and also due to the near implementation of a new ATM system;
- 3 - Student ATCO failing their final rating evaluation (1 student ATCO failed).

### Application of Corrective Measures for Capacity (if applicable)

The recovery in traffic levels expected to occur in the summer of 2022 in the Lisbon FIR, and the transition to the new ATM System planned until October of 2022 together pose serious risks to the proposed performance targets. The ATM System transition risk had been identified and is being managed by NAV Portugal through a thorough preparation process. However, together with potentially higher than expected levels of traffic the risks associated are exponentiated.

In order to minimize potential impacts NAV Portugal is taking several measures, as reinforcing training hours and anticipating the implementation of system components that allow higher capacity. Notwithstanding, with the higher traffic the risks also increase.

The NSA has been supervising closely the ATM System transition process, in particular the shadow operation which started in March

### Summary of capacity performance

Portugal experienced an increase in traffic from 311k flights in 2020 to 401k flights in 2021. However, traffic levels were still substantially below the 733k flights in 2019.

In 2021, Portugal had 26k minutes of ATFM delay - with approximately 80% attributed to ATC capacity and 20% to ATC staffing.

### En route Capacity Incentive Scheme

	2020	2021	2022	2023	2024	Observations
<b>National Capacity target</b>	0.23	0.09	0.13	0.13	0.13	
<b>Deadband +/-</b>	-	-	[0.09-0.15]	[0.09-0.15]	[0.09-0.15]	
<b>Actual performance</b>	0.25	0.07				

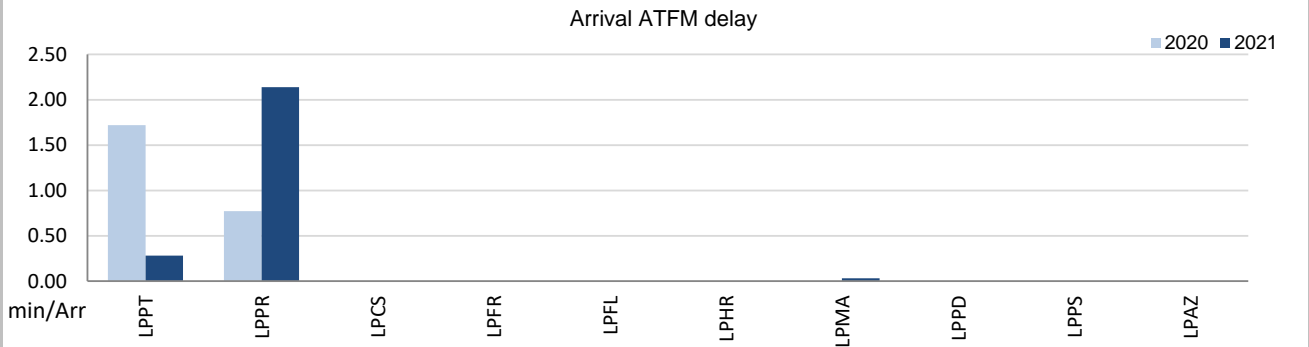
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

**1. Overview**

The scope of RP3 monitoring for Portugal comprises 10 airports in 2020. However, in accordance with IR (EU) 2019/317 and the traffic figures, only two of these airports (Lisbon (LPPT) and Porto (LPPR)) must be monitored for pre-departure delays. The Airport Operator Data Flow, necessary for the monitoring of these pre-departure delays, is correctly established where required and the monitoring of all capacity indicators can be performed. Nevertheless, the quality of the reporting from Porto does not allow for the calculation of the ATC pre-departure delay, with more than 60% of the reported delay not allocated to any cause. Traffic at these 10 airports, that had increased considerably during RP2, and regardless of an increase versus 2020 of 32% was still in 2021 42% lower than in 2019.

Average arrival ATFM delays in 2021 was 0.58 min/arr, compared to 0.97 min/arr in 2020. ATFM slot adherence has improved (2021: 96.1%; 2020: 95.3%).

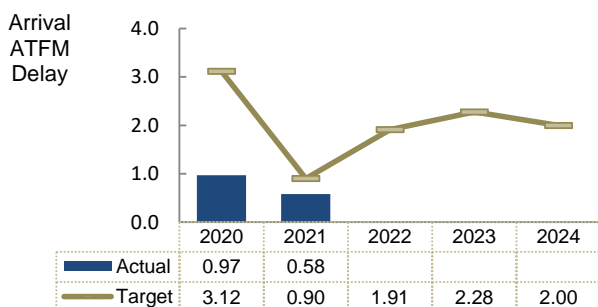
**2. Arrival ATFM Delay**



The national average arrival ATFM delay at Portuguese airports in 2021 was 0.58min/arr, significantly lower than the 0.97 min/arr of 2020 and drastically lower than the 2.76 min/arr in 2019. At airport level, only Lisbon and Porto registered delays (Madeira observed only marginal delays) At Porto (LPPR; 2019: 3.09 min/arr; 2020: 0.77 min/arr; 2021: 2.14 min/arr) delays have significantly increased with respect to the previous year, concentrated in the period May to December and attributed mostly to weather (56%) and aerodrome capacity (39%). Lisbon (LPPT; 2019: 4.13 min/arr; 2020: 1.72 min/arr; 2021: 0.28 min/arr) on the other hand has drastically decreased the delays. 40% of these delays were attributed to weather, 28% to aerodrome capacity and 13% to airspace management issues.

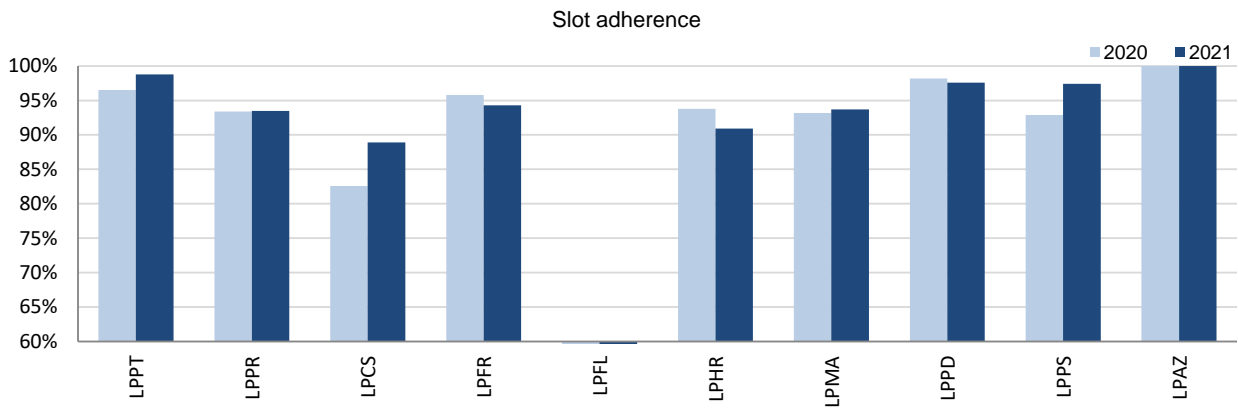
According to the Portuguese monitoring report: *The initially low traffic figures during 2021 were dully handled at airport level, particularly by Lisbon airport, which was the main source of delays before the pandemic. However, when traffic numbers approached those of 2019, the airport infrastructure, once more with emphasis for Lisbon, was under pressure to accommodate the demand. In the Lisbon airport the expectation of traffic recovery for the summer of 2022 is now higher than when the Performance Plan was presented in October 2021. In particular stakeholders are expecting traffic levels to be close to 2019. Considering that the Lisbon airport is highly constrained in terms of infrastructure capacity, the performance issues witnessed in 2019 may come back in 2022. On the ANSP side, a plan to minimize the impact of the ATM System transition is being developed, including the anticipation of implementation of the new system tools that allow higher approach capacity. The Portuguese NSA developed an action plan to prepare the summer of 2022 encompassing all civil aviation stakeholders, which is underway. The action plan includes most of the Portuguese airports, although the Lisbon airport given its circumstances is key in this process. The traffic numbers for 2021 were still highly affected by the aftermath of the COVID19 pandemic, thus not indicative of the real demand on normal conditions.*

**3. Arrival ATFM Delay – National Target and Incentive Scheme**



The provisional national target on arrival ATFM delay in 2021 was met. In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

#### 4. ATFM Slot Adherence



With the drastic drop in traffic, the share of regulated departures from Portuguese airports virtually disappeared until July 2021. Most Portuguese airports showed adherence around or above 90%. The national average was 96.1%, an improvement with respect to 2020's performance (95.3%). With regard to the 3.9% of flights that did not adhere, 3% was early and 0.9% was late.

#### 5. ATC Pre-departure Delay

The performance at Lisbon, the only Portuguese airport where this indicator can be calculated has further improved with respect to the previous years (LPPT; 2019: 4.16 min/dep.; 2020: 2.13 min/dep.; 2021: 1.22 min/dep.) and even if it increased in the second half of 2021, it was lower than the 2019 values. Nevertheless, this delay is still the highest in the SES area. The quality of the airport data reported by Porto was too low, preventing the calculation of this indicator for this airport, but the quality of the reporting has improved in the second half of 2021 alongside the traffic recovery.

#### 6. All Causes Pre-departure Delay

The total (all causes) delay in the actual off block time at Lisbon decreased in 2021 (LPPT: 2020: 12.02 min/dep.; 2021: 11.03 min/dep.) and increased at Porto (LPPR: 2020: 9.15 min/dep.; 2021: 10.70 min/dep.). The higher delays for Lisbon were observed in the second part of the year, while the situation at Porto was changing from month to month registering the highest delays in August (16 min/dep) According to the Portuguese monitoring report: *The traffic numbers for 2021 were still highly affected by the aftermath of the COVID19 pandemic, thus not indicative of the real demand on normal conditions.*

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Lisbon-LPPT	1.72	0.28				96.5%	98.8%				2.13	1.22				12.02	11.03			
Porto-LPPR	0.77	2.14				93.4%	93.5%				n/a	n/a				9.15	10.70			
Cascais-LPCS	0	0				82.6%	88.9%				-	-				-	-			
Faro-LPFR	0	0				95.8%	94.3%				-	-				-	-			
Flores-LPFL	0	0				n/a	n/a				-	-				-	-			
Horta-LPHR	0	0				93.8%	90.9%				-	-				-	-			
Madeira-LPMA	0	0.03				93.2%	93.7%				-	-				-	-			
Ponta Delgada-LPPD	0	0				98.2%	97.6%				-	-				-	-			
Porto Santo-LPPS	0	0				92.9%	97.4%				-	-				-	-			
Santa Maria-LPAZ	0	0				100.0%	100.0%				-	-				-	-			



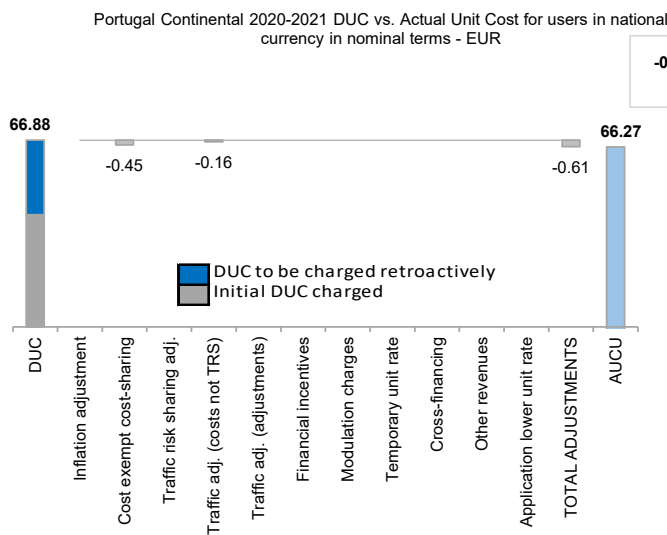
1. Contextual economic information: en route air navigation services						
Portugal Continental ECZ represents 2.3% of the SES en route ANS actual costs in 2019			FAB: SW FAB			
National currency: EUR						
Performance Plan: RP3 draft performance plan dated 17 November 2021 and found consistent as per Commission Decision (EU) 2022/767 of 13 April 2022						
The final version of the plan was adopted and published on 14 June 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317.						
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Portugal Continental: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)	115,523,007	117,279,296	232,802,303	139,106,168	150,290,389	154,572,715
Inflation %	0.0%	0.9%		1.2%	1.3%	1.4%
Inflation index (100 in 2017)	101.5	102.4		103.6	104.9	106.4
Real en route costs (EUR2017)	114,095,861	115,019,714	229,115,575	135,200,935	144,619,857	147,095,309
Total en route service units	1,556,016	1,924,895	3,480,911	3,315,551	3,582,357	3,884,376
<b>Real en route DUC per service unit (EUR2017)</b>	<b>73.33</b>	<b>59.75</b>	<b>65.82</b>	<b>40.78</b>	<b>40.37</b>	<b>37.87</b>
Portugal Continental: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)	115,523,007	118,446,123	233,969,130			
Inflation %	0.0%	0.9%				
Inflation index (100 in 2017)	101.5	102.4				
Real en route costs (EUR2017)	114,095,861	116,103,545	230,199,406			
Total en route service units	1,556,016	1,988,333	3,544,349			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>73.33</b>	<b>58.39</b>	<b>64.95</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)	in value	0	1,166,827	1,166,827		
	in %	-	+1.0%	+0.5%		
Inflation %	in p.p.	0.0 p.p.	0.0 p.p.			
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	0.0 p.p.			
Real en route costs (EUR2017)	in value	0	1,083,831	1,083,831		
	in %	-	+0.9%	+0.5%		
Total en route service units	in value	0	63,438	63,438		
	in %	-	+3.3%	+1.8%		
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-1.36</b>	<b>-0.87</b>		
	<b>in %</b>	<b>-</b>	<b>-2.3%</b>	<b>-1.3%</b>		
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs. DUC</b>						
In the combined year 2020-2021, the en route AUC was -1.3% (or -0.87€2017) lower than the planned DUC. This results from the combination of higher than planned TSUs (+1.8%) and higher than planned en-route costs in real terms but in a lesser proportion (+0.5%, or +1.1 M€2017).						
<b>En route service units</b>						
The difference between actual and planned TSUs (+1.8%) falls within the ±2% dead band. Hence the resulting additional en-route revenue is kept by the ANSPs (see items 10 to 14).						
<b>En route costs by entity</b>						
Actual real en route costs are +0.5% (+1.1 M€2017) higher than planned. This is driven by the main ANSP, NAV Portugal (+0.9%, or +1.7 M€2017), while the costs of the SAR provider and the MET provider are in line with the plan (+0.1% and -0.03%, respectively) and the NSA/EUROCONTROL costs are lower than planned (-3.4%, or -0.6 M€2017).						
<b>En route costs for the main ANSP (NAV Portugal) at charging zone level</b>						
The higher than planned en route costs in real terms for NAV Portugal (+0.9%, or +1.7 M€2017) result from:						
- higher staff costs (+3.6% for the period 2020-2021), "mainly due to the following factors: i) Higher pension fund costs, namely in NAV/CTA-MT; ii) Contingent liabilities arising from specific situations in which ATCOs do not meet the requirements for access to retirement status;iii) Capitalized work that did not materialize at the same level as planned;"						
- lower other operating costs (-12.3%), mainly explained by lower spending on IT assistance and other outsourced services, repair and maintenance, communication and travel;"						
- slightly higher depreciation (+0.8%); and						
- lower cost of capital (-21.5%), due to a slight delay in implementation of the new ATM System.						
			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      +1.8%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
			<p>Costs by entity at ECZ level (M€2017):</p> <p>Main ANSP 0.9%</p> <p>Other ANSP(s) 0.1%</p> <p>METSP(s) 0.0%</p> <p>NSA/EUROCONTROL -3.4%</p> <p>Total CZ 0.5%</p>			
			<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs 3.6%</p> <p>Other operating costs -12.3%</p> <p>Depreciation 0.8%</p> <p>Cost of capital -21.5%</p> <p>Exceptional costs 0.9%</p> <p>VFR exempted flights 0.0%</p> <p>Total Main ANSP 0.9%</p>			

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	40.19
DUC to be charged retroactively	26.69
<b>DUC</b>	<b>66.88</b>
Inflation adjustment	0.00
Cost exempt from cost-sharing	-0.45
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.16
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-0.61
<b>AUCU</b>	<b>66.27</b>
<b>AUCU vs. DUC</b>	<b>-0.9%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

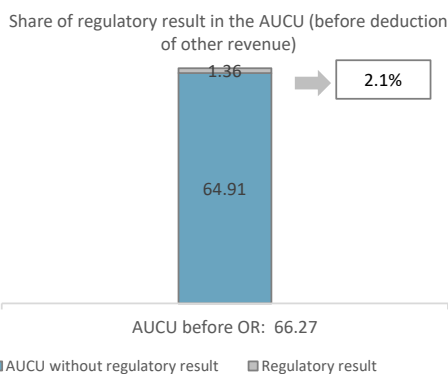
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-982	-0.28
Competent authorities and qualified entities costs	-38	-0.01
Eurocontrol costs	-581	-0.16
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-1,600</b>	<b>-0.45</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level



ANSP(S)	EUR '000	EUR/SU
NAV Portugal (Continental)	4,379	1.24
Portugal Continental SAR	199	0.06
METSP(s)	EUR '000	EUR/SU
Portugal Continental MET	254	0.07
<b>Total charging zone</b>	<b>4,831</b>	<b>1.36</b>
<b>Actual cost for users***</b>	<b>234,893</b>	<b>66.27</b>
<b>Regulatory result (% AUCU)</b>	<b>2.1%</b>	<b>2.1%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (66.27€) is -0.9% lower than the nominal DUC (66.88€) which includes DUC initially charged: 40.19€; and to be charged: 26.69€. The difference between these two figures (-0.61€/SU) is due to:

- the impact of adjustments resulting from the costs exempt from cost-sharing mechanism (-0.45€/SU); and
  - the deduction of the traffic adjustment (-0.16€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years.
- It should be noted that Portugal decided not to charge the inflation adjustment for 2020-2021 to airspace users.

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 2.1%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

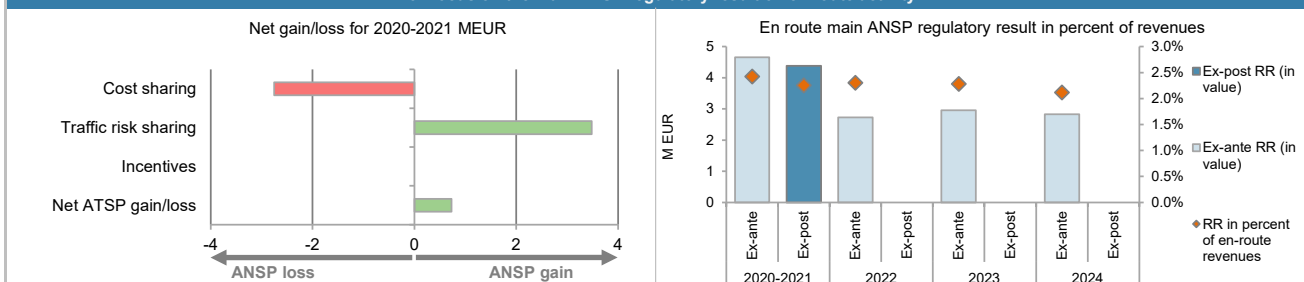
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	-1,773			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	0			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-982			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>-2,755</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	1.8%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	190,994			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>3,481</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>726</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

NAV Portugal (Continental) planned regulatory result (EUR '000) from RP3	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	41,220	69,774	110,994	106,102	114,796	109,724
Proportion of financing through equity (in %)	70%	70%	70%	61%	61%	61%
RoE pre-tax rate (in %)	6.0%	6.0%	6.0%	4.2%	4.2%	4.2%
RoE (in value)	1,728	2,925	4,653	2,733	2,959	2,828
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>1,728</b>	<b>2,925</b>	<b>4,653</b>	<b>2,733</b>	<b>2,959</b>	<b>2,828</b>
<b>Revenue for the en route charging zone</b>	<b>95,572</b>	<b>96,616</b>	<b>192,188</b>	<b>118,833</b>	<b>129,814</b>	<b>133,840</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>1.8%</b>	<b>3.0%</b>	<b>2.4%</b>	<b>2.3%</b>	<b>2.3%</b>	<b>2.1%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>4.2%</b>	<b>4.2%</b>	<b>4.2%</b>
NAV Portugal (Continental) actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	41,220	45,915	87,134			
Proportion of financing through equity (in %)	70%	70%	70%			
RoE pre-tax rate (in %)	6.0%	6.0%	6.0%			
RoE (in value)	1,728	1,925	3,653			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	726	726			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>1,728</b>	<b>2,651</b>	<b>4,379</b>			
<b>Revenue for the en route charging zone</b>	<b>95,572</b>	<b>99,115</b>	<b>194,687</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>1.8%</b>	<b>2.7%</b>	<b>2.2%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>6.0%</b>	<b>8.2%</b>	<b>7.2%</b>			

13. Focus on the main ANSP regulatory result on en route activity



NAV Portugal net gain on activity in Portugal Continental en route charging zone in the combined year 2020-2021

NAV Portugal generated a net gain of +0.7 M€, resulting from a loss of -2.8 M€ arising from the cost sharing mechanism and a gain of +3.5 M€ arising from the traffic risk sharing mechanism.

NAV Portugal overall regulatory results (RR) for the en route activity

Ex-post, the overall RR corresponding to the net gain from the en route activity mentioned above (+0.7 M€) and the RoE (+3.7 M€) amounts to +4.4 M€ (2.2% of the en route revenues). The resulting ex-post rate of return on equity is 7.2%, which is higher than the 6.0% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
<b>Portugal Continental SAR planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	5,725	5,791	11,516	5,506	5,545	5,632
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Portugal Continental SAR actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	199	199			
Revenue for the en route charging zone	5,725	6,001	11,726			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	3.3%	1.7%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Portugal Continental MET planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	139	148	287	144	146	149
Revenue for the en route charging zone	5,524	5,610	11,134	5,489	5,593	5,719
Ex-ante regulatory result (+/-) in percent of revenues	2.5%	2.6%	2.6%	2.6%	2.6%	2.6%
Ex-ante RoE pre-tax rate (in %)	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
<b>Portugal Continental MET actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	139	115	254			
Revenue for the en route charging zone	5,524	5,610	11,134			
Ex-post regulatory result (+/-) in percent of revenues	2.5%	2.1%	2.3%			
Ex-post RoE pre-tax rate (in %)	4.0%	4.0%	4.0%			
<b>Total other ANSPs planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	139	148	287	144	146	149
Revenue for the en route charging zone	11,249	11,401	22,650	10,995	11,138	11,351
Ex-ante regulatory result (+/-) in percent of revenues	1.2%	1.3%	1.3%	1.3%	1.3%	1.3%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total other ANSPs actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	139	314	453			
Revenue for the en route charging zone	11,249	11,611	22,860			
Ex-post regulatory result (+/-) in percent of revenues	1.2%	2.7%	2.0%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for the other ANSPs in Portugal Continental en route charging zone (the SAR and the MET providers) corresponds to 2.0% of the en route revenues. The ex-post RoE cannot be calculated for the SAR provider, as it reports no equity.						

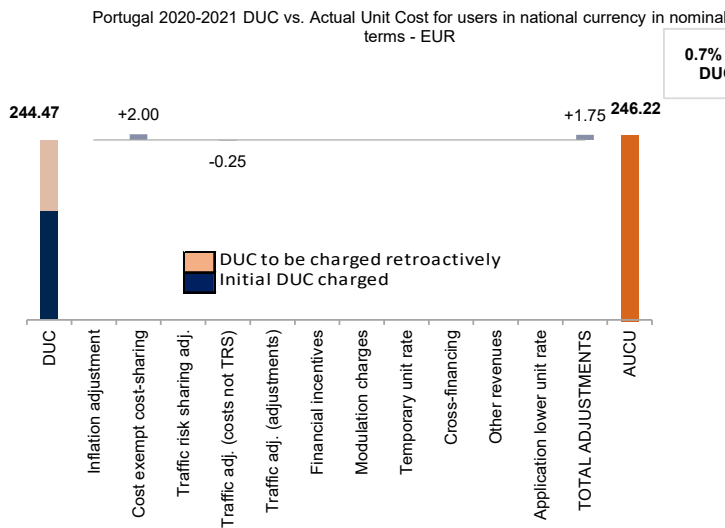
1. Contextual economic information: terminal air navigation services						
<ul style="list-style-type: none"> <li>Portugal TCZ represents 3.2% of the SES terminal ANS actual costs in 2019</li> <li>Number of airports in charging zone in 2021: 10 of which:                             <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 8</li> <li>Airports with more than 80,000 IFR mvmts: 2</li> </ul> </li> <li>National currency: EUR</li> <li>Performance Plan: See item 1 for the en route charging zone(s).</li> </ul>						
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.</p>						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Portugal: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal EUR)	34,829,936	33,103,732	67,933,668	39,079,710	42,067,274	43,963,676
Inflation %	0.0%	0.9%		1.2%	1.3%	1.4%
Inflation index (100 in 2017)	101.5	102.4		103.6	104.9	106.4
Real terminal costs (EUR2017)	34,377,977	32,423,922	66,801,899	37,864,473	40,318,956	41,656,556
Total terminal service units	122,723	155,162	277,885	252,079	269,126	287,502
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>280.13</b>	<b>208.97</b>	<b>240.39</b>	<b>150.21</b>	<b>149.81</b>	<b>144.89</b>
Portugal: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal EUR)	34,829,936	34,283,768	69,113,704			
Inflation %	0.0%	0.9%				
Inflation index (100 in 2017)	101.5	102.4				
Real terminal costs (EUR2017)	34,377,977	33,584,305	67,962,282			
Total terminal service units	122,723	160,329	283,052			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>280.13</b>	<b>209.47</b>	<b>240.11</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal EUR)	in value	0	1,180,036	1,180,036		
	in %	-	+3.6%	+1.7%		
Inflation %	in p.p.	0.0 p.p.	0.0 p.p.			
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	0.0 p.p.			
Real terminal costs (EUR2017)	in value	0	1,160,383	1,160,383		
	in %	-	+3.6%	+1.7%		
Total terminal service units	in value	0	5,166	5,166		
	in %	+0.00%	+3.3%	+1.9%		
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>0.50</b>	<b>-0.29</b>		
	<b>in %</b>	<b>-0.00%</b>	<b>+0.2%</b>	<b>-0.1%</b>		
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>					
	<b>in %</b>					
4. Focus on terminal DUC monitoring at charging zone level						
<p><b>AUC vs. DUC</b>                      The AUC for the combined year 2020-2021 is in line with the planned DUC (-0.1%, or -0.29 €2017). This is due to the combination of higher than planned TNSUs (+1.9%) and higher than planned terminal costs in real terms but in a lesser proportion (+1.7%, or +1.2 M€2017).</p> <p><b>Terminal service units</b>                      The difference between actual and planned TNSUs (+1.9%) falls within the ±2% dead band. Thus the resulting additional terminal revenue is kept by the ANSPs (see items 10 to 14).</p> <p><b>Terminal costs by entity at charging zone level</b>                      Actual real terminal costs for 2020-2021 are +1.7% (+1.2 M€2017) higher than planned. This result is driven by the main ANSP, NAV Portugal (+1.8%, or +1.2 M€2017), while the METSPs costs are in line with the plan and NSA costs are -1.7% lower than planned.</p> <p><b>Terminal costs for the main ANSP (NAV Portugal) at charging zone level</b>                      Overall, the terminal costs in real terms for NAV Portugal in 2020-2021 were higher than the determined costs from the performance plan (by +1.8%, or +1.2 M€2017). This results from:                      - higher staff costs (+1.4% for 2020-2021), "mainly due to the following factors: i) Higher pension fund costs, namely in NAV/CTA-MT; ii) Contingent liabilities arising from specific situations in which ATCOs do not meet the requirements for access to retirement status; iii) Capitalized work that did not materialize at the same level as planned."                      - lower other operating costs (-2.7%), "mainly explained by lower spending on IT assistance and other outsourced services, repair and maintenance, communication and travel."                      - higher depreciation (+5.4%); and higher cost of capital (+17.8%), due to a "higher than expected incorporation of investments over the period", also "reflected in the net book value of fixed assets".</p>			<p>2020-2021 actual vs. planned TNSUs</p>			
<p><b>Costs by entity at TCZ level (M€2017):</b></p>			<p><b>Costs by nature for main ANSP (M€2017):</b></p>			

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	148.84
DUC to be charged retroactively	95.62
<b>DUC</b>	<b>244.47</b>
Inflation adjustment	0.00
Cost exempt from cost-sharing	2.00
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.25
Traffic adj. (adjustments)*	0.00
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	0.00
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	1.75
<b>AUCU</b>	<b>246.22</b>
<b>AUCU vs. DUC</b>	<b>0.7%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

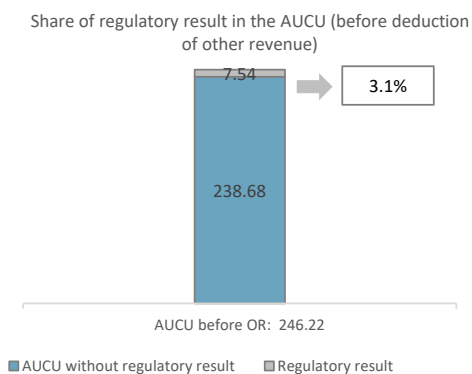
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	576	2.03
Competent authorities and qualified entities costs	-11	-0.04
Eurocontrol costs	0	0.00
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>565</b>	<b>2.00</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	EUR '000	EUR/SU
NAV Portugal (Continental)	2,076	7.33
METSP(s)	EUR '000	EUR/SU
Portugal-MET	60	0.21
<b>Total charging zone</b>	<b>2,135</b>	<b>7.54</b>
<b>Actual cost for users***</b>	<b>69,692</b>	<b>246.22</b>
<b>Regulatory result (% AUCU)</b>	<b>3.1%</b>	<b>3.1%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (246.22€) is +0.7% higher than the nominal DUC (244.47€) which includes DUC initially charged: 148.84€; and to be charged: 95.62€. The difference between these two figures (+1.75€/SU) is due to:

- the impact of adjustments resulting from the costs exempt from cost-sharing mechanism (+2.00€/SU); and
  - the deduction of the traffic adjustment (-0.25€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years.
- It should be noted that Portugal decided not to charge the inflation adjustment for 2020-2021 to airspace users.

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 3.1%.

10. Monitoring of the terminal ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

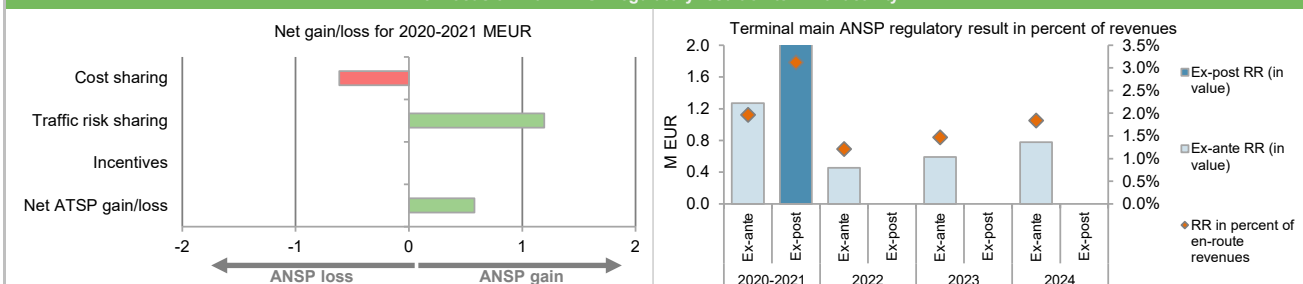
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	-1,191			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	0			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	576			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>-615</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	1.9%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	64,185			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>1,193</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>579</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

NAV Portugal (Continental) planned regulatory result (EUR '000) from RP3	2020	2021	2020-2021D	2022	2023	2024
Total asset base	15,774	14,545	30,319	17,634	23,044	30,207
Proportion of financing through equity (in %)	70%	70%	70%	61%	61%	61%
RoE pre-tax rate (in %)	6.0%	6.0%	6.0%	4.2%	4.2%	4.2%
RoE (in value)	661	610	1,271	454	593	777
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>661</b>	<b>610</b>	<b>1,271</b>	<b>454</b>	<b>593</b>	<b>777</b>
<b>Revenue for the terminal charging zone</b>	<b>33,223</b>	<b>31,442</b>	<b>64,665</b>	<b>37,377</b>	<b>40,329</b>	<b>42,191</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>2.0%</b>	<b>1.9%</b>	<b>2.0%</b>	<b>1.2%</b>	<b>1.5%</b>	<b>1.8%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>4.2%</b>	<b>4.2%</b>	<b>4.2%</b>
NAV Portugal (Continental) actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	15,774	19,933	35,707			
Proportion of financing through equity (in %)	70%	70%	70%			
RoE pre-tax rate (in %)	6.0%	6.0%	6.0%			
RoE (in value)	661	836	1,497			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	579	579			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>661</b>	<b>1,414</b>	<b>2,076</b>			
<b>Revenue for the terminal charging zone</b>	<b>33,223</b>	<b>33,212</b>	<b>66,434</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>2.0%</b>	<b>4.3%</b>	<b>3.1%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>6.0%</b>	<b>10.1%</b>	<b>8.3%</b>			

13. Focus on main ANSP regulatory result on terminal activity



NAV Portugal net gain on activity in Portugal terminal charging zone in the combined year 2020-2021

NAV Portugal generated a net gain of +0.6 M€, resulting from a loss of -0.6 M€ arising from the cost sharing mechanism and a gain of +1.2 M€ arising from the traffic risk sharing mechanism.

NAV Portugal overall regulatory results (RR) for the terminal activity

Ex-post, the overall RR corresponding to the net gain from the terminal activity mentioned above (+0.6 M€) and the RoE (+1.5 M€) amounts to +2.1 M€ (3.1% of the terminal revenues). The resulting ex-post rate of return on equity is 8.3%, which is higher than the 6.0% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Portugal-MET planned regulatory result (EUR '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	33	35	67	35	36	37
Revenue for the terminal charging zone	1,300	1,320	2,620	1,348	1,377	1,406
Ex-ante regulatory result (+/-) in percent of revenues	2.5%	2.6%	2.6%	2.6%	2.6%	2.6%
Ex-ante RoE pre-tax rate (in %)	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Portugal-MET actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	33	27	60			
Revenue for the terminal charging zone	1,300	1,320	2,620			
Ex-post regulatory result (+/-) in percent of revenues	2.5%	2.1%	2.3%			
Ex-post RoE pre-tax rate (in %)	4.0%	4.0%	4.0%			
<b>Total other ANSP overall regulatory results (RR) for the terminal activity</b>						
Ex-post, the overall RR for the MET provider corresponds to 2.3% of the terminal revenues, i.e. slightly less than planned.						
The resulting ex-post rate of return on equity for the METSP is 4.0%, in line with the PP.						



1. Monitoring of gate-to-gate ANS costs																																																				
Charging zones concerned:																																																				
En route charging zone 1: Portugal Continental		En route charging zone 2:																																																		
Terminal charging zone 1: Portugal		Terminal charging zone 2:																																																		
Portugal Continental: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D																																													
Real en route costs (EUR2017)		114,095,861	115,019,714	229,115,575	135,200,935	144,619,857	147,095,309																																													
Real terminal costs (EUR2017)		34,377,977	32,423,922	66,801,899	37,864,473	40,318,956	41,656,556																																													
Real gate-to-gate costs (EUR2017)		148,473,837	147,443,636	295,917,473	173,065,408	184,938,813	188,751,865																																													
En route share (%)		76.8%	78.0%	77.4%	78.1%	78.2%	77.9%																																													
Portugal Continental: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A																																													
Real en route costs (EUR2017)		114,095,861	116,103,545	230,199,406																																																
Real terminal costs (EUR2017)		34,377,977	33,584,305	67,962,282																																																
Real gate-to-gate costs (EUR2017)		148,473,837	149,687,850	298,161,687																																																
En route share (%)		76.8%	77.6%	77.2%																																																
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024																																													
Real gate-to-gate costs (EUR2017) in value		0	2,244,214	2,244,214																																																
in %		0.0%	1.5%	0.8%																																																
En route share in p.p.		0.0 p.p.	-0.4 p.p.	-0.2 p.p.																																																
2. Share of en route and terminal in gate-to-gate actual costs (2020-2021)																																																				
<table border="1"> <caption>Share of en route and terminal in gate-to-gate actual costs (2020-2021)</caption> <thead> <tr> <th>Year</th> <th>Type</th> <th>En route (%)</th> <th>Terminal (%)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">2020</td> <td>Determined</td> <td>77%</td> <td>23%</td> </tr> <tr> <td>Actual</td> <td>77%</td> <td>23%</td> </tr> <tr> <td rowspan="2">2021</td> <td>Determined</td> <td>78%</td> <td>22%</td> </tr> <tr> <td>Actual</td> <td>78%</td> <td>22%</td> </tr> <tr> <td rowspan="2">2020-2021</td> <td>Determined</td> <td>77%</td> <td>23%</td> </tr> <tr> <td>Actual</td> <td>77%</td> <td>23%</td> </tr> <tr> <td rowspan="2">2022</td> <td>Determined</td> <td>78%</td> <td>22%</td> </tr> <tr> <td>Actual</td> <td>78%</td> <td>22%</td> </tr> <tr> <td rowspan="2">2023</td> <td>Determined</td> <td>78%</td> <td>22%</td> </tr> <tr> <td>Actual</td> <td>78%</td> <td>22%</td> </tr> <tr> <td rowspan="2">2024</td> <td>Determined</td> <td>78%</td> <td>22%</td> </tr> <tr> <td>Actual</td> <td>78%</td> <td>22%</td> </tr> </tbody> </table>				Year	Type	En route (%)	Terminal (%)	2020	Determined	77%	23%	Actual	77%	23%	2021	Determined	78%	22%	Actual	78%	22%	2020-2021	Determined	77%	23%	Actual	77%	23%	2022	Determined	78%	22%	Actual	78%	22%	2023	Determined	78%	22%	Actual	78%	22%	2024	Determined	78%	22%	Actual	78%	22%	<p>In the combined year 2020-2021, actual gate-to-gate ANS costs are +0.8% (+2.2 M€2017) higher than planned, due to higher than planned en route costs (+0.5%, or +1.1 M€2017) and terminal costs (+1.7%, or +1.2 M€2017).</p> <p>The actual share of en route in gate-to-gate ANS costs (77.2%) is slightly lower than planned in the PP for 2020-2021 (77.4%).</p>		
Year	Type	En route (%)	Terminal (%)																																																	
2020	Determined	77%	23%																																																	
	Actual	77%	23%																																																	
2021	Determined	78%	22%																																																	
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3. Gate-to-gate regulatory result (RR) 2020-2021																																																				
In EUR '000																																																				
ANSP(S)	RR	Ex-ante			Ex-post																																															
		Revenues	RR % revenues	RR	Revenues	RR % revenues																																														
NAV Portugal (Continental)	5,924	256,853	2.3%	6,454	261,122	2.5%																																														
Portugal Continental SAR	0	11,516	0.0%	199	11,726	1.7%																																														
METSP(s)	RR	Ex-ante			Ex-post																																															
		Revenues	RR % revenues	RR	Revenues	RR % revenues																																														
Portugal Continental MET	354	13,754	2.6%	314	13,754	2.3%																																														
<b>Total</b>	<b>6,278</b>	<b>282,123</b>	<b>2.2%</b>	<b>6,967</b>	<b>286,601</b>	<b>2.4%</b>																																														
<p>For the ANSPs providing services in the en route and terminal charging zones of Portugal covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +7.0 M€ (see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 2.4% of gate-to-gate ANS revenues.</p> <p>This is slightly higher than the return planned for the year included in the performance plan (2.2%).</p>				<p>Portugal Continental gate-to-gate 2020-2021 regulatory result in % of revenues</p> <table border="1"> <caption>Portugal Continental gate-to-gate 2020-2021 regulatory result in % of revenues</caption> <thead> <tr> <th>Type</th> <th>RR % revenues</th> </tr> </thead> <tbody> <tr> <td>Ex-ante</td> <td>2.2%</td> </tr> <tr> <td>Ex-post</td> <td>2.4%</td> </tr> </tbody> </table>			Type	RR % revenues	Ex-ante	2.2%	Ex-post	2.4%																																								
Type	RR % revenues																																																			
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# **Annual Monitoring Report 2021**

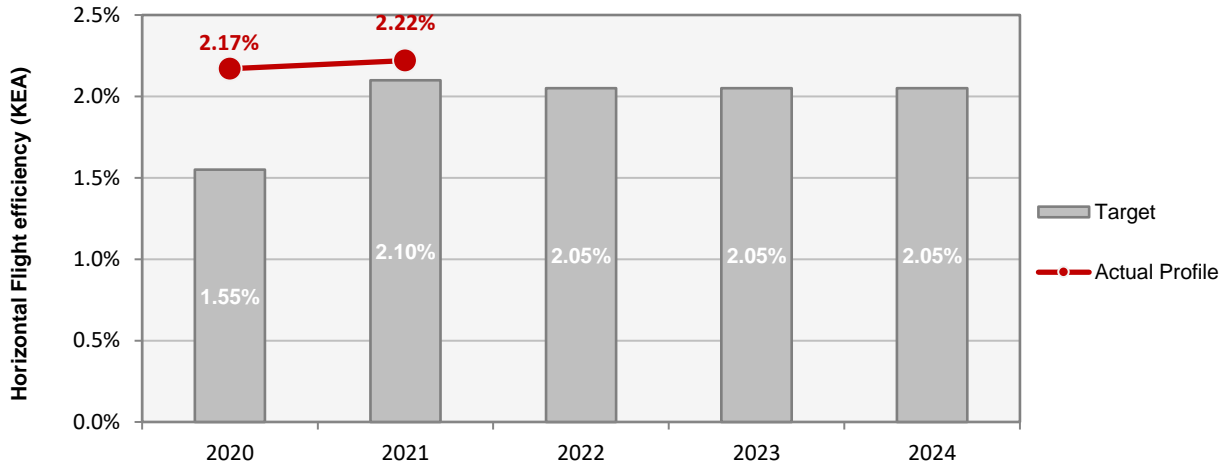
## Local level view

### Romania

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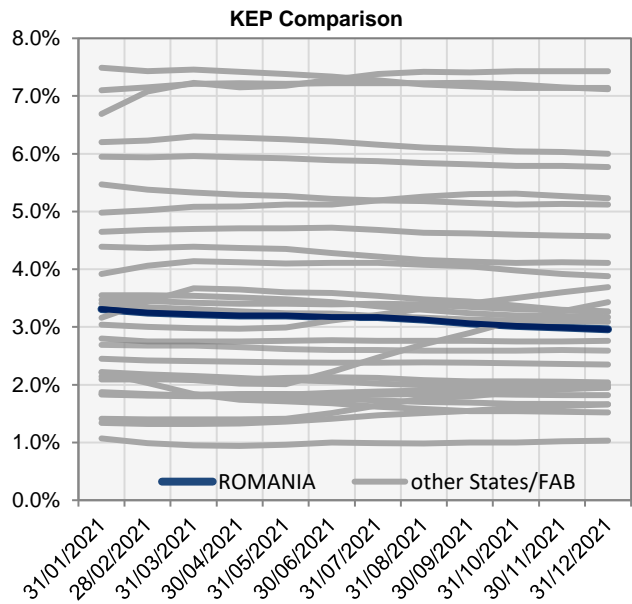
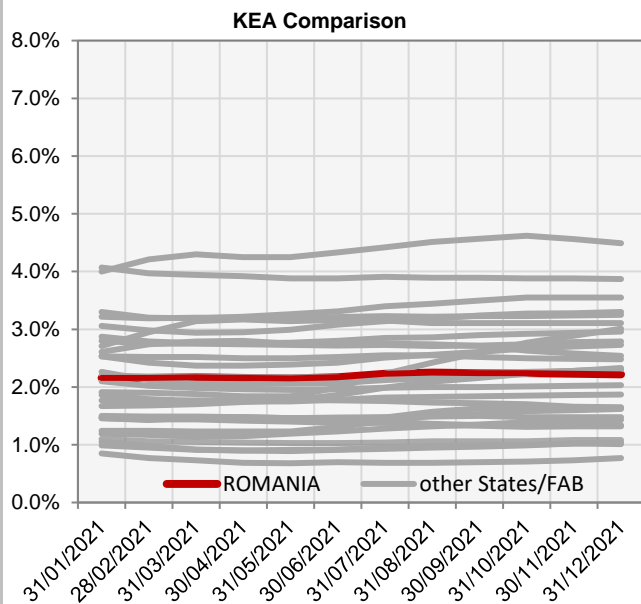
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>Romatsa</b>	99	D	C	D	D	D
Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.						
Observations						
Slight increase in maturity has been observed with respect to 2020. Nevertheless, all five EoSM components of the ANSP meet, or exceed, already the 2024 target level.						

KEA					
	2020	2021	2022	2023	2024
Target	1.55%	2.10%	2.05%	2.05%	2.05%
Actual performance	2.17%	2.22%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	2.16%	2.16%	2.17%	2.16%	2.15%	2.17%	2.23%	2.25%	2.24%	2.24%	2.23%	2.22%
KEP	3.31%	3.25%	3.22%	3.20%	3.20%	3.17%	3.17%	3.13%	3.06%	3.02%	2.99%	2.96%
KES	2.13%	2.11%	2.11%	2.12%	2.14%	2.15%	2.19%	2.19%	2.17%	2.18%	2.18%	2.18%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**1. Overview**

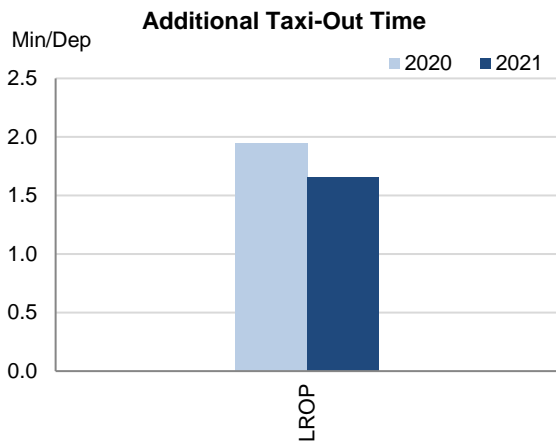
Romania includes 2 airports under RP3 monitoring. However, in accordance with IR (EU) 2019/317 and the traffic figures, only Bucharest/Otopeni (LROP) must be monitored for additional taxi-out and ASMA times. The Airport Operator Data Flow, necessary for the monitoring of the additional times, is correctly implemented where required and the monitoring of all environment indicators can be performed.

Traffic at these 2 airports decreased in 2021 is still 40% lower than in 2019, regardless of a 37% increase with respect to 2020.

Both additional times have decreased with respect to 2020.

Both airports have shares of CDO flights that didn't change a lot with respect to 2020 and which are above the overall RP3 value of 30.5% in 2021.

**2. Additional Taxi-Out Time**



Additional taxi-out times at Bucharest/Otopeni (LROP; 2019: 2.67 min/dep.; 2020: 1.95 min/dep.; 2021: 1.66 min/dep.) were similar to those observed in 2020, with additional taxi-out times higher in the first trimester, probably due to de-icing operations.

According to the Romanian monitoring report, following measures are planned or already implemented, although no dates are provided:

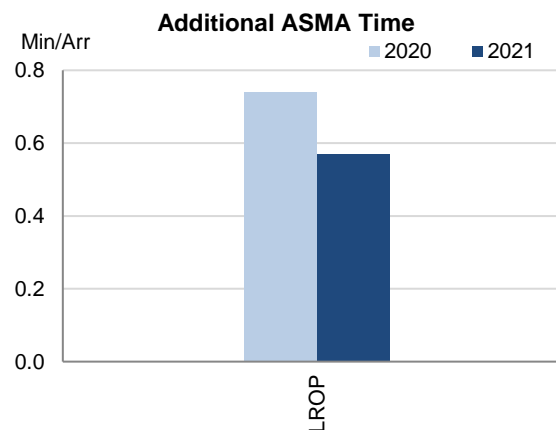
- a) *Implemented:*
  - clearance delivery position;
  - ASMGCS at Otopeni TWR - advance surface management ground control system;

- Common procedure between Bucharest Airports National Company and TWR Otopeni for repairing works periods on the manoeuvring area, ie pre-established alternative standard taxi routes;
- Common procedure regarding ATFM (according to EU Reg 255/2010) regarding the regulation of traffic in situations that may influence the airport's capacity.

b) *Planned:*

- Modernisation ASMGCS - Implementation of Advanced Tower Messaging
- AMAN at Bucuresti TMA - Arrival Manager.

**3. Additional ASMA Time**



Additional ASMA times at Bucharest/Otopeni (LROP; 2019: 0.75 min/arr.; 2020: 0.74 min/arr.; 2021: 0.57 min/arr.) decreased in the first half of 2021 and then increased again in the second half.

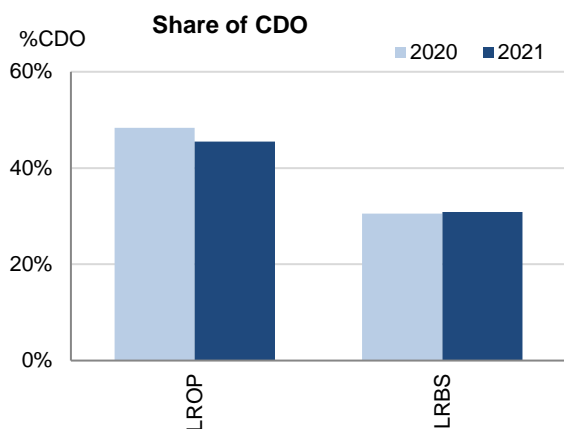
According to the Romanian monitoring report, following measures are planned or already implemented, although no dates are provided:

- a) *Implemented:*
  - SID / STAR RNAV 1;
  - as current practice, vectorizations for shortening the trajectories when the traffic is of low complexity (DIRECT TO);
  - Bucharest TMA resectorisation - implementation of new sector: DIRECTOR.

b) *Planned:*

- implementation of AMAN - Arrival Manager;
- implementation of RNP (required navigation performance) approach procedures.

#### 4. Share of arrivals applying CDO



Bucharest/Otopeni (LROP), being the major airport in the Romania, has the highest share of CDO flights: 45.5% which is well above the overall RP3 value in 2021 (30.5%) despite a decrease from 48.4% in 2020.

The share of CDO flights at Bucharest/Băneasa (LRBS) increased slightly above the overall RP3 value to 30.9%.

The monthly values are significantly lower from April to September.

According to the Romanian monitoring report: *Resumption of AIP Romania amendment process, chap. 2.21 Noise abatement procedures with the following specific provisions for aircraft operating at Otopeni Airport:*

*"In order to reduce aircraft noise and emissions, ATC gives clearances allowing continuous descent (CD) traffic situation permitting. Continuous descent can be planned based on track distance information of the STAR or, when vectored, on estimated track distance provided by ATC. "*

*NSA: continuous oversight and FLT procedures approval.*

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Otopeni-Intl.-LROP	1.95	1.66				0.74	0.57				48%	45%			
Bucharest AUREL VLAICU-LRBS	-	-				-	-				31%	31%			



## Update on Military dimension of the plan

Information from annual monitoring report 2020 is repeated, no new information provided as update.

## Military - related measures implemented or planned to improve capacity

No new information provided.

## PI#6 Effective use of reserved or segregated airspace - national level

Ratio PI#6	2020	2021	2022	2023	2024
Romania	83%	86%			

## PI#6 Effective use of reserved or segregated airspace (per ACC)

Ratio PI#6	2020	2021	2022	2023	2024
Bucharest ACC					

## Initiatives implemented or planned to improve PI#6

**ROMATSA:** The FUA Concept is fully implemented in Romania at all specific levels, as follows: at Level 1 through National Air Space Management Council, at Level 2 through AMC, as civil-military body and at Level 3 through civil-military coordination offices colocated. At FAB level, an AirSpace Policy Body is defined for strategic coordination between Romania and Republic of Bulgaria. Furthermore, Romanian operational procedures allow the crossing of most military training zones by civil aircraft with a prior coordination.

**NSA:** continuous oversight. PI monitored for statistical purposes, no target assigned in the Performance Plan.

## PI#7 Rate of planning via available airspace structures - national level

Ratio PI#7	2020	2021	2022	2023	2024
Romania		N/A			

## PI#7 Rate of planning via available airspace structures (per ACC)

Ratio PI#7	2020	2021	2022	2023	2024
Bucharest ACC					

## Initiatives implemented or planned to improve PI#7

No information provided.

## PI#8 Rate of using available airspace structures - national level

Ratio PI#8	2020	2021	2022	2023	2024
Romania		N/A			

## PI#8 Rate of using available airspace structures (per ACC)

Ratio PI#8	2020	2021	2022	2023	2024
Bucharest ACC					

## Initiatives implemented or planned to improve PI#8

No information provided.

Minutes of ATFM en-route delay						
	2020	2021	2022	2023	2024	Observations
<b>National Target</b>	0.14	0.02	0.04	0.04	0.04	
<b>Actual performance</b>	0.00	0.00				
<b>NSA's assessment of capacity performance</b>						
<p>The significantly reduced traffic in the pandemic context allowed during 2021 optimised traffic flows and values (0) for ATFM delay per flight. Nevertheless, in the perspective of future traffic recovery, ROMATSA continues the airspace structure improvement process, by supporting Free Route operations expansion in the context of SEEFRA, by removing the ATS Routes above FL105 within Bucuresti CTA during Summer Season 2021 and by sectorisation improvements (planned for Q1 2023).</p> <p>ROMATSA has become a member of the collaborative, pan-European, Centralised Code Assignment and Management System (CCAMS), starting with 15th of October 2021.</p> <p>CCAMS aims to overcome the current and future shortages of the Secondary Surveillance Radar (SSR) codes used by Air Traffic Control for radar services and provides a unique SSR code to each flight operating in the countries using the service. CCAMS optimises the efficiency of European SSR code management by introducing the dynamic transponder codes allocation, allowing the simultaneous use of the same code in volumes of airspace separated by a buffer zone.</p> <p>This approach assures the optimal use of SSR codes and reduces the SSR codes shortage and conflicts in the CCAMS region. Through CCAMS application within București FIR the SSR codes management is more efficient, increasing safety.</p> <p>It also determines a reduction of the airborne SSR code changes, thus decreasing ATC workload and allowing for more flights to be handled.</p> <p>Being among the pioneers of Mode S implementation in the entire FIR, CCAMS activation makes ROMATSA one of the few air navigation service providers in Europe that have operationalized both concepts.</p>						
<b>Monitoring process for capacity performance</b>						
<p>ROMATSA provided regularly inputs on capacity availability in the context of NOP Rolling Seasonal Plan implemented by the Network manager at European network level. The expected en-route performance was and is regularly evaluated by the NM for each ACC, including Bucuresti ACC, in terms of planned/maximum sector openings in relation with the estimated traffic demand.</p>						
<b>Capacity Planning</b>						
<p>In the context of COVID-19 crisis, the capacity as previously planned and published within an annual NOP (Network Operatios Plan) has been adapted accordingly by adoption of capacity plans under a NOP Rolling Seasonal Plan format, including periods of 6 weeks, based on the expected traffic demand regularly provided by the Network Manager. These plans refer to:</p> <ul style="list-style-type: none"> <li>- sector openings</li> <li>- maximum possible sector openings</li> <li>- availability of support of operational staff.</li> <li>- special events and projects, etc.</li> </ul> <p>Bucuresti ACC ensured a stable sector opening plan with no sector capacity reduction throughout this difficult period, with the possibility to increase the number of sectors plan, if the traffic is increasing and support operational staff working as normal.</p>						

ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
Planned 2021 Perf Plan	-	-	235	243	249	267	
Planned 2022 Perf Plan				239	244	262	
Actual	233	225	219				

Due to the impact of the COVID19 pandemic, training of new ATCOs has been delayed and the 24 ATCOs who were supposed to be partially licensed at the end of 2021 will become full FTE in 2022. In what concerns ATCOs that have stopped working in the OPS room, apart from the 2 that were retired, 1 has lost its licence due to medical reasons, 2 more were moved to the simulator due to health issues that prevent them from working in shifts as required in OPS and 1 has temporarily taken over the position of Director for Bucharest Regional Subsidiary.

#### Application of Corrective Measures for Capacity (if applicable)

As presented during the RP2 revision process, ROMATSA faces an ageing ATCO personnel. This is especially true in ACC Bucharest, where more than 1/3 of ATCOs are over 50 years old and will be over age 55 at the end of RP3. It takes between 3 to 5 years to fully train and authorize an ATCO for ACC, therefore a recruitment process was started in 2017 and should continue until the end of RP3, as was approved through the RP2 revision in December 2018, to guarantee proper staffing levels to ensure safety and capacity. As it can be seen in the figure, without recruitment capacity in ACC Bucharest would not meet the required needs.

NSA: revision to the Performance Plan which will be transmitted to the EC, after the Decision of the Inconsistency nr 2283/2022

Capacity targets are met, continuous oversight, licencing of new ACOs and training approvals.

#### Summary of capacity performance

Romania experienced an increase in traffic from 320k flights in 2020 to 454k flights in 2021, with zero ATFM delay. However, traffic levels were still substantially below the 747k flights in 2019.

#### En route Capacity Incentive Scheme

	2020	2021	2022	2023	2024	Observations
National Capacity target	0.14	0.02	0.04	0.04	0.04	
Deadband +/-	-	-	[0.029-0.049]	[0.012-0.032]	[0.012-0.032]	
Actual performance	0.00	0.00				

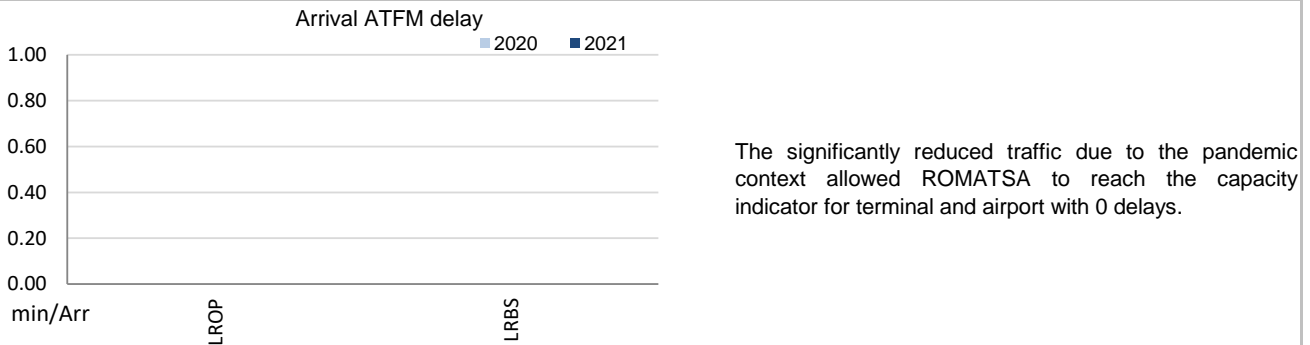
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

**1. Overview**

Romania includes 2 airports under RP3 monitoring. However, in accordance with IR (EU) 2019/317 and the traffic figures, only Bucharest/Otopeni (LROP) must be monitored for the pre-departure delay indicators. The Airport Operator Data Flow, necessary for the monitoring of these delays, is correctly implemented where required and the monitoring of all capacity indicators can be performed. Nevertheless, the quality of the reporting from Bucharest does not allow for the calculation of the ATC pre-departure delay, with more than 60% of the reported delay not allocated to any cause. Traffic at these 2 airports decreased in 2021 is still 40% lower than in 2019, regardless of a 37% increase with respect to 2020.

Average arrival ATFM delays in 2021 was 0 min/arr, same as in 2020.  
 ATFM slot adherence has improved (2021: 98.2%; 2020: 96.6%).

**2. Arrival ATFM Delay**



According to the Romanian monitoring report: ROMATSA and Bucharest Airports National Company continue to work together to ensure optimum capacity level at terminal level as this impacts the entire network. On one hand ROMATSA has implemented at Otopeni TWR a different ATM system with A-SMGCS component, composed of a surveillance subsystem (operational for over three years) and an electronic flight strips subsystem (transferred into operations on April 8th 2019), interfaced via OLDI with the System covering the rest of the ATS units.

There is in place also a common procedure between Bucharest Airports National Company and TWR Otopeni for repairing works periods on the manoeuvring area, ie pre-established alternative standard taxi routes;

According to EU Reg 255/2010 a common procedure regarding ATFM for the regulation of traffic in situations that may influence the airport's capacity is in place.

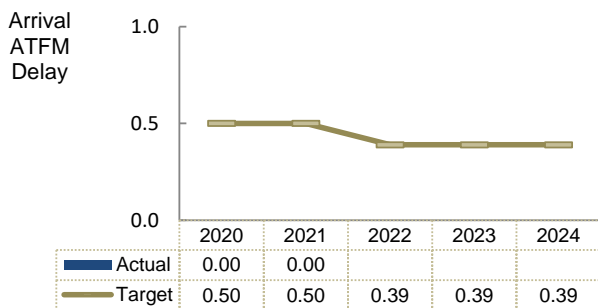
Implementation of AMAN at Bucharest APP is foreseen also during RP3 and also the upgrade of ASMGCS to include Advance Tower Messaging.

The NSA intends to do a revision to the Performance Plan which will be transmitted to the EC, after the Decision of the Inconsistency nr 2283/2022

The monitoring report also mentions that Capacity targets are met, continuous oversight, licencing of new ACOs and training approvals.

External factor regarding CNAB: administrative decisions regarding the works and maintenance at the airport.

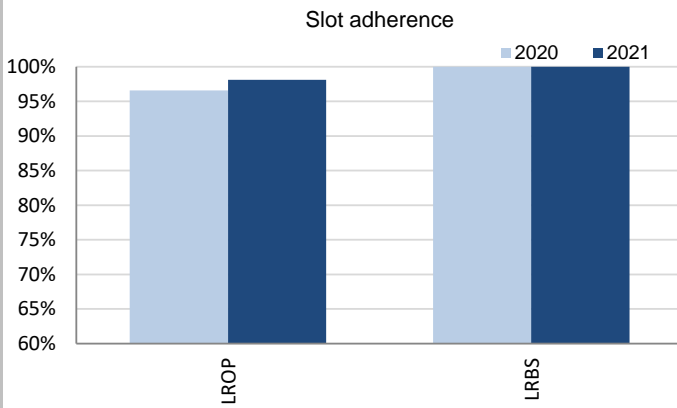
**3. Arrival ATFM Delay – National Target and Incentive Scheme**



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

#### 4. ATFM Slot Adherence



With the drastic drop in traffic, the share of regulated departures from Bucharest/Otopeni (LROP) until July 2021. Only 44 departures in total from Bucharest Aurel Vlaicu (LRBS) were regulated in the entire year, with a 100% compliance. The national average, driven by Bucharest/Otopeni, was 98.2%, an improvement with respect to 2020's performance (96.6%). With regard to the 1.8% of flights that did not adhere, 0.8% was early and 1% was late.

The Romanian NSA reports: According to EU Reg 255/2010 a common procedure regarding ATFM for the regulation of traffic in situations that may influence the airport's capacity is in place between Bucharest Airports National Company and ROMATSA

#### 5. ATC Pre-departure Delay

The calculation of the ATC pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF) which is properly implemented at Bucharest/Otopeni (the only Romanian airport subject to monitoring of this indicator).

However, there are several quality checks before EUROCONTROL can produce the final value which is established as the average minutes of pre-departure delay (delay in the actual off block time) associated to the IATA delay code 89 (through the APDF, for each delayed flight, the reasons for that delay have to be transmitted and coded according to IATA delay codes.

However, sometimes the airport operator has no information concerning the reasons for the delay in the off block, or they cannot convert the reasons to the IATA delay codes. In those cases, the airport operator might:

- Not report any information about the reasons for the delay for that flight (unreported delay)
- Report a special code to indicate they do not have the information (code ZZZ)
- Report a special code to indicate they do not have the means to collect and/or translate the information (code 999)

To be able to calculate with a minimum of accuracy the PI for a given month, the minutes of delay that are not attributed to any IATA code reason should not exceed 40% of the total minutes of pre-departure delay observed at the airport.

Finally, to be able to produce the annual figure, at least 10 months of valid data is requested by EUROCONTROL.

Bucharest/Otopeni (LROP) had proper reporting before March 2020, but the share of unidentified delay rose well above 40% since the pandemic (preventing the calculation of this indicator) due to the special traffic composition. In the second half of 2021 the quality of the reporting improved but still not enough for the calculation, and in the beginning of 2022 has deteriorated again.

#### 6. All Causes Pre-departure Delay

The total (all causes) delay in the actual off block time at Bucharest/Otopeni increased in 2021 (LROP: 2020: 10.22 min/dep.; 2021: 12.45 min/dep.), with the highest delays observed in Summer.

According to the Romanian monitoring report: *In 2021 departure delays at LROP were due to aerodrome capacity mainly during the summer season. ROMATSA and Bucharest Airports National Company continue to work together to ensure optimum capacity level at terminal level as this impacts the entire network. On one hand ROMATSA has implemented at Otopeni TWR a different ATM system with A-SMGCS component, composed of a surveillance subsystem (operational for over three years) and an electronic flight strips subsystem (transferred into operations on April 8th 2019), interfaced via OLDI with the System covering the rest of the ATS units. An upgrade to the system is planned for 2022-2023 to include Advance Tower Messaging.*

*There is in place also a common procedure between Bucharest Airports National Company and TWR Otopeni for repairing works periods on the manoeuvring area, ie pre-established alternative standard taxi routes;*

*According to EU Reg 255/2010 a common procedure regarding ATFM for the regulation of traffic in situations that may influence the airport's capacity is in place.*

*Implementation of AMAN at Bucuresti TMA is foreseen also during RP3*

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Otopeni-Intl.-LROP	0	0				96.6%	98.1%				n/a	n/a				10.22	12.45			
Bucharest AUREL VLAICU-LRBS	0	0				100.0%	100.0%				-	-				-	-			

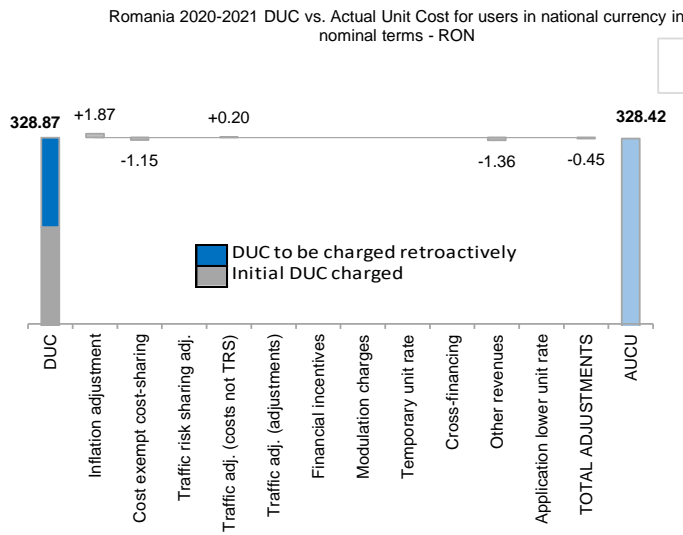
1. Contextual economic information: en route air navigation services						
Romania ECZ represents 2.8% of the SES en route ANS actual costs in 2019			FAB: DANUBE FAB			
National currency:	RON	Exchange rates (1 EUR=)	2017: 4.56629 RON	2020: 4.83499 RON	2021: 4.91854 RON	
Performance Plan:	RP3 draft performance plan dated 17 November 2021 and found inconsistent as per Commission Decision (EU) 2022/728 of 13 April 2022 Romania has submitted a revised RP3 draft performance plan in July 2022, currently under assessment.					
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Romania: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal RON)	829,103,803	862,516,826	1,691,620,629	999,844,521	1,137,701,999	1,208,532,282
Inflation %	2.3%	2.8%		9.3%	4.0%	3.0%
Inflation index (100 in 2017)	110.6	113.7		125.9	130.9	134.8
Real en route costs (RON2017)	762,460,146	774,836,449	1,537,296,595	822,771,096	904,168,391	934,279,954
Total en route service units	2,245,622	2,898,081	5,143,703	4,583,000	5,531,000	5,825,000
<b>Real en route DUC per service unit (RON2017)</b>	<b>339.53</b>	<b>267.36</b>	<b>298.87</b>	<b>179.53</b>	<b>163.47</b>	<b>160.39</b>
<b>Real en route DUC per service unit (EUR2017)</b>	<b>74.36</b>	<b>58.55</b>	<b>65.45</b>	<b>39.32</b>	<b>35.80</b>	<b>35.13</b>
Romania: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal RON)	829,103,803	873,701,122	1,702,804,925			
Inflation %	2.3%	4.1%				
Inflation index (100 in 2017)	110.6	115.2				
Real en route costs (RON2017)	762,460,146	775,923,757	1,538,383,903			
Total en route service units	2,245,622	2,869,907	5,115,528			
<b>Real en route AUC per service unit (RON2017)</b>	<b>339.53</b>	<b>270.37</b>	<b>300.73</b>			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>74.36</b>	<b>59.21</b>	<b>65.86</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal RON)	in value	0	11,184,295	11,184,295		
	in %	-	+1.3%	+0.7%		
Inflation %	in p.p.	0.0 p.p.	1.3 p.p.			
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	1.5 p.p.			
Real en route costs (RON2017)	in value	0	1,087,308	1,087,308		
	in %	-	+0.1%	+0.1%		
Total en route service units	in value	0	-28,174	-28,174		
	in %	-	-1.0%	-0.5%		
<b>Real en route unit cost per service unit (RON2017)</b>	<b>in value</b>	<b>0.00</b>	<b>3.00</b>	<b>1.86</b>		
	<b>in %</b>	<b>-</b>	<b>+1.1%</b>	<b>+0.6%</b>		
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>0.66</b>	<b>0.41</b>		
	<b>in %</b>	<b>-</b>	<b>+1.1%</b>	<b>+0.6%</b>		
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs. DUC</b>			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      -0.5%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
The AUC for the combined year 2020-2021 is slightly higher than the planned DUC (by +0.6%, or +1.86 RON2017, or +0.41€2017). This results from the combination of lower than planned TSUs (-0.5%) and higher than planned en route costs in real terms (by +0.1%, or +1.1 MRON2017, or +0.2 M€2017).						
<b>En route service units</b>			<p>Costs by entity at ECZ level (M€2017):</p> <p>Main ANSP: 0.5%</p> <p>Other ANSP(s): -5.7%</p> <p>METSP(s): 0.1%</p> <p>NSA/EUROCONTROL: -0.1%</p> <p>Total CZ: 0.1%</p>			
The difference between actual and planned TSUs (-0.5%) falls within the ±2% dead band. Hence the resulting loss is borne by the ANSPs (see item 11).						
<b>En route costs by entity at charging zone level</b>			<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs: -13.8%</p> <p>Other operating costs: 2.3%</p> <p>Depreciation: 1.1%</p> <p>Cost of capital: 2.7%</p> <p>Exceptional costs: 0.5%</p> <p>VFR exempted flights: 0.5%</p> <p>Total Main ANSP: -13.8%</p>			
<b>En route costs for the main ANSP (Romatsa) at charging zone level</b>						
Overall, the en route costs in real terms for Romatsa in 2020-2021 were in line with the determined costs from the performance plan (+0.5%, or +1.5 M€2017 higher). This results from opposite variations:						
<ul style="list-style-type: none"> <li>- higher staff costs (+2.3%), "due to higher than planned pensions costs related to the defined benefits provision. These have been partly offset by cost restraining measures applied for both 2020-2021".</li> <li>- lower other operating costs (-13.8%), "due mainly to a delay in flight validation services for the 15 DMEs installed and cost restraining measures applied to conserve cash-flow."</li> <li>- slightly higher depreciation (+1.1%), "due to an accounting error in forecasting", and</li> <li>- higher cost of capital (+2.7%).</li> </ul>						

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	RON/SU	EUR/SU
Initial DUC charged	186.75	38.25
DUC to be charged retroactively	142.12	29.18
<b>DUC</b>	<b>328.87</b>	<b>67.43</b>
Inflation adjustment	1.87	0.38
Cost exempt from cost-sharing	-1.15	-0.23
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	0.20	0.04
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	-1.36	-0.28
Application of lower unit rate	0.00	0.00
Total adjustments	-0.45	-0.09
<b>AUCU</b>	<b>328.42</b>	<b>67.34</b>
<b>AUCU vs. DUC</b>	<b>-0.1%</b>	<b>-0.1%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

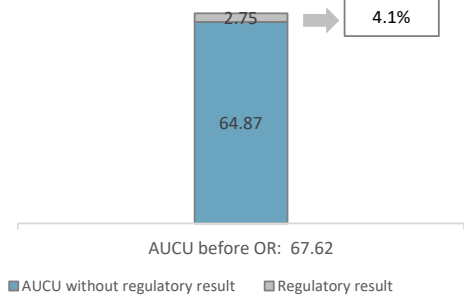
7. En route costs exempt from cost sharing

		RON '000	EUR '000	RON/SU	EUR/SU
by item	New and existing investments	0	0	0.00	0.00
	Competent authorities and qualified entities costs	-3,277	-666	-0.64	-0.13
	Eurocontrol costs	-2,552	-519	-0.50	-0.10
	Pension costs	0	0	0.00	0.00
	Interest on loans	-52	-11	-0.01	0.00
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>-5,881</b>	<b>-1,196</b>	<b>-1.15</b>	<b>-0.23</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	RON '000	EUR '000	RON/SU	EUR/SU
ROMATSA	68,501	14,086	13.39	2.75
METSP(s)	RON '000	EUR '000	RON/SU	EUR/SU
<b>Total charging zone</b>	68,501	14,086	13.39	2.75
<b>Actual cost for users***</b>	1,687,023	345,890	329.78	67.62
<b>Regulatory result (% AUCU)</b>	4.1%	4.1%	4.1%	4.1%

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (328.42RON or 67.34€) is very close to the nominal DUC (328.87RON or 67.43€) which includes DUC initially charged: 186.75RON or 38.25€, and to be charged: 142.12RON or 29.18€. The difference between these two figures (-0.45RON/SU or -0.09€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+1.87RON/SU or +0.38€/SU);
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-1.15RON/SU or -0.23€/SU);
- the traffic adjustment (+0.20RON/SU or +0.04€/SU) for the costs not subject to traffic risk sharing to be charged in future years ; and
- the deduction of the other revenues (-1.36RON/SU or -0.28€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 4.1%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

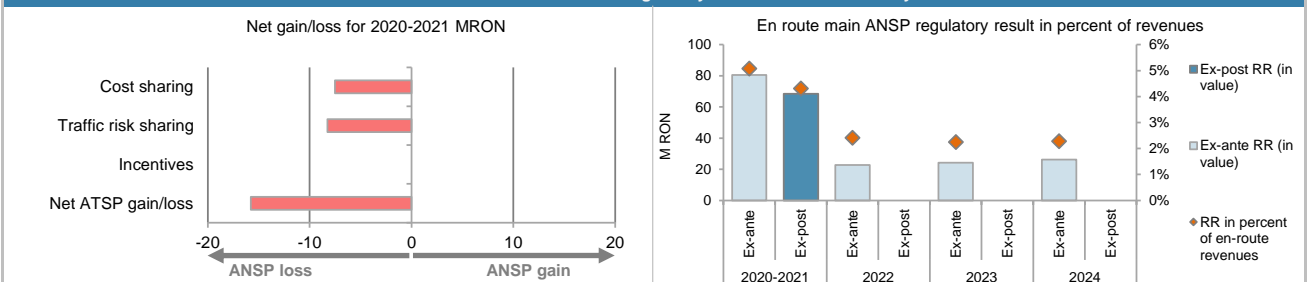
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (RON '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	-17,013			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	9,543			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-52			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>-7,522</b>			
Traffic risk sharing (RON '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	-0.5%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	1,507,906			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>-8,259</b>			
Incentives (RON '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (RON '000)</b>	<b>-15,782</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>-3,209</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

ROMATSA planned regulatory result (RON '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	534,225	526,173	1,060,398	584,892	651,607	670,123
Proportion of financing through equity (in %)	93%	57%	75%	50%	48%	53%
RoE pre-tax rate (in %)	9.1%	11.7%	10.1%	7.8%	7.8%	7.4%
RoE (in value)	45,310	35,264	80,574	22,727	24,285	26,173
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>45,310</b>	<b>35,264</b>	<b>80,574</b>	<b>22,727</b>	<b>24,285</b>	<b>26,173</b>
<b>Revenue for the en route charging zone</b>	<b>779,258</b>	<b>809,552</b>	<b>1,588,810</b>	<b>945,254</b>	<b>1,083,590</b>	<b>1,152,229</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>5.8%</b>	<b>4.4%</b>	<b>5.1%</b>	<b>2.4%</b>	<b>2.2%</b>	<b>2.3%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>9.1%</b>	<b>11.7%</b>	<b>10.1%</b>	<b>7.8%</b>	<b>7.8%</b>	<b>7.4%</b>
ROMATSA actual regulatory result (RON '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	534,225	522,628	1,056,853			
Proportion of financing through equity (in %)	93%	64%	78%			
RoE pre-tax rate (in %)	9.1%	11.7%	10.2%			
RoE (in value)	45,310	38,972	84,282			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	-15,782	-15,782			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>45,310</b>	<b>23,190</b>	<b>68,501</b>			
<b>Revenue for the en route charging zone</b>	<b>779,258</b>	<b>810,783</b>	<b>1,590,042</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>5.8%</b>	<b>2.9%</b>	<b>4.3%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>9.1%</b>	<b>7.0%</b>	<b>8.3%</b>			

13. Focus on the main ANSP regulatory result on en route activity



Romatsa net loss on en route activity in the Romania charging zone in the combined year 2020-2021

Romatsa incurred a net loss of -15.8 MRON, as a combination of a loss of -7.5 MRON arising from the cost sharing mechanism and a loss of -8.3 MRON arising from the traffic risk sharing mechanism.

Romatsa overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net loss from the en route activity mentioned above (-15.8 MRON) and the actual RoE (84.3 MRON) amounts to +68.5 MRON (4.3% of the en route revenues). The resulting ex-post rate of return on equity is 8.3%, which is lower than the 10.1% planned in the PP.



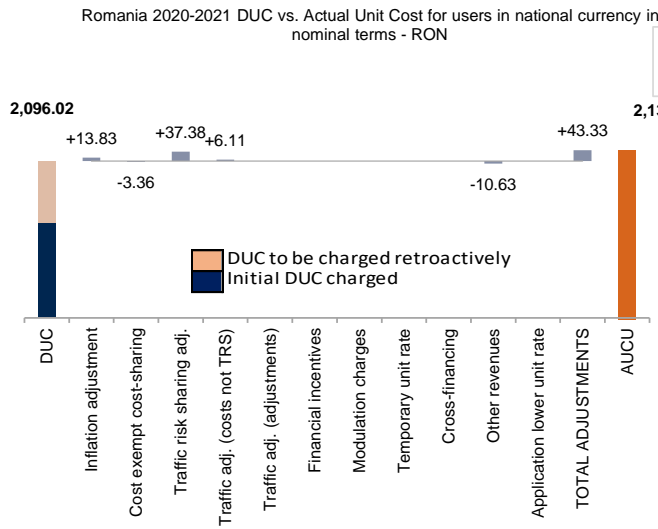
1. Contextual economic information: terminal air navigation services																				
<ul style="list-style-type: none"> <li>Romania TCZ represents 1.3% of the SES terminal ANS actual costs in 2019</li> <li>Number of airports in charging zone in 2021: 2 of which:                             <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 1</li> <li>Airports with more than 80,000 IFR mvmts: 1</li> </ul> </li> <li>National currency: RON Exchange rates (1 EUR=) 2017: 4.56629 RON 2020: 4.83499 RON 2021: 4.91854 RON</li> <li>Performance Plan: See item 1 for the en route charging zone(s).</li> </ul>																				
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level																				
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.</p>																				
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)																				
Romania: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D														
Terminal costs (nominal RON)	76,128,704	88,591,319	164,720,024	97,263,290	109,965,411	113,486,715														
Inflation %	2.3%	2.8%		9.3%	4.0%	3.0%														
Inflation index (100 in 2017)	110.6	113.7		125.9	130.9	134.8														
Real terminal costs (RON2017)	69,727,232	79,065,826	148,793,058	78,876,018	86,224,223	86,638,794														
Total terminal service units	31,587	47,000	78,587	67,000	71,000	74,000														
<b>Real terminal DUC per service unit (RON2017)</b>	<b>2,207.47</b>	<b>1,682.25</b>	<b>1,893.35</b>	<b>1,177.25</b>	<b>1,214.43</b>	<b>1,170.79</b>														
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>483.43</b>	<b>368.41</b>	<b>414.64</b>	<b>257.81</b>	<b>265.95</b>	<b>256.40</b>														
Romania: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A														
Terminal costs (nominal RON)	76,128,704	85,147,248	161,275,952																	
Inflation %	2.3%	4.1%																		
Inflation index (100 in 2017)	110.6	115.2																		
Real terminal costs (RON2017)	69,727,232	75,167,703	144,894,934																	
Total terminal service units	31,587	43,395	74,982																	
<b>Real terminal AUC per service unit (RON2017)</b>	<b>2,207.47</b>	<b>1,732.19</b>	<b>1,932.40</b>																	
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>483.43</b>	<b>379.34</b>	<b>423.19</b>																	
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024														
Terminal costs (nominal RON)	in value 0	-3,444,071	-3,444,071																	
	in % -	-3.9%	-2.1%																	
Inflation %	in p.p. 0.0 p.p.	1.3 p.p.																		
Inflation index (100 in 2017)	in p.p. 0.0 p.p.	1.5 p.p.																		
Real terminal costs (RON2017)	in value 0	-3,898,123	-3,898,123																	
	in % -	-4.9%	-2.6%																	
Total terminal service units	in value 0	-3,605	-3,605																	
	in % -	-7.7%	-4.6%																	
<b>Real terminal unit cost per service unit (RON2017)</b>	<b>in value 0.00</b>	<b>49.93</b>	<b>39.05</b>																	
	<b>in % -</b>	<b>+3.0%</b>	<b>+2.1%</b>																	
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value 0.00</b>	<b>10.94</b>	<b>8.55</b>																	
	<b>in % -</b>	<b>+3.0%</b>	<b>+2.1%</b>																	
4. Focus on terminal DUC monitoring at charging zone level																				
<p><b>AUC vs. DUC</b> The AUC for the combined year 2020-2021 is higher than the planned DUC (by +2.1%, or +39.05RON2017 or 8.55€2017). This is due to lower than planned TNSUs (-4.6%) and lower than planned terminal costs in real terms (by -2.6%, or -3.9 MRON2017 or -0.9ME2017).</p> <p><b>Terminal service units</b> The difference between actual and planned TNSUs (-4.6%) falls between the -2% dead band and the -10% threshold. Hence the resulting loss is shared between the ANSP and the airspace users (see item 11).</p> <p><b>Terminal costs by entity at charging zone level</b> Actual real terminal costs for 2020-2021 are -2.6% (-0.9 ME2017) lower than planned. This result is driven by the main ANSP, Romatsa (-2.5%, or -0.8 ME2017) and the NSA costs (-20.8%, or -0.1 ME2017).</p> <p><b>Terminal costs for the main ANSP (Romatsa) at charging zone level</b> Overall, the terminal costs in real terms for Romatsa in 2020-2021 were lower than the determined costs from the performance plan (by -2.5%, or -0.8 ME2017 lower). This results from:                      - lower staff costs (-1.3%), "due to cost restraining measures applied for both 2020-2021, offsetting higher than planned pensions costs related to the defined benefits provision".                      - lower other operating costs (-14.5%), "due mainly to a delay in the contracts for procedure design and flight validations and cost restraining measures applied to conserve cash-flow."                      - slightly higher depreciation (+0.9%), "due to an accounting error in forecasting" and                      - higher cost of capital (+1.2%).</p>			<p>2020-2021 actual vs. planned TNSUs</p> <p>Threshold -10%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p> <p>Deviation: -4.6%</p>																	
<p><b>Costs by entity at TCZ level (ME2017):</b></p> <table border="1"> <tr><td>Main ANSP</td><td>-2.5%</td></tr> <tr><td>Other ANSP(s)</td><td></td></tr> <tr><td>METSP(s)</td><td></td></tr> <tr><td>NSA</td><td>-20.8%</td></tr> <tr><td><b>Total CZ</b></td><td><b>-2.6%</b></td></tr> </table>			Main ANSP	-2.5%	Other ANSP(s)		METSP(s)		NSA	-20.8%	<b>Total CZ</b>	<b>-2.6%</b>								
Main ANSP	-2.5%																			
Other ANSP(s)																				
METSP(s)																				
NSA	-20.8%																			
<b>Total CZ</b>	<b>-2.6%</b>																			
<p><b>Costs by nature for main ANSP (ME2017):</b></p> <table border="1"> <tr><td>Staff costs</td><td>-1.3%</td></tr> <tr><td>Other operating costs</td><td>-14.5%</td></tr> <tr><td>Depreciation</td><td>0.9%</td></tr> <tr><td>Cost of capital</td><td>1.2%</td></tr> <tr><td>Exceptional costs</td><td></td></tr> <tr><td>VFR exempted flights</td><td>-36.8%</td></tr> <tr><td><b>Total Main ANSP</b></td><td><b>-2.5%</b></td></tr> </table>			Staff costs	-1.3%	Other operating costs	-14.5%	Depreciation	0.9%	Cost of capital	1.2%	Exceptional costs		VFR exempted flights	-36.8%	<b>Total Main ANSP</b>	<b>-2.5%</b>				
Staff costs	-1.3%																			
Other operating costs	-14.5%																			
Depreciation	0.9%																			
Cost of capital	1.2%																			
Exceptional costs																				
VFR exempted flights	-36.8%																			
<b>Total Main ANSP</b>	<b>-2.5%</b>																			

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	RON/SU	EUR/SU
Initial DUC charged	1,275.32	261.16
DUC to be charged retroactively	820.70	168.39
<b>DUC</b>	<b>2,096.02</b>	<b>429.55</b>
Inflation adjustment	13.83	2.81
Cost exempt from cost-sharing	-3.36	-0.68
Traffic risk sharing adjustment	37.38	7.60
Traffic adj. (costs not TRS)	6.11	1.24
Traffic adj. (adjustments)*	-	-
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**	-	-
Cross-financing	0.00	0.00
Other revenues	-10.63	-2.18
Application of lower unit rate	0.00	0.00
Total adjustments	43.33	8.79
<b>AUCU</b>	<b>2,139.35</b>	<b>438.35</b>
<b>AUCU vs. DUC</b>	<b>2.1%</b>	<b>2.0%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

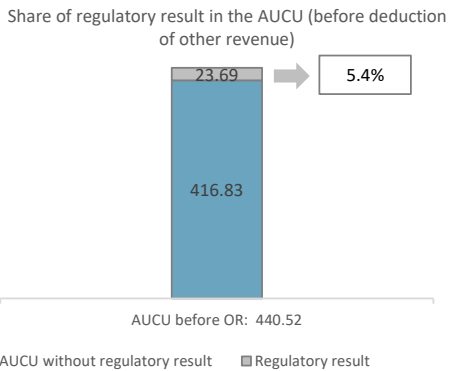
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

		RON '000	EUR '000	RON/SU	EUR/SU
by item	New and existing investments	0	0	0.00	0.00
	Competent authorities and qualified entities costs	-244	-50	-3.26	-0.66
	Eurocontrol costs	0	0	0.00	0.00
	Pension costs	0	0	0.00	0.00
	Interest on loans	-7	-2	-0.10	-0.02
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>-252</b>	<b>-51</b>	<b>-3.36</b>	<b>-0.68</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	RON '000	EUR '000	RON/SU	EUR/SU
ROMATSA	8,654	1,776	115.42	23.69
METSP(s)	RON '000	EUR '000	RON/SU	EUR/SU
<b>Total charging zone</b>	<b>8,654</b>	<b>1,776</b>	<b>115.42</b>	<b>23.69</b>
<b>Actual cost for users***</b>	<b>161,209</b>	<b>33,031</b>	<b>2,149.98</b>	<b>440.52</b>
<b>Regulatory result (% AUCU)</b>	<b>5.4%</b>	<b>5.4%</b>	<b>5.4%</b>	<b>5.4%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 (2,139.35RON or 438.35€) is +2% higher than the nominal DUC (2,096.02RON or 429.55€) which includes DUC initially charged: 1,275.32RON or 261.16€; and to be charged: 820.70RON or 168.39€. The difference between these two figures (+43.33RON/SU or +8.79€/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+13.83RON/SU or +2.81€/SU);
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-3.36RON/SU or -0.68€/SU);
- the traffic risk sharing adjustment (+37.38RON/SU or +7.60€/SU);
- the traffic adjustment (+6.11RON/SU or +1.24€/SU) for the costs not subject to traffic risk sharing to be charged in future years; and
- the deduction of the other revenues (-10.63RON/SU or -2.18€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 5.4%.

**10. Monitoring of the terminal ANSPs regulatory results (RR)**

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.
- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

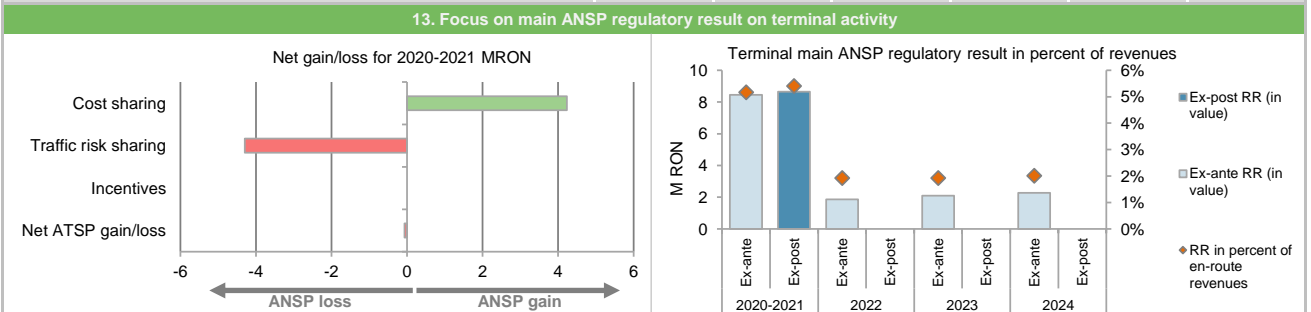
The monitoring of the RR is carried out in national currency in nominal terms.

**11. Net gain/loss for the main ANSP for the terminal activity at charging zone level**

Cost sharing (RON '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	3,200			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	1,037			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-7			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>4,229</b>			
Traffic risk sharing (RON '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	-4.6%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	154,732			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>-4,296</b>			
Incentives (RON '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (RON '000)</b>	<b>-67</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>-14</b>			

**12. Regulatory result (RR) for the main ANSP at charging zone level**

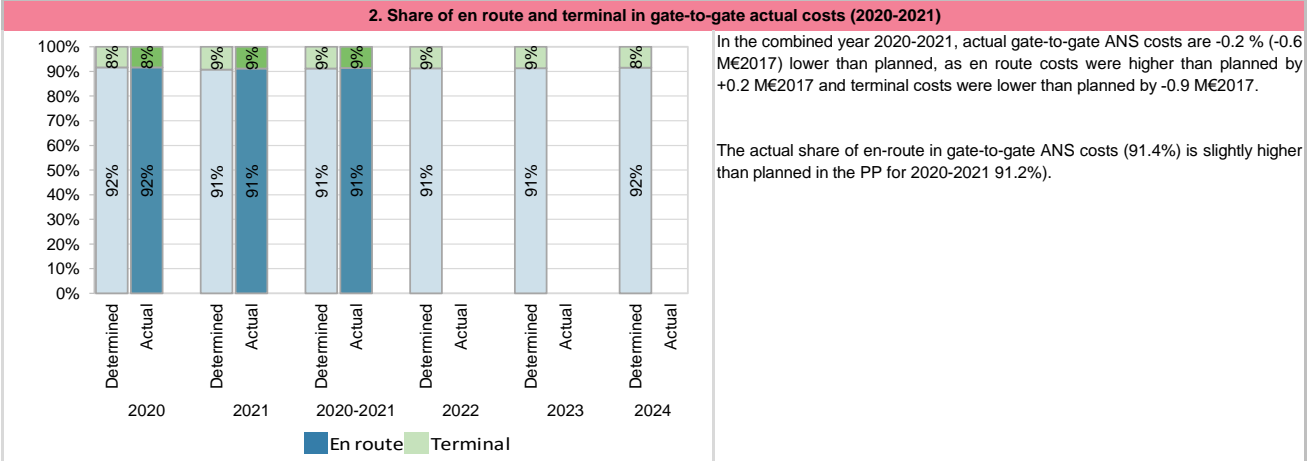
ROMATSA planned regulatory result (RON '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	56,199	55,115	111,314	47,930	56,290	57,937
Proportion of financing through equity (in %)	93%	57%	75%	50%	48%	53%
RoE pre-tax rate (in %)	9.1%	11.7%	10.1%	7.8%	7.8%	7.4%
RoE (in value)	4,767	3,694	8,460	1,862	2,102	2,267
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>4,767</b>	<b>3,694</b>	<b>8,460</b>	<b>1,862</b>	<b>2,102</b>	<b>2,267</b>
<b>Revenue for the terminal charging zone</b>	<b>75,560</b>	<b>87,987</b>	<b>163,547</b>	<b>96,551</b>	<b>109,197</b>	<b>112,583</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>6.3%</b>	<b>4.2%</b>	<b>5.2%</b>	<b>1.9%</b>	<b>1.9%</b>	<b>2.0%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>9.1%</b>	<b>11.7%</b>	<b>10.1%</b>	<b>7.8%</b>	<b>7.8%</b>	<b>7.4%</b>
ROMATSA actual regulatory result (RON '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	56,199	53,018	109,216			
Proportion of financing through equity (in %)	93%	64%	79%			
RoE pre-tax rate (in %)	9.1%	11.7%	10.1%			
RoE (in value)	4,767	3,955	8,721			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	-67	-67			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>4,767</b>	<b>3,888</b>	<b>8,654</b>			
<b>Revenue for the terminal charging zone</b>	<b>75,560</b>	<b>84,720</b>	<b>160,280</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>6.3%</b>	<b>4.6%</b>	<b>5.4%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>9.1%</b>	<b>11.5%</b>	<b>10.1%</b>			



**Romatsa net loss on terminal activity in the Romania charging zone in the combined year 2020-2021**  
 Romatsa incurred a net loss of -0.1 MRON, as a combination of a gain of +4.2 MRON arising from the cost sharing mechanism and a loss of -4.3 MRON arising from the traffic risk sharing mechanism.

**Romatsa overall regulatory results (RR) for the terminal activity**  
 Ex-post, the overall RR taking into account the net loss from the terminal activity mentioned above (-0.1 MRON) and the actual RoE (+8.7 MRON) amounts to +8.7 MRON (5.4% of the en route revenues). The resulting ex-post rate of return on equity is 10.1%, which is the same as planned in the PP.

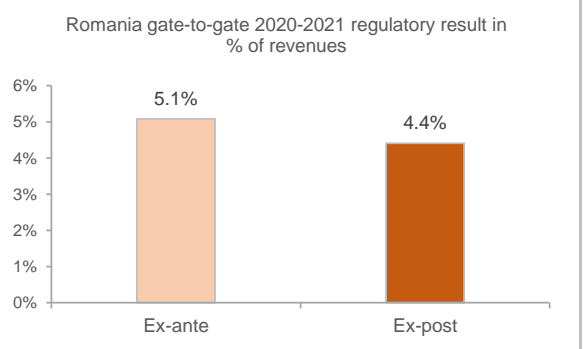
1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1:	Romania	En route charging zone 2:	N/A				
Terminal charging zone 1:	Romania	Terminal charging zone 2:					
Romania: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		166,975,848	169,686,211	336,662,059	180,183,715	198,009,411	204,603,727
Real terminal costs (EUR2017)		15,269,996	17,315,113	32,585,109	17,273,546	18,882,774	18,973,564
Real gate-to-gate costs (EUR2017)		182,245,845	187,001,324	369,247,168	197,457,261	216,892,185	223,577,291
En route share (%)		91.6%	90.7%	91.2%	91.3%	91.3%	91.5%
Romania: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		166,975,848	169,924,327	336,900,176			
Real terminal costs (EUR2017)		15,269,996	16,461,439	31,731,435			
Real gate-to-gate costs (EUR2017)		182,245,845	186,385,766	368,631,611			
En route share (%)		91.6%	91.2%	91.4%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017)	in value	0	-615,558	-615,558			
	in %	0.0%	-0.3%	-0.2%			
En route share	in p.p.	0.0 p.p.	0.4 p.p.	0.2 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In RON '000	ANSP(S)	Ex-ante			Ex-post		
		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	ROMATSA	89,034	1,752,357	5.1%	77,155	1,750,322	4.4%
METSP(s)		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
<b>Total</b>		<b>89,034</b>	<b>1,752,357</b>	<b>5.1%</b>	<b>77,155</b>	<b>1,750,322</b>	<b>4.4%</b>

For ROMATSA, the estimated gate-to-gate regulatory result in 2020-2021 amounts to 77.2 MRON (see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 4.4% of gate-to-gate ANS revenues.

This is lower than the return planned for the year (5.1%).



# **Annual Monitoring Report 2021**

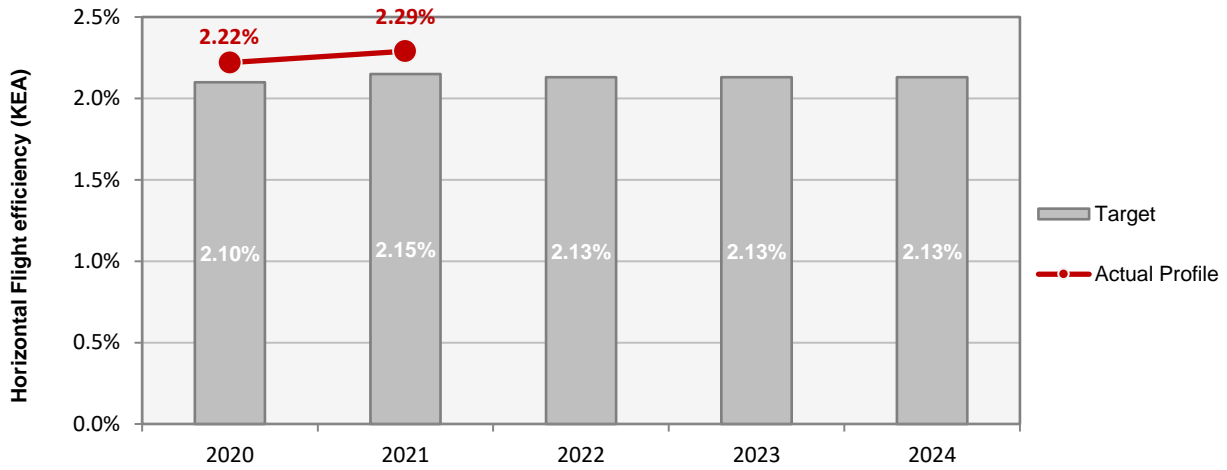
## Local level view

### Slovakia

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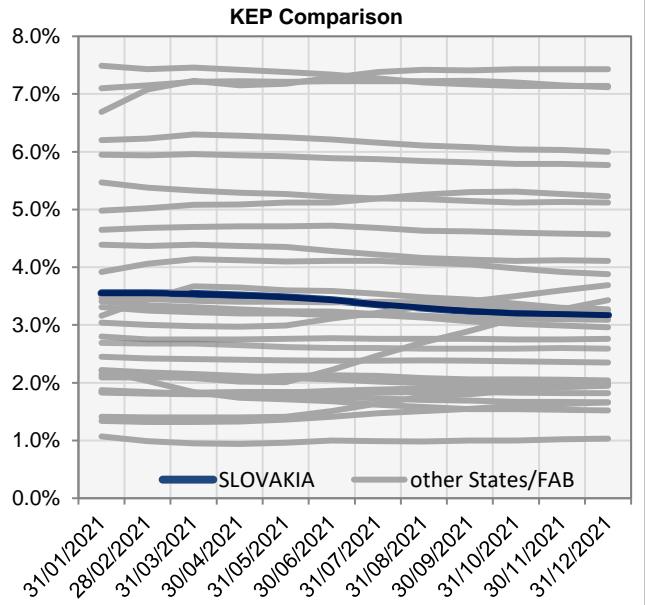
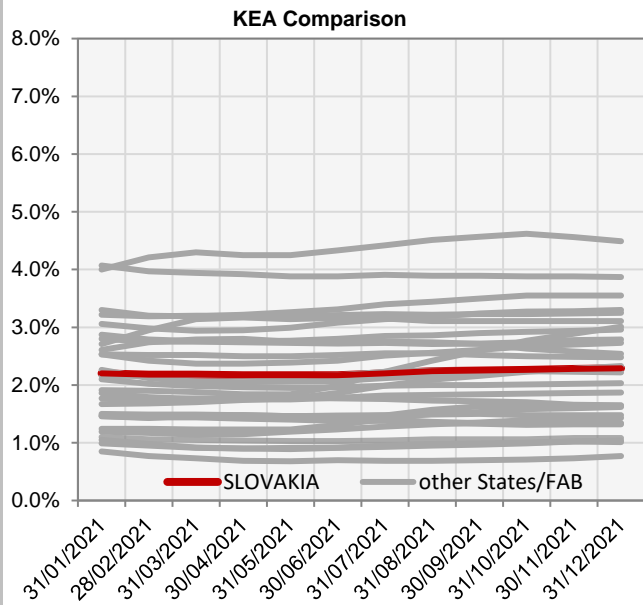
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>LPS SR</b>	88	C	C	D	C	C
<p>Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.</p>						
Observations						
<p>Improvements in maturity levels have been observed with respect 2020, reaching already the 2024 targtes in all components.</p>						

KEA					
	2020	2021	2022	2023	2024
Target	2.10%	2.15%	2.13%	2.13%	2.13%
Actual performance	2.22%	2.29%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	2.20%	2.18%	2.18%	2.17%	2.17%	2.17%	2.20%	2.24%	2.25%	2.26%	2.28%	2.29%
KEP	3.55%	3.55%	3.54%	3.51%	3.48%	3.43%	3.36%	3.30%	3.24%	3.20%	3.19%	3.17%
KES	2.89%	2.86%	2.84%	2.82%	2.79%	2.75%	2.70%	2.64%	2.61%	2.60%	2.62%	2.62%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.



## Update on Military dimension of the plan

No impact on either environment or capacity.

## Military - related measures implemented or planned to improve capacity

No information provided.

## PI#6 Effective use of reserved or segregated airspace - national level

Ratio PI#6	2020	2021	2022	2023	2024
Slovakia	42%	49%			

## PI#6 Effective use of reserved or segregated airspace (per ACC)

Ratio PI#6	2020	2021	2022	2023	2024
Bratislava ACC	53%	56%			

## Initiatives implemented or planned to improve PI#6

PRISMIL CURA - on-line civil-military performance measurements system was implemented and tested in 2021 in order to improve FUA performance monitoring. Agreement between EUROCONTROL and LPS SR relating to the provision by EUROCONTROL of the PRISMIL Service was signed at beginning of 2022.

## PI#7 Rate of planning via available airspace structures - national level

Ratio PI#7	2020	2021	2022	2023	2024
Slovakia					

## PI#7 Rate of planning via available airspace structures (per ACC)

Ratio PI#7	2020	2021	2022	2023	2024
Bratislava ACC					

## Initiatives implemented or planned to improve PI#7

The above requested data will be available for 2022 and later. PRISMIL CURA - on-line civil-military performance measurements system was implemented and tested in 2021 in order to improve FUA performance monitoring. Agreement between EUROCONTROL and LPS SR relating to the provision by EUROCONTROL of the PRISMIL Service was signed at beginning of 2022.

## PI#8 Rate of using available airspace structures - national level

Ratio PI#8	2020	2021	2022	2023	2024
Slovakia					

## PI#8 Rate of using available airspace structures (per ACC)

Ratio PI#8	2020	2021	2022	2023	2024
Bratislava ACC					

## Initiatives implemented or planned to improve PI#8

The above requested data will be available for 2022 and later. PRISMIL CURA - on-line civil-military performance measurements system was implemented and tested in 2021 in order to improve FUA performance monitoring. Agreement between EUROCONTROL and LPS SR relating to the provision by EUROCONTROL of the PRISMIL Service was signed at beginning of 2022.

Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.60	0.05	0.07	0.08	0.07		
<b>Actual performance</b>	0.00	0.00					
NSA's assessment of capacity performance							
There were no delay due to still low traffic caused by the COVID-19							
Monitoring process for capacity performance							
Annual monitoring of capacity performance has been implemented as from y2020.							
Capacity Planning							
Capacity of ACC is sufficient with respect to expected demand in a period till y2024.							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned (Perf Plan)</b>	-	-	58	60	62	63	2021 monitoring report differs from 2020 report for number of FTE ATCOs in 2020. Correction provided by NSA below.
<b>Actual 2020 Mon report</b>	54	53					
<b>Actual</b>	54	62	60				
1 ATCO - Loss of Medical Certificate in 2021 2 ATCOs became Managers in 2021 Corrected data for 2020: Number of additional ATCOs in OPS who have started working in the OPS room (FTEs): 5 Number of ATCOs in OPS who have stopped working in the OPS room (FTEs): 1 Number of ATCOs in OPS operational at year-end (FTEs): 62							
Application of Corrective Measures for Capacity (if applicable)							
Not applicable							
Summary of capacity performance							
Slovakia experienced an increase in traffic from 201k flights in 2020 to 271k flights in 2021, with practically zero ATFM delay. However, traffic levels were still substantially below the 562k flights in 2019.							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.60	0.05	0.07	0.08	0.07		
<b>Deadband +/-</b>	-	-	[0-0.01]	[0-0.01]	[0-0.01]		
<b>Actual performance</b>	0.00	0.00					
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.							

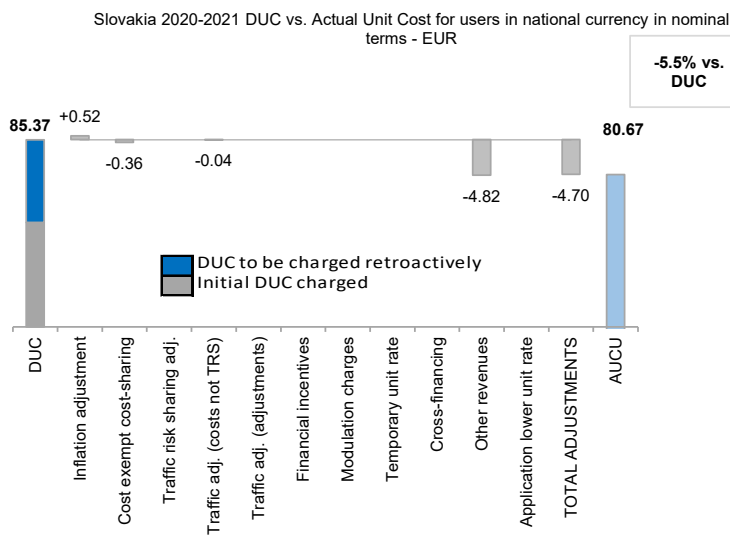
1. Contextual economic information: en route air navigation services						
Slovakia ECZ represents 1.0% of the SES en route ANS actual costs in 2019			FAB: FAB CE			
National currency: EUR						
Performance Plan: RP3 draft performance plan dated 15 December 2021 and found consistent as per Commission Decision (EU) 2022/768 of 13 April 2022						
The final version of the plan was adopted and published on 10 August 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317						
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Slovakia: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)	44,945,003	47,600,378	92,545,382	59,383,508	62,056,434	63,498,702
Inflation %	2.0%	1.2%		1.9%	2.0%	2.1%
Inflation index (100 in 2017)	107.5	108.8		110.9	113.1	115.5
Real en route costs (EUR2017)	42,646,113	44,628,382	87,274,495	54,676,787	56,317,420	56,771,300
Total en route service units	475,362	608,638	1,084,000	798,052	952,668	1,094,249
<b>Real en route DUC per service unit (EUR2017)</b>	<b>89.71</b>	<b>73.33</b>	<b>80.51</b>	<b>68.51</b>	<b>59.12</b>	<b>51.88</b>
Slovakia: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)	44,945,003	40,435,862	85,380,865			
Inflation %	2.0%	2.8%				
Inflation index (100 in 2017)	107.5	110.5				
Real en route costs (EUR2017)	42,646,113	37,709,071	80,355,184			
Total en route service units	475,362	611,991	1,087,353			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>89.71</b>	<b>61.62</b>	<b>73.90</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)						
in value	0	-7,164,516	-7,164,516			
in %	-	-15.1%	-7.7%			
Inflation %						
in p.p.	0.0 p.p.	1.6 p.p.				
Inflation index (100 in 2017)						
in p.p.	0.0 p.p.	1.7 p.p.				
Real en route costs (EUR2017)						
in value	0	-6,919,310	-6,919,310			
in %	-	-15.5%	-7.9%			
Total en route service units						
in value	0	3,353	3,353			
in %	-	+0.6%	+0.3%			
<b>Real en route unit cost per service unit (EUR2017)</b>						
in value	<b>0.00</b>	<b>-11.71</b>	<b>-6.61</b>			
in %	-	<b>-16.0%</b>	<b>-8.2%</b>			
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs. DUC</b>						
<p>In the combined year 2020-2021, the en route AUC (73.90 €2017) was lower by -8.2% (or -6.61 €2017) compared with the DUC (80.51 €2017). This was mainly the effect of the lower than planned en route costs in real terms (-7.9%, -6.9 M€2017).</p> <p><b>En route service units</b></p> <p>The difference between actual and planned TSU (+0.3%) is within the ±2% dead-band, which results in additional revenues kept by the ANSPs.</p>			<p>Costs by entity at ECZ level (M€2017):</p>			
<p><b>En route costs by entity</b></p> <p>Actual en route costs are -7.9% lower than planned (-6.9 M€2017), which is mainly driven by the lower costs for LPS (-8.3%, or -6.2 M€2017). Actual 2020-2021 costs for METSP and NSA/EUROCONTROL were also lower, by -11.7% (or -0.4 M€2017) and -3.9% (-0.4 M€2017) respectively.</p>			<p>Costs by nature for main ANSP (M€2017):</p>			
<p><b>En route costs for the main ANSP (LPS) at charging zone level</b></p> <p>The lower than planned en route costs in real terms for LPS (-8.3%, or -6.2 M€2017) result from:</p> <ul style="list-style-type: none"> <li>- lower than planned, by -13.5% (or -6.5 M€2017) en route staff costs resulted from freezing of variable wage components in 2020 and continuation of this measure in 2021;</li> <li>- lower, by -6.8% (or -0.9 M€2017) en-route other operating costs due to continuation of the cost containment measures such as limited travel expenses, trainings and consumption of materials, etc.</li> <li>- higher, by +14.2% (or +1.3 M€2017) depreciation, however, as explained by LPS, the depreciation was in line with the investment plan and the difference came from the deduction in 2021 of the carry-overs of unrealized investments in RP2; and,</li> <li>- lower costs of capital by -0.7% (or -0.03 M€2017).</li> </ul>						

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	47.71
DUC to be charged retroactively	37.66
<b>DUC</b>	<b>85.37</b>
Inflation adjustment	0.52
Cost exempt from cost-sharing	-0.36
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.04
Traffic adj. (adjustments)*	0.00
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	0.00
Cross-financing	0.00
Other revenues	-4.82
Application of lower unit rate	0.00
Total adjustments	-4.70
<b>AUCU</b>	<b>80.67</b>
<b>AUCU vs. DUC</b>	<b>-5.5%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

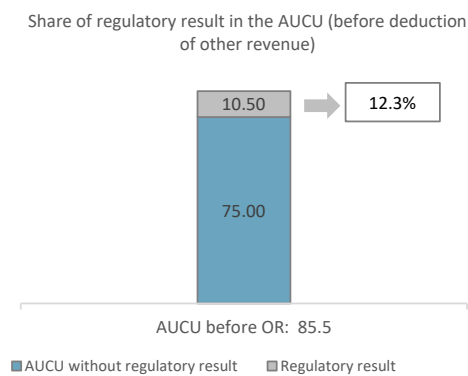
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. En route costs exempt from cost sharing

		EUR '000	EUR/SU
by item	New and existing investments	0	0.00
	Competent authorities and qualified entities costs	-142	-0.13
	Eurocontrol costs	-252	-0.23
	Pension costs	0	0.00
	Interest on loans	0	0.00
	Changes in law	0	0.00
	<b>Total costs exempt from cost sharing</b>	<b>-394</b>	<b>-0.36</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level



ANSP(S)	EUR '000	EUR/SU
LPS	11,025	10.14
<b>METSP(s)</b>		
Slovakia MET	392	0.36
<b>Total charging zone</b>	<b>11,417</b>	<b>10.50</b>
<b>Actual cost for users***</b>	<b>92,965</b>	<b>85.50</b>
<b>Regulatory result (% AUCU)</b>	<b>12.3%</b>	<b>12.3%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (80.67€) is -5.5% lower than the nominal DUC (85.37€), which includes DUC initially charged: 47.71€; and to be charged: 37.66€. The difference between these two figures (-4.70€/SU) is due to:

- the positive inflation adjustment (+0.52€/SU) resulting from higher than planned inflation;
- the deduction of the adjustment for costs exempt from cost-sharing (-0.36€/SU), to be reimbursed to airspace users in future years;
- the deduction of traffic adjustments (-0.04€/SU), for the costs not subject to traffic risk sharing to be reimbursed to airspace users in future years; and,
- the deduction of other revenues (-4.82€/SU).

The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 12.3%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

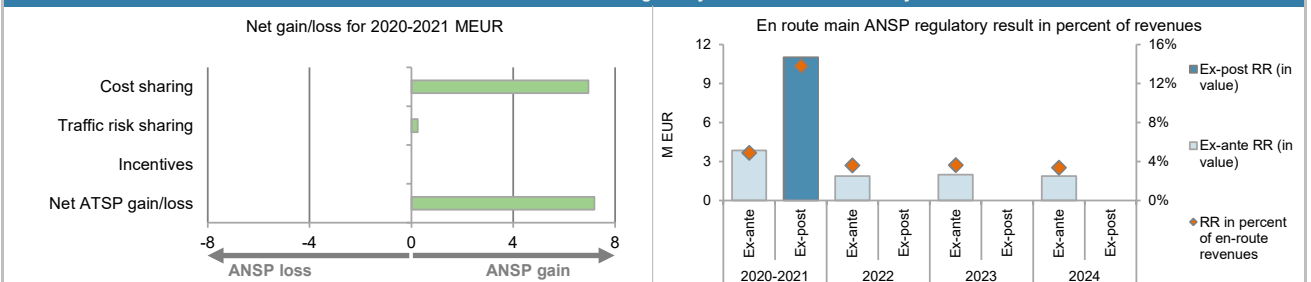
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	6,406			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	541			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	0			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>6,947</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.3%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	79,226			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>245</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>7,192</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

LPS planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	43,906	45,466	89,371	46,751	48,539	44,724
Proportion of financing through equity (in %)	100%	89%	94%	79%	84%	89%
RoE pre-tax rate (in %)	4.4%	4.7%	4.6%	5.1%	4.9%	4.7%
RoE (in value)	1,942	1,917	3,859	1,881	1,999	1,887
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>1,942</b>	<b>1,917</b>	<b>3,859</b>	<b>1,881</b>	<b>1,999</b>	<b>1,887</b>
<b>Revenue for the en route charging zone</b>	<b>38,339</b>	<b>40,886</b>	<b>79,226</b>	<b>52,628</b>	<b>55,240</b>	<b>56,400</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>5.1%</b>	<b>4.7%</b>	<b>4.9%</b>	<b>3.6%</b>	<b>3.6%</b>	<b>3.3%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>4.4%</b>	<b>4.7%</b>	<b>4.6%</b>	<b>5.1%</b>	<b>4.9%</b>	<b>4.7%</b>
LPS actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	43,906	44,541	88,446			
Proportion of financing through equity (in %)	100%	90%	95%			
RoE pre-tax rate (in %)	4.4%	4.7%	4.6%			
RoE (in value)	1,942	1,891	3,833			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	7,192	7,192			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>1,942</b>	<b>9,083</b>	<b>11,025</b>			
<b>Revenue for the en route charging zone</b>	<b>38,339</b>	<b>41,673</b>	<b>80,012</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>5.1%</b>	<b>21.8%</b>	<b>13.8%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>4.4%</b>	<b>22.7%</b>	<b>13.1%</b>			

13. Focus on the main ANSP regulatory result on en route activity



LPS net gain on activity in the en route charging zone in the combined year 2020-2021

LPS's net gain amounts to +7.2 ME, mainly due to a gain of +6.9 ME from the cost sharing mechanism and a gain of +0.2 ME from the traffic risk sharing mechanism.

LPS overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+7.2 ME) and the actual RoE (+3.8 ME) amounts to +11.0 ME (13.8% of the en route revenues). The resulting ex-post rate of return on equity is 13.1% which is higher than the 4.6% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
<b>Slovakia MET planned regulatory result (EUR '000)</b>	<b>2020D</b>	<b>2021D</b>	<b>2020-2021D</b>	<b>2022D</b>	<b>2023D</b>	<b>2024D</b>
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	1,513	1,770	3,283	1,907	1,949	2,118
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Slovakia MET actual regulatory result (EUR '000)</b>	<b>2020A</b>	<b>2021A</b>	<b>2020-2021A</b>	<b>2022A</b>	<b>2023A</b>	<b>2024A</b>
Ex-post regulatory result (+/-) for the en route charging zone	0	392	392			
Revenue for the en route charging zone	1,513	1,797	3,310			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	21.8%	11.9%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
For other ANSP (METSP) the overall ex-post regulatory result amounted to +0.4 M€ which represents 11.9% of their actual en route revenues for the combined 2020-2021. This result is the sole effect of the cost-risk sharing mechanism (both difference in costs and inflation adjustment), as no costs of capital was calculated for METSP for 2020-2021.						

# **Annual Monitoring Report 2021**

## Local level view

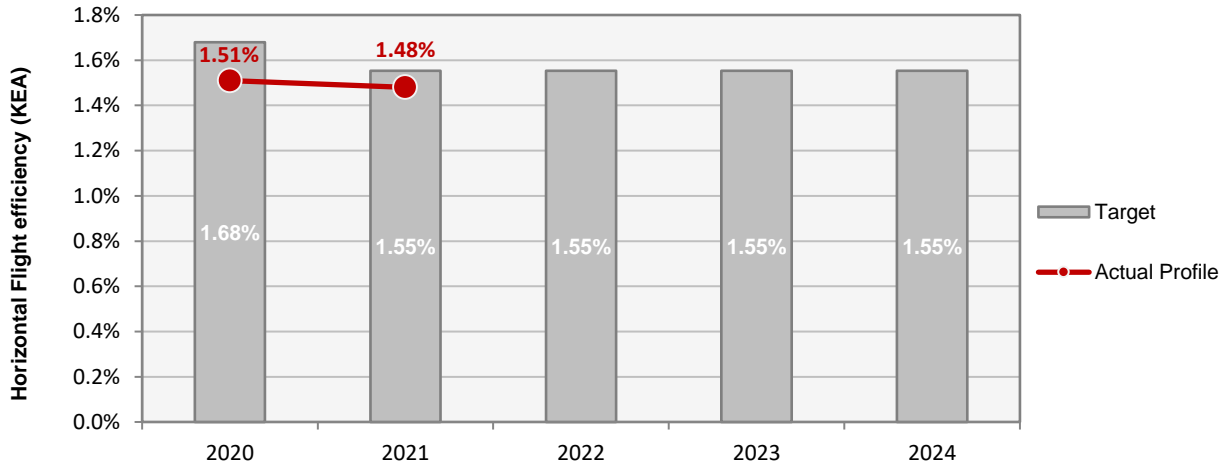
### Slovenia

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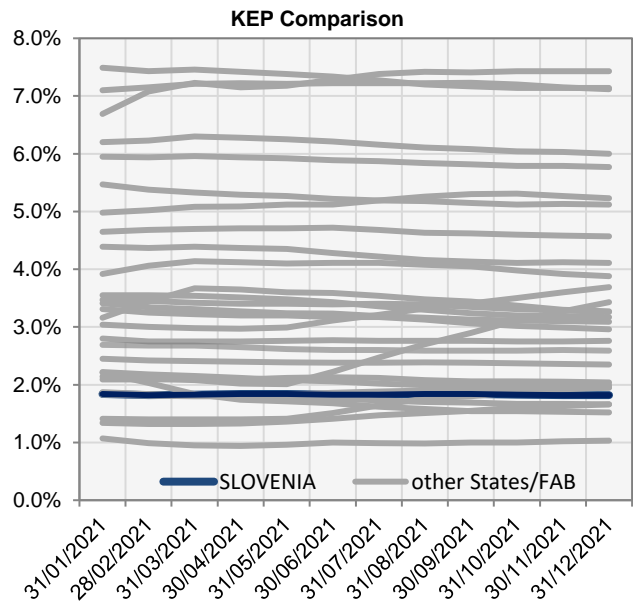
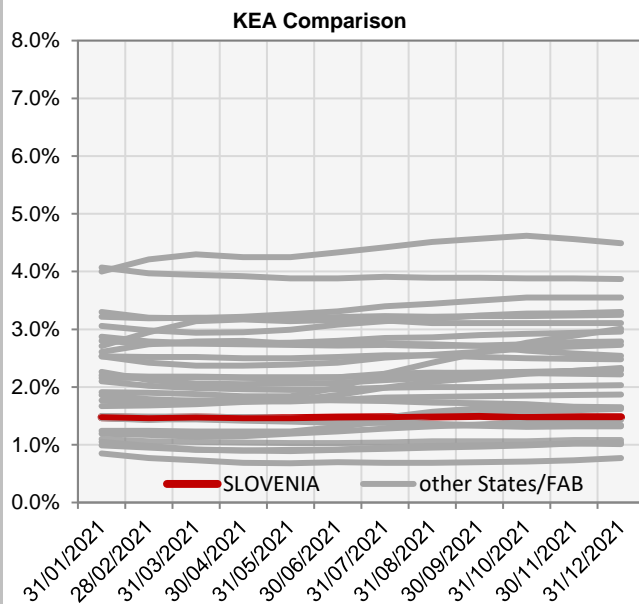
Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>Slovenia Control</b>	75	C	C	C	C	C
Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.						
Observations						
Maturity levels have been maintained with respect to 2020. Four out of five EoSM components of the ANSP meet already the 2024 target level. Only the component "Safety Risk Management" is below 2024 target level, at level C. Improvements in safety risk management are still expected during RP3 to achieve 2024 targets.						

KEA					
	2020	2021	2022	2023	2024
Target	1.68%	1.55%	1.55%	1.55%	1.55%
Actual performance	1.51%	1.48%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	1.48%	1.46%	1.47%	1.46%	1.46%	1.47%	1.48%	1.49%	1.50%	1.48%	1.48%	1.48%
KEP	1.84%	1.82%	1.83%	1.84%	1.84%	1.83%	1.83%	1.84%	1.84%	1.83%	1.82%	1.82%
KES	1.53%	1.51%	1.51%	1.52%	1.53%	1.54%	1.56%	1.58%	1.60%	1.60%	1.60%	1.60%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

Update on Military dimension of the plan					
Environment: No impact on environment.					
Capacity: No impact on capacity.					
Military - related measures implemented or planned to improve capacity					
Environment: N/A					
Capacity: N/A					
PI#6 Effective use of reserved or segregated airspace - national level					
Ratio PI#6	2020	2021	2022	2023	2024
Slovenia	N/A	N/A			
PI#6 Effective use of reserved or segregated airspace (per ACC)					
Ratio PI#6	2020	2021	2022	2023	2024
Ljubljana ACC	N/A	N/A			
Initiatives implemented or planned to improve PI#6					
No comment provided					
PI#7 Rate of planning via available airspace structures - national level					
Ratio PI#7	2020	2021	2022	2023	2024
Slovenia	N/A	N/A			
PI#7 Rate of planning via available airspace structures (per ACC)					
Ratio PI#7	2020	2021	2022	2023	2024
Ljubljana ACC	N/A	N/A			
Initiatives implemented or planned to improve PI#7					
No comment provided					
PI#8 Rate of using available airspace structures - national level					
Ratio PI#8	2020	2021	2022	2023	2024
Slovenia	N/A	N/A			
PI#8 Rate of using available airspace structures (per ACC)					
Ratio PI#8	2020	2021	2022	2023	2024
Ljubljana	N/A	N/A			
Initiatives implemented or planned to improve PI#8					
No comment provided					

Minutes of ATFM en-route delay							
	2020	2021	2022	2023	2024	Observations	
<b>National Target</b>	0.23	0.05	0.09	0.09	0.09		
<b>Actual performance</b>	0.00	0.00					
NSA's assessment of capacity performance							
No assessment provided.							
Monitoring process for capacity performance							
No information provided							
Capacity Planning							
No information provided							
ATCO in OPS (FTE)							
	2019	2020	2021	2022	2023	2024	Observations
<b>Planned (Perf Plan)</b>	-	-	68	69	69	72	
<b>Actual</b>	66	65	68				
Application of Corrective Measures for Capacity (if applicable)							
Not applicable							
Summary of capacity performance							
The Ljubljana FIR experienced an increase in traffic from 195k flights in 2020 to 279k flights in 2021, with zero ATFM delays. However, traffic levels were still substantially below the 460k flights in 2019.							
En route Capacity Incentive Scheme							
	2020	2021	2022	2023	2024	Observations	
<b>National Capacity target</b>	0.23	0.05	0.09	0.09	0.09	Only C, R, S, T, M P causes are considered for the incentive scheme.	
<b>Deadband +/-</b>	-	-	[0.055-0.075]	[0.055-0.075]	[0.055-0.075]		
<b>Actual performance</b>	0.00	0.00					
In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.							

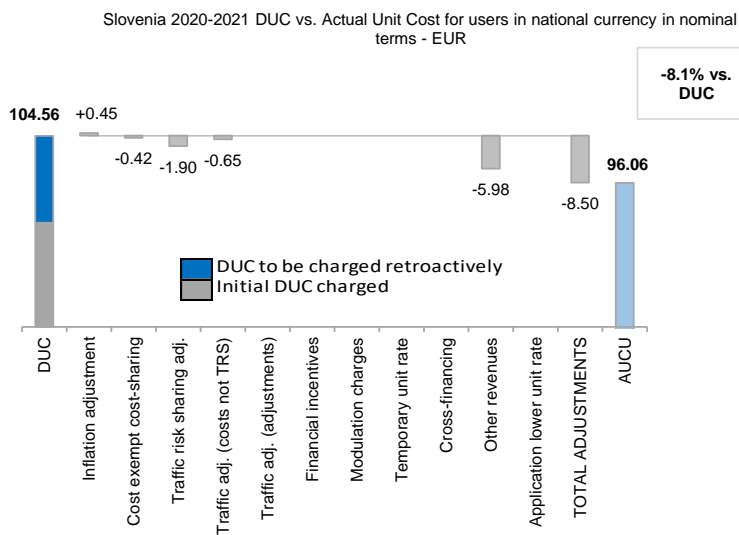
1. Contextual economic information: en route air navigation services							
· Slovenia ECZ represents 0.5% of the SES en route ANS actual costs in 2019			· FAB: FAB CE				
· National currency: EUR							
· Performance Plan: RP3 draft performance plan dated 13 December 2021 and found consistent as per Commission Decision (EU) 2022/777 of 13 April 2022 The final version of the plan was adopted and published on 23 May 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317							
2. Monitoring of the en route determined unit cost (DUC) at charging zone level							
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.							
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.							
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)							
Slovenia: Data from RP3 Performance Plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)		31,716,704	31,335,841	63,052,545	34,865,292	36,234,614	36,617,359
Inflation %		0.0%	0.8%		1.5%	1.6%	1.8%
Inflation index (100 in 2017)		103.6	104.5		106.0	107.8	109.7
Real en route costs (EUR2017)		30,876,185	30,292,691	61,168,876	33,287,877	34,158,305	34,037,505
Total en route service units		263,994	339,029	603,022	535,978	570,849	605,805
<b>Real en route DUC per service unit (EUR2017)</b>		<b>116.96</b>	<b>89.35</b>	<b>101.44</b>	<b>62.11</b>	<b>59.84</b>	<b>56.19</b>
Slovenia: Actual data from Reporting Tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)		31,716,704	29,458,544	61,175,249			
Inflation %		0.0%	2.0%				
Inflation index (100 in 2017)		103.6	105.7				
Real en route costs (EUR2017)		30,876,185	28,229,075	59,105,260			
Total en route service units		263,994	369,971	633,965			
<b>Real en route AUC per service unit (EUR2017)</b>		<b>116.96</b>	<b>76.30</b>	<b>93.23</b>			
Difference between Actuals and Planned		2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)		in value	0	-1,877,296	-1,877,296		
		in %	-	-6.0%	-3.0%		
Inflation %		in p.p.	0.0 p.p.	1.2 p.p.			
Inflation index (100 in 2017)		in p.p.	0.0 p.p.	1.2 p.p.			
Real en route costs (EUR2017)		in value	0	-2,063,616	-2,063,616		
		in %	-	-6.8%	-3.4%		
Total en route service units		in value	0	30,942	30,942		
		in %	-	+9.1%	+5.1%		
<b>Real en route unit cost per service unit (EUR2017)</b>		<b>in value</b>	<b>0.00</b>	<b>-13.05</b>	<b>-8.21</b>		
		<b>in %</b>	<b>-</b>	<b>-14.6%</b>	<b>-8.1%</b>		
4. Focus on en route DUC monitoring at charging zone level							
<b>AUC vs. DUC</b> In the combined year 2020-2021, the en route AUC (93.23 €2017) was lower by -8.1% (or -8.21 €2017) compared with the DUC (101.44 €2017). This was the combined effect of the lower than planned en route costs in real terms (-3.4%, -2.1 M€2017) and higher total TSU (+5.1%).				<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      +5.1%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
<b>En route service units</b> The actual TSUs exceed the planned level (+5.1%) and fall between the ±2% dead band and +10% threshold. Hence the resulting gain will be shared between the airspace users and the ANSPs (see item 11).							
<b>En route costs by entity</b> Actual en route costs are -3.4% lower than planned (-2.1 M€2017) which is mainly driven by the lower costs for Slovenia Control (-3.4% or -1.8 M€2017). Actual 2020-2021 costs for METSP are higher by +3.1% (or +0.1 M€2017), while NSA/EUROCONTROL costs are lower by -6.5% (or -0.3 M€2017).				<p>Costs by entity at ECZ level (M€2017):</p> <p>Main ANSP -3.4%    Other ANSP(s) 3.1%    METSP(s) -6.5%    NSA/EUROCONTROL -3.4%    Total CZ -3.4%</p>			
<b>En route costs for the main ANSP (Slovenia Control) at charging zone level</b> The lower than planned en route costs in real terms for Slovenia Control (-3.4%, or -1.8 M€2017) result from: - lower than planned staff costs, by -3.7% (or -1.3 M€2017), due to lower salaries that remained in place in Q4 2021, to the same extent as for the Q1-Q3; - lower other operating costs by -6.5% (or -0.5 M€2017), due to optimized/postponed contracts (equipment & telecommunication rentals); - higher depreciation costs by +1.3% (or +0.1 M€2017); and, - lower cost of capital by -2.1% (or -0.1 M€2017).				<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs -3.7%    Other operating costs -6.5%    Depreciation 1.3%    Cost of capital -2.1%    Exceptional costs 0%    VFR exempted flights -3.4%    Total Main ANSP -3.4%</p>			

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	57.06
DUC to be charged retroactively	47.50
<b>DUC</b>	<b>104.56</b>
Inflation adjustment	0.45
Cost exempt from cost-sharing	-0.42
Traffic risk sharing adjustment	-1.90
Traffic adj. (costs not TRS)	-0.65
Traffic adj. (adjustments)*	-
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	-
Cross-financing	0.00
Other revenues	-5.98
Application of lower unit rate	0.00
Total adjustments	-8.50
<b>AUCU</b>	<b>96.06</b>
<b>AUCU vs. DUC</b>	<b>-8.1%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

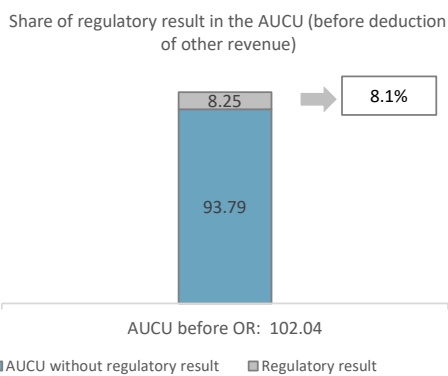
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	58	0.09
Competent authorities and qualified entities costs	-147	-0.23
Eurocontrol costs	-180	-0.28
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-269</b>	<b>-0.42</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level



ANSP(S)	EUR '000	EUR/SU
Slovenia Control	5,319	8.39
METSP(s)	EUR '000	EUR/SU
Slovenia MET	-90	-0.14
<b>Total charging zone</b>	<b>5,229</b>	<b>8.25</b>
<b>Actual cost for users***</b>	<b>64,690</b>	<b>102.04</b>
<b>Regulatory result (% AUCU)</b>	<b>8.1%</b>	<b>8.1%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (96.06€) is -8.1% lower than the nominal DUC (104.56€), which includes DUC initially charged: 57.06€; and to be charged: 47.50€. The difference between these two figures (-8.50€/SU) is due to:

- the positive inflation adjustment (+0.45€/SU) resulting from higher than planned inflation;
- the deduction of the adjustment for costs exempt from cost-sharing (-0.42€/SU), to be reimbursed to airspace users in future years;
- the deduction of traffic risk sharing adjustment of -1.90€/SU to be reimbursed to the airspace users in future years;
- the deduction of traffic adjustment (-0.65€/SU), for the costs not subject to traffic risk sharing to be reimbursed in future years; and,
- the deduction of the other revenues (-5.98€/SU).

The share of the regulatory result (see items 10 to 14) in the AUCU (before the deduction of other revenues) is 8.1%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

11. Net gain/loss for the main ANSP for the en route activity at charging zone level

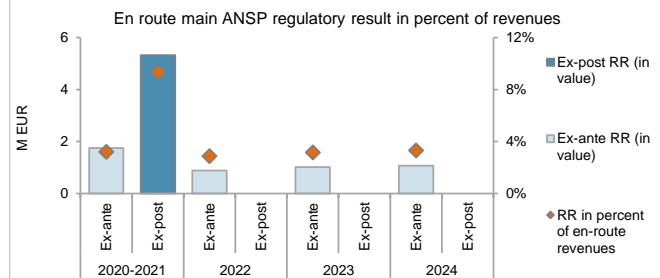
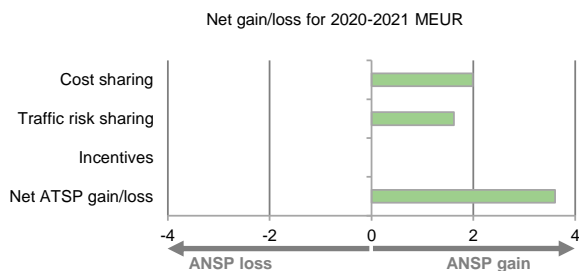
Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	1,660			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	272			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	54			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>1,986</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	5.1%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	55,060			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>1,618</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>3,604</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

Slovenia Control planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	23,304	18,884	42,187	21,238	24,440	25,798
Proportion of financing through equity (in %)	40%	40%	40%	40%	40%	40%
RoE pre-tax rate (in %)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
RoE (in value)	971	784	1,755	882	1,015	1,071
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>971</b>	<b>784</b>	<b>1,755</b>	<b>882</b>	<b>1,015</b>	<b>1,071</b>
Revenue for the en route charging zone	27,777	27,284	55,060	30,768	32,138	32,500
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>3.5%</b>	<b>2.9%</b>	<b>3.2%</b>	<b>2.9%</b>	<b>3.2%</b>	<b>3.3%</b>
<b>Ex-ante RoE pre-tax rate (in %) Note 1</b>	<b>10.4%</b>	<b>10.4%</b>	<b>10.4%</b>	<b>10.4%</b>	<b>10.4%</b>	<b>10.4%</b>
Slovenia Control actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	23,304	17,908	41,212			
Proportion of financing through equity (in %)	40%	40%	40%			
RoE pre-tax rate (in %)	10.4%	10.4%	10.4%			
RoE (in value)	971	744	1,715			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	3,604	3,604			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>971</b>	<b>4,348</b>	<b>5,319</b>			
Revenue for the en route charging zone	27,777	29,228	57,005			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>3.5%</b>	<b>14.9%</b>	<b>9.3%</b>			
<b>Ex-post RoE pre-tax rate (in %) Note 1</b>	<b>10.4%</b>	<b>60.7%</b>	<b>32.3%</b>			

**Note 1:** The ex-ante and ex-post RoE are calculated based on the notional capital structure (representing the proportion of financing through equity for determined and actual 2020 and 2021 at the level of 40%). The actual proportion should be reported.

13. Focus on the main ANSP regulatory result on en route activity



Slovenia Control net gain on activity in the en route charging zone in the combined year 2020-2021

Slovenia Control's net gain amounts to +3.6 M€, mainly due to the gains of +2.0 M€ from the cost sharing mechanism and of +1.6 M€ from the traffic risk sharing mechanism.

Slovenia Control overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+3.6 M€) and the actual RoE (+1.7 M€) amounts to +5.3 M€ (9.3% of the en route revenues). The resulting ex-post rate of return on equity is 32.3% which is higher than the 10.4% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
Slovenia MET planned regulatory result (EUR '000)	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	1,526	1,445	2,971	1,484	1,435	1,410
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
Slovenia MET actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	-90	-90			
Revenue for the en route charging zone	1,526	1,465	2,992			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	-6.1%	-3.0%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
For other ANSP (METSP) the overall ex-post regulatory result amounted to -0.09 M€. This loss is the sole effect of the cost-risk sharing mechanism (both difference in costs and inflation adjustment).						



# **Annual Monitoring Report 2021**

## Local level view

### Spain

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Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
<b>ENAIRE</b>	100	D	D	D	D	D
<b>FERRONATS</b>	90	C	C	C	C	C

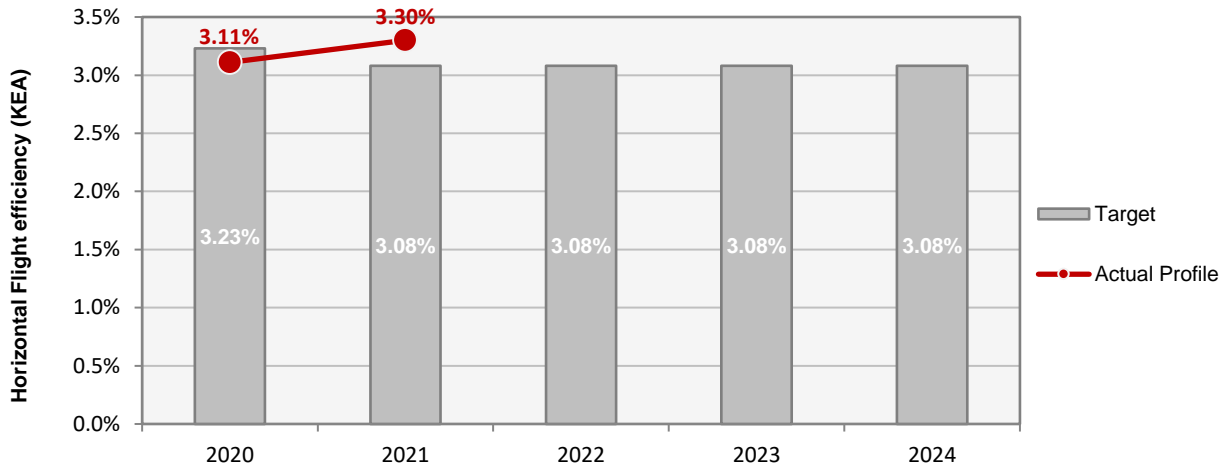
Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.

**Observations**

All five EoSM components of ENAIRE meet, or exceed, already the 2024 target level. Maximum maturity level is maintained.

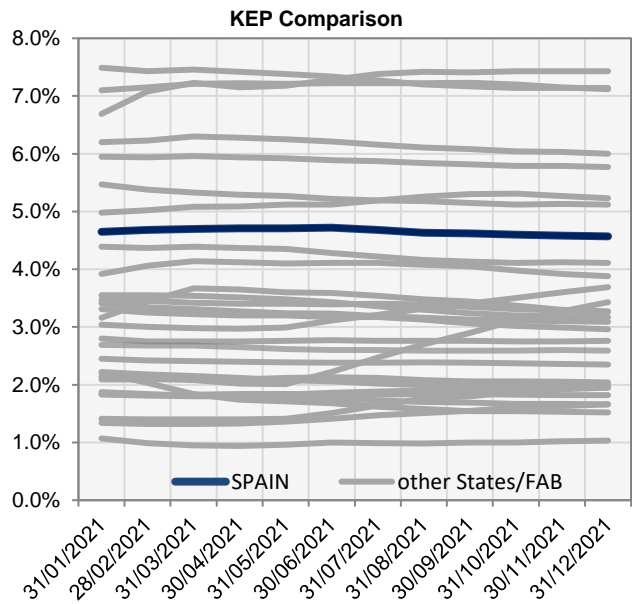
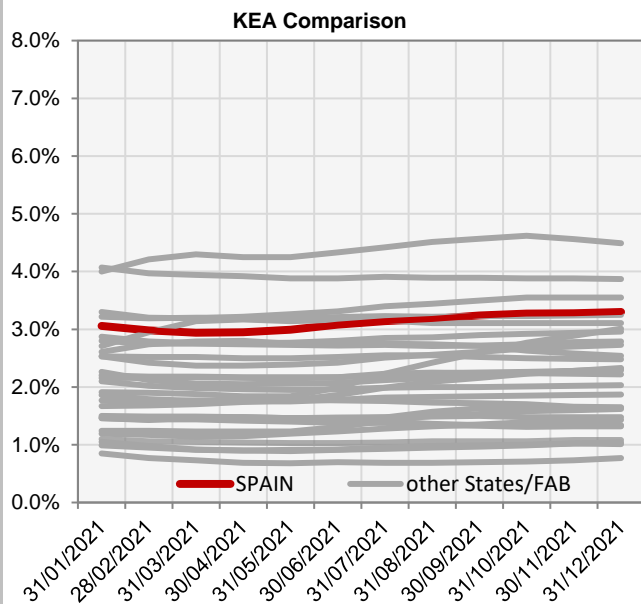
Improvements in maturity are observed with respect to 2020. Four out of five EoSM components of FERRONATS meet already the 2024 target level. Only the component "Safety Risk Management" is below 2024 target level, at level C. Improvements in safety risk management are still expected during RP3 to achieve 2024 targets.

KEA					
	2020	2021	2022	2023	2024
Target	3.23%	3.08%	3.08%	3.08%	3.08%
Actual performance	3.11%	3.30%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	3.06%	2.98%	2.94%	2.95%	2.99%	3.08%	3.14%	3.18%	3.24%	3.27%	3.28%	3.30%
KEP	4.65%	4.68%	4.70%	4.71%	4.71%	4.72%	4.68%	4.63%	4.62%	4.60%	4.58%	4.57%
KES	4.51%	4.53%	4.58%	4.58%	4.59%	4.60%	4.58%	4.53%	4.53%	4.50%	4.48%	4.47%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.

**1. Overview**

Spain includes seven airports under RP3 monitoring. However in accordance with IR (EU) 2019/317 and the traffic figures, Ibiza is not monitored for additional taxi-out and ASMA times.

The Airport Operator Data Flow, necessary for the monitoring of the additional times, is correctly implemented where required and the monitoring of all environment indicators can be performed.

Traffic at the ensemble of Spanish airports under monitoring in 2021 is still 44% lower than in 2019, with the best recovery observed at the holiday destinations.

Alongside the recovery of traffic, additional times both in the taxi-out and the approach phase increased in general in 2021.

The share of CDO flights is in general higher than the overall RP3 value in 2021. All airports had a lower share of CDO flights than in 2020.

The Spanish NSA reports that *all these indicators are being monitored by AESA twice a year to evaluate the evolution of the indicators. If significant deviations are found, the possible causes will be analysed by contacting the relevant stakeholder.*

**2. Additional Taxi-Out Time**



The additional taxi out time (aggregated for the 6 airports monitored in RP3) increased in 2021 by 31% in relation to the value of 2020, mainly driven by the traffic recovery in the second part of the year.

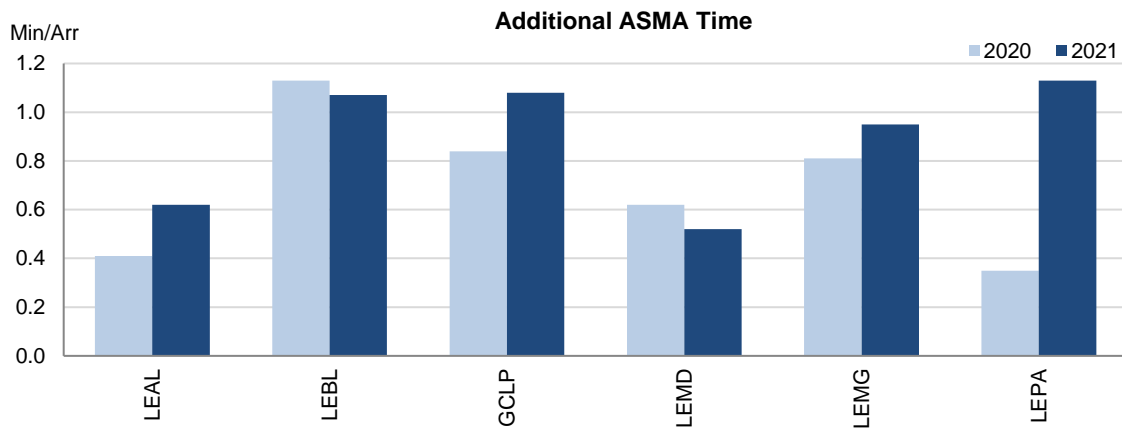
At Madrid (LEMD; 2019: 4.01 min/dep.; 2020: 2.12 min/dep.; 2021: 2.11 min/dep.) the annual average is influenced by the high additional taxi-out times values in January due to the effects of the snow storm Filomena.

Additional taxi-out times at Gran Canaria (GCLP: 2019: 1.86 min/dep.; 2020: 1.09 min/dep.; 2021: 1.75 min/dep.) and Malaga (LEMG: 2019: 2.36 min/dep.; 2020: 1.39 min/dep.; 2021: 2.2 min/dep.) increased notably in the second half of the year, exceeding the values observed in 2019 with slightly higher traffic.

According to the Spanish monitoring report: *There is work in progress regarding the improvement of A-CDM in Madrid and Barcelona.*

*Although LEIB does not yet reach >80k movements, it is monitored together with these 6 airports since it is one of the airports considered in the Spanish performance plan (ESPP3) for RP3. In 2021 it reaches a value of 1.94, 64% higher than the 2020 value (1.18). The additional taxi out time (aggregated for the 7 airports monitored in RP3) has a value of 2,01 and it has increased in 2021 by 33% in relation to the value of 2020 (1,51).*

### 3. Additional ASMA Time



The additional time in terminal area (aggregated for the 6 airports monitored in RP3) increased by 18% in relation to the value of 2020. This increase, like for the additional taxi-out times, was observed mainly in the second half of the year in line with the traffic recovery.

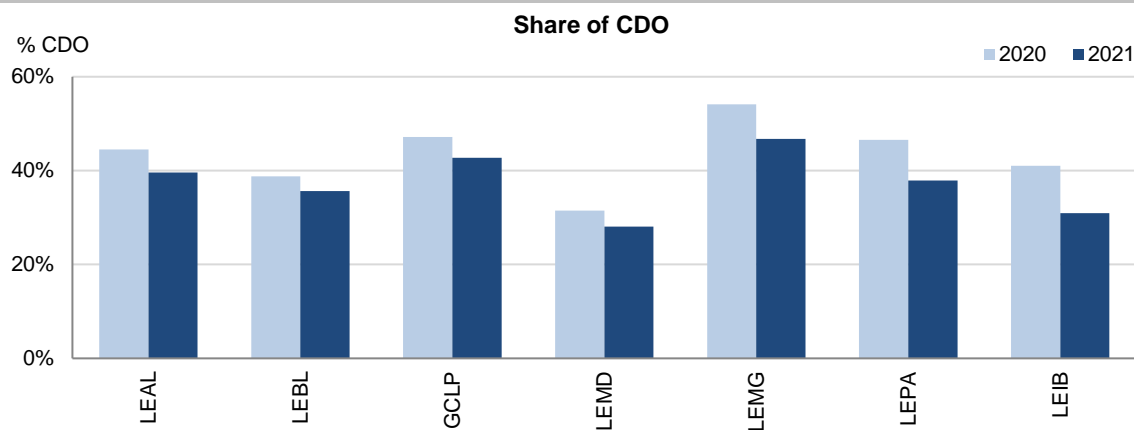
With a similar trend as identified for the additional taxi-out times, the additional ASMA times at the holiday destinations (Gran Canaria, Palma and Malaga) increased in the second half of 2021 to almost the same levels as in 2019.

According to the Spanish monitoring report: *Some restructuring projects are planned for the coming years in the main TMAs in Spain:*

- PBN SIDs, STARs and ILS & RNP APCH in Madrid TMA
- PBN SIDs in Barcelona TMA
- PBN SIDs, ILS & RNP APCH in Palma TMA
- PBN STARs in Malaga

*Although LEIB does not yet reach >80k movements, it is monitored together with these 6 airports since it is one of the airports considered in the Spanish performance plan (ESPP3) for RP3. In 2021 it reaches a value of 1.05, 72% higher than the 2020 value (0.61). The additional time in terminal area (aggregated for the 7 airports monitored in RP3) has a value of 0,88 and it has increased in 2021 by 21% in relation to the value of 2020 (0,73).*

#### 4. Share of arrivals applying CDO



Only Madrid (LEMD: 28.1%) has its share of CDO flights below the overall RP3 value in 2021 (30.5%). All other airports have shares of CDO flights above the overall RP3 value in 2021, ranging from 30.9% (LEIB) to 46.8% (LEMG).

All airports had a decrease of the share of CDO flights with respect to 2020, ranging from -3.2 percentage points (LEBL) to -10.1 percentage points (LEIB).

Over the summer months, the share of CDO flights is generally lower.

According to the Spanish monitoring report: *The share of arrivals applying continuous descent operation (aggregated for the 7 airports monitored in RP3) has decreased around -13% in relation to the value of 2020, mainly due to the growth in traffic demand which is beginning to recover from the COVID crisis.*

*The conditions of use of continuous descent procedures mean that the use of this type of procedure is not always compatible with the techniques used when it is necessary to manage medium/high traffic demands at airports/TMAs. Therefore, the authorisation of these procedures must be compatible with the airport's operations in order to meet the demand without establishing restrictions. In the long term, there are plans to modify the structure of the CDA procedures currently published at some airports and to transfer to the arrival procedures section of the AIP the information to proceed with the continuous descent from some point of the STARs to the IAF, to some point of the intermediate approach or to the IF, thus maximising the use of these operations.*

*No new projects were implemented during 2021. During 2022, it is planned to carry out an awareness campaign for ATCOs on the environmental aspects associated with ATC operations.*

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Alicante-LEAL	0.7	1.15				0.41	0.62				45%	40%			
Barcelona-LEBL	1.84	2.33				1.13	1.07				39%	36%			
Gran Canaria-GCLP	1.09	1.75				0.84	1.08				47%	43%			
Madrid/Barajas-LEMD	2.12	2.11				0.62	0.52				32%	28%			
Malaga-LEMG	1.39	2.2				0.81	0.95				54%	47%			
Palma de Mallorca-LEPA	0.69	1.83				0.35	1.13				47%	38%			
Ibiza-LEIB	-	-				-	-				41%	31%			

**Update on Military dimension of the plan**

Environment: Civil-Military coordination regarding Flexible Use of Airspace is on progress at strategic level established within the specific working group called UPEA inside CIDETMA (previous CIDEFO). Dissemination of progress on FUA to civil operators is considered an enabler to achieve Flight Plans using more efficient routes through the Civil Use of Release Airspace (CURA).

A new version of AMC Manual is in progress to incorporate the new agreements and procedures for FUA improvement developed by the Level 1.

Capacity: Based on the Principles of FUA, additional capacity to the planned one could be provided once the airspace used for military operations and training is released.

**Military - related measures implemented or planned to improve capacity & environment**

Environment: Spanish Air Force has been active participant in the general meetings to implement the Spanish Free Route Airspace Programme and an specific group composed by ENAIRE and Spanish Air Force was created in order to further improve the coordination for the implementation of FRA, with a spetial focuss in ASM related matters. Furthermore, a close coordination work with the Network Manager is ongoing.

Several meetings have been held and discussions are ongoing in order to implement new single CDR category and to revise airspace structures (Reserved areas and to re-align ATS routes). At national level, there are some improvements at strategic level, including the definition of a SSC transition plan. SSC (Single Category CDR) transition plan has the objective of using only one type of Conditional Route improving ASM procedures and optimazing the use of the airspace.

Capacity: Establishment of SCC and the FUA Pilot Project. SCC transition plan is explained above. Regarding the "FUA Pilot Project" is a project with civil-military coordination to improve the use of the airspace and associated procedures, from both points of view, civil and military, starting from some specific Dangerous areas and working in Collaborative Decision Making processes.

**PI#6 Effective use of reserved or segregated airspace - national level**

Ratio PI#6	2020	2021	2022	2023	2024
Spain	53%	44%			

**PI#6 Effective use of reserved or segregated airspace (per ACC)**

Ratio PI#6	2020	2021	2022	2023	2024
Barcelona ACC					
Canarias ACC	30%	26%			
Madrid ACC					
Palma ACC					
Sevilla ACC					



### Initiatives implemented or planned to improve PI#6

In October the SCC (Single CDR Category) has been implemented (phase 1), starting the transition phase. Phase 2 expected in the first quarter of 2022.

SSC transition plan, whose objective is the use of only one type of Conditional Route in order to simplify its management while improving the civil use of the airspace without forgetting the requirements of the National Defence, has been approved and is active.

A level 1 document on "Principios de aplicación del FUA" has been agreed helping to facilitate and improve the FUA implementation and the CDM process.

Planned in 2022: The process of assessing the possibility to extend the use of the procedures set out in the SCC transition plan for the management of reserved areas to new areas that currently do not have associated CDRs.

Also ongoing the definition of a Joint Civil-Military Procedure of Criteria for the creation of Airspace Structures with adjustable lateral and vertical boundaries with multiple reserve and routing options.

The particularities of this indicator have been analyzed in our airspace since there are no monthly data published at SES portal and they are provided by the Spanish Air Force NSA. This PI is expected to be monitored by AESA twice a year from 2022 onwards to evaluate the evolution of the indicator in the appropriate organization.

### PI#7 Rate of planning via available airspace structures - national level

Ratio PI#7	2020	2021	2022	2023	2024
Spain	49%	74%			

### PI#7 Rate of planning via available airspace structures (per ACC)

Ratio PI#7	2020	2021	2022	2023	2024
Barcelona ACC					
Canarias ACC					
Madrid ACC					
Palma ACC					
Sevilla ACC					

### Initiatives implemented or planned to improve PI#7

Spain has updated the figures for 2020.

In September 2021 the single CDR phase 1 was implemented, and the phase 2 (the last one) has been also implemented in February 2022.

This PI is monitored only annually to evaluate the evolution of the indicators because our ANSP, ENAIRE, which provides the data to calculate the indicator, requests it from Eurocontrol and for the time being they are not in a position to request it on a more frequent basis. If significant deviations are found, the possible causes will be analysed by contacting the relevant stakeholder.

For the following years ENAIRE expects to improve this PI with the definition of AMC specific coordination procedures to release traffic flows from RSA with military activity. ENAIRE also expects FRA implementation to improve flight planning through optimal route

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Spain	52%	79%			

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Barcelona ACC					
Canarias ACC					
Madrid ACC					
Palma ACC					
Sevilla ACC					

**Initiatives implemented or planned to improve PI#8**

Spain has updated the figures for 2020.

In September 2021 the single CDR phase 1 was implemented, and the phase 2 (the last one) has been also implemented in February 2022.

This PI is monitored only annually to evaluate the evolution of the indicators because our ANSP, ENAIRE, which provides the data to calculate the indicator, requests it from Eurocontrol and for the time being they are not in a position to request it on a more frequent basis. If significant deviations are found, the possible causes will be analysed by contacting the relevant stakeholder.

For the following years ENAIRE expects to improve this PI with the definition of AMC specific coordination procedures to release traffic flows from RSA with military activity. ENAIRE also expects FRA implementation to improve flight planning through optimal route

Minutes of ATFM en-route delay						Observations
	2020	2021	2022	2023	2024	
<b>National Target</b>	0.47	0.12	0.20	0.19	0.19	
<b>Actual performance</b>	0.40	0.09				

**NSA's assessment of capacity performance**

The performance in the capacity KPA was below reference values in 2021 and 2020 for Spain. It should be taken into account that those figures were achieved with a substantial reduction of traffic, but also with the goal of safety, ensuring business continuity and generating the minimum delay, in exceptional circumstances. To achieve that, several measures had to be implemented and adapted to the changing evolution of the pandemic:

- protect the essential operational staff from COVID19 in all places of work to reduce the active cases and spread of the disease among the staff
- keep the level of training and expertise for operational staff, and
- design mitigation measures for the recovery of the traffic.

In the first part of the year 2021 the delays generated were very occasional, the only most significant was the one generated in January at LECM due to the Filomena storm (1.015 min of O-Other cause regulation) that generated for a few days difficulties in the movement of both people and airplanes. From July onwards, with the reactivation of traffic and the development of the high season in most ACCs, more delay minutes were generated, but without reaching pre-pandemic levels. Delays were mainly caused by C-ATC Capacity (42% of the 2021 total) and W-Weather (31% of the 2021 total). In GCCC in the last months of the year there were also important delays on route with O-Other cause regulation due to the eruption of the Cumbre Vieja volcano on the island of La Palma, which caused some redistribution of traffic flows and the congestion of some sectors that usually present overloads on certain days. The minutes due to O-Other cause regulations (because of the volcanic eruption, Filomena and other aspects) have accounted for 25% of the total delay in 2021.

Additionally there have been 2 cases of the POST-OPS process that were initially not accepted, case 2021-13 (regulation on 26/07/2021 at LECB with 1019 min) and case 2021-17 (regulation on 07/09/2021 at LECB with 251 min). It was specified that the CDM process was inconclusive and that, even if those minutes could not ultimately be reassigned to the third party, NM suggested that the NSA could omit them. These conclusions were finally included in the Post-OPS Performance Adjustment Process Status Report 2021. Therefore AESA has finally considered it so and the minutes of those 2 regulations will not be taken into account in this report and in the results of the various monitoring that are performed periodically

**Monitoring process for capacity performance**

The AESA Monitoring Process continues to monitor this indicator on a monthly basis taking into account the different causes of delay, since the incentive system implemented for RP3 considers a mechanism modulated by causes of delay. The evolution of the attributable and non-attributable delay causes is monitored in order to apply the incentive mechanism and to identify the reasons in the event of non-compliance.

The alert mechanism continues to be active to warn, months before the end of the year, of possible non-compliance.

**Capacity Planning**

The NOP 2020 Recovery Plan was the NOP structured plan adapted to the COVID-19 crisis, updated every week, initially covering an outlook of four weeks and later reconverted into the NOP Rolling Seasonal Plan covering an outlook of six weeks.

Every week Enaire updated data to the plan (planned sector openings, maximum possible sector openings, sector capacity reductions if any, availability of support to operations staff, additional information -e.g. other constraints to be highlighted- and special events and major projects). The plan was a living document regularly updated and published by NM in order to be adapted to the changed conditions of the Air Navigation Service.

Also a NOP 2021 for Summer was elaborated. The main projects planned for 2021 in the NOP for Spain were:

- ALL ACCs: improved ATFCM, in line with AF4 of PCP; optimized sector configurations and sector capacities, net increase of ATCOs -at a lower rate than planned due to COVID19-
- PALMA ACC: Palma Final Approach Improvements (Ongoing).
- CANARIAS ACC: Improvements of NW and Split NE Sector, 11th sector (sector cluster) (postponed).

The scenario was focused on service recovery and to facilitate users the return to normality, always prioritizing safety and the minimum delay.

ATCO in OPS (FTE)							
<b>Barcelona ACC</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>
<b>Planned (Perf Plan)</b>	341	370	341	350	350	338	
<b>Actual</b>	339	323	347				
<b>Madrid ACC</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>
<b>Planned (Perf Plan)</b>	423	448	434	407	386	398	
<b>Actual</b>	425	415	436				
<b>Palma ACC</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>
<b>Planned (Perf Plan)</b>	139	148	128	120	118	121	
<b>Actual</b>	130	137	133				
<b>Sevilla ACC</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>
<b>Planned (Perf Plan)</b>	129	147	137	132	129	133	
<b>Actual</b>	140	131	136				
<b>Canarias ACC</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>
<b>Planned (Perf Plan)</b>	156	163	161	164	164	162	
<b>Actual</b>	156	151	155				
<p>Number of additional ATCOs in OPS who have started working in the OPS room (FTEs): New CTAs in ENAIRE and CTAs that have moved to the ACCs by CMCD during the year. Incorporated CTAs are considered.</p> <p>Number of ATCOs in OPS who have stopped working in the OPS room (FTEs): For operative CTAs, retirements, dismissals (permanent disabilities, deaths, voluntary leaves, etc.) and RA concessions are considered.</p>							
Application of Corrective Measures for Capacity (if applicable)							
<p>No particular risk of non-compliance with the KPI is expected, but given the degree of seasonality that exists in some units, the various monitoring activities will continue, monthly and annual monitoring, as well as periodic monitoring of the assignment of delay causes in order to know the evolution of the KPIs and the specific characteristics of each unit. This results in a better knowledge of the behavior of the indicators and a fluid communication and coordination with the ANSP. Additionally, AESA is monitoring the cases reported by our ANSP through the Post-OPS performance adjustment process, collaborating with both ANSPs and other stakeholders with the aim of deepening the analysis of the cases.</p> <p>As the year progresses and especially as the summer season unfolds, with the existing follow-up mechanisms thanks to various monitoring and alert system in force, if this risk of non-compliance materializes, it will be notified to the Commission as established in the Regulation (EU) 2019/317.</p>							
Summary of capacity performance							
<p>Spain experienced an increase in traffic from 854k flights in 2020 to 1,192k flights in 2021. However, traffic levels were still substantially below the 2,152k flights in 2019.</p> <p>In 2021, Spain had 106k minutes of ATFM delay - with the highest monthly traffic figure 162k flights occurring in August and leading to 16k minutes of delay. For comparison, the month with the closest level of traffic in 2019 was March, with 157k flights, in that month there were more than three times as much delay (49k minutes)..</p>							
En route Capacity Incentive Scheme							
	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Observations</b>	
<b>National Capacity target</b>	0.47	0.12	0.20	0.19	0.19		
<b>Deadband +/-</b>	-	-	[0.143-0.163]	[0.136-0.156]	[0.136-0.156]		
<b>Actual performance</b>	0.40	0.09					
<p>In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.</p>							

1. Overview

Spain includes seven airports under RP3 monitoring. However in accordance with IR (EU) 2019/317 and the traffic figures, Ibiza is not monitored for pre-departure delays.

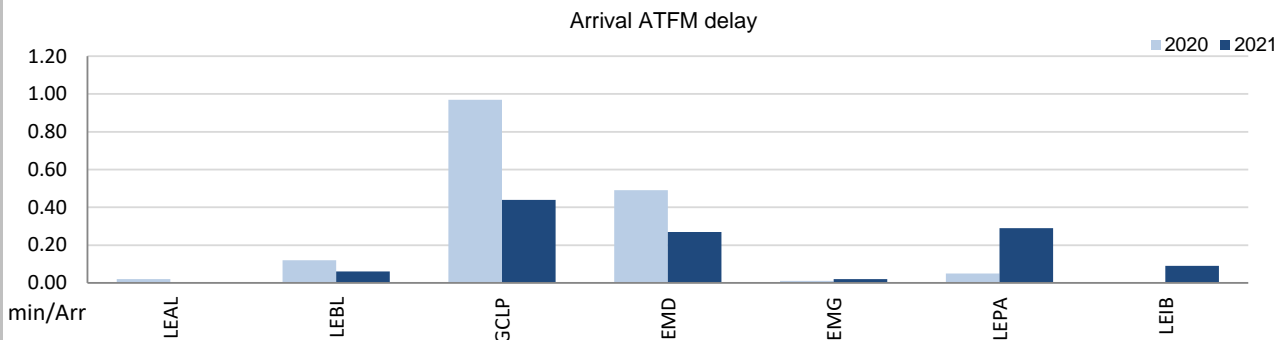
The Airport Operator Data Flow, necessary for the monitoring of these pre-departure delays, is correctly implemented where required. Nevertheless, the quality of the reporting from all the Spanish airports does not allow for the calculation of the ATC pre-departure delay, with more than 60% of the reported delay not allocated to any cause.

Traffic at the ensemble of Spanish airports under monitoring in 2021 is still 44% lower than in 2019, with the best recovery observed at the holiday destinations.

Average arrival ATFM delays in 2021 was 0.19 min/arr, compared to 0.30 min/arr in 2020.

ATFM slot adherence has improved (2021: 97.2%; 2020: 95.3%).

2. Arrival ATFM Delay



The national average arrival ATFM delay at Spanish airports in 2021 was 0.19 min/arr, lower than the 0.30 min/arr in 2020 and the 1.02 min/arr in 2019. The performance in the capacity KPA was below reference values in 2021 and 2020 for Spain. All actual values obtained in 2021 were lower than PP values except in Gran Canaria (GCLP).

In the first part of the year 2021, the only delay generated was at LEMD in January due to the Filomena storm (22.581 min of W-Weather cause regulation) which generated difficulties for the movement of both people and airplanes for a few days. From July onwards, with the reactivation of traffic and the development of the high season in most airports, more delay minutes were generated, but without reaching pre-pandemic levels. Delays were mainly caused by W-Weather (60% of the 2021 total) considering that half of those minutes were due to delays at LEMD due to Filomena in January. 22% of the delay minutes were attributed to aerodrome capacity regulations, most of which were concentrated at GCLP due to airside work from August to October.

According to the Spanish monitoring report: *Regarding the particularity of the LEAL and LEIB airports, in which different ANSPs are involved, for 2021 as for 2020, it is not necessary to make a breakdown between ENAIRE and FerroNATS delays, since the incentive scheme is not applicable to these two years. However, we consider that from 2022 onwards, it will be necessary to differentiate this value for both aerodromes for incentive purposes.*

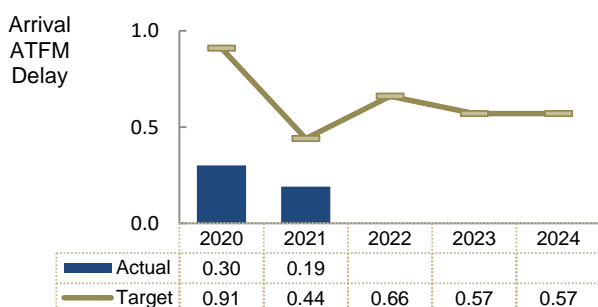
For 2021, the part of the delay that would correspond to ENAIRE or FerroNATS for these two airports would be as follows:

- Alicante: 0,00 min/flight (ENAIRE and FerroNATS)
- Ibiza: 0,03 min/flight (ENAIRE) and 0,06 min/flight (FerroNATS). The minutes of ATFM arrival delay at LEIB were not due to ATC reasons, were therefore not attributable delay causes.

No particular risk of non-compliance with the KPI is expected, but given the degree of seasonality that exists in some units, the various monitoring activities will continue, monthly and annual monitoring, as well as periodic monitoring of the assignment of delay causes in order to know the evolution of the KPIs and the specific characteristics of each unit. This results in a better knowledge of the behaviour of the indicators and a fluid communication and coordination with the ANSP. Additionally, AESA is monitoring the cases reported by our ANSP through the Post-OPS performance adjustment process, collaborating with both ANSPs and other stakeholders with the aim of deepening the analysis of the cases.

As the year progresses and especially as the summer season unfolds, with the existing follow-up mechanisms thanks to various monitoring and alert system in force, if this risk of non-compliance materializes, it will be notified to the Commission as established in

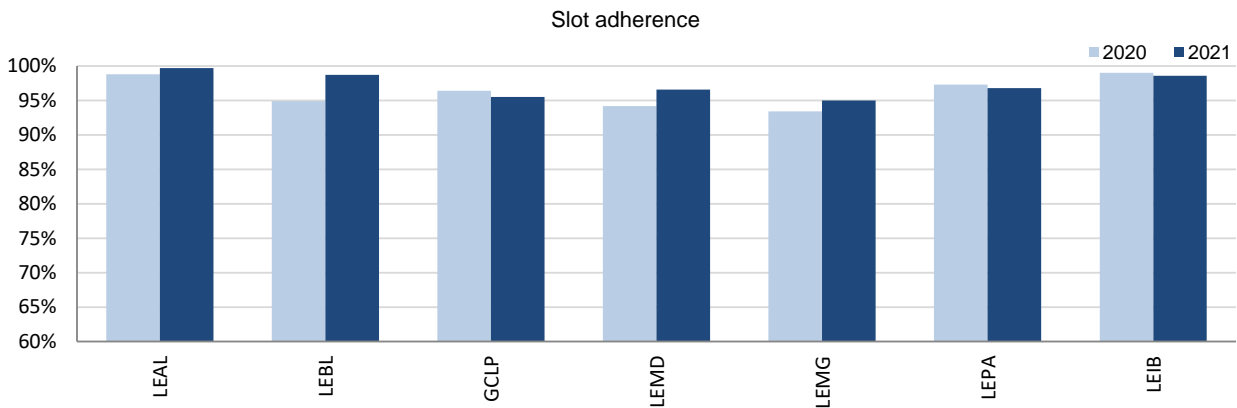
3. Arrival ATFM Delay – National Target and Incentive Scheme



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

#### 4. ATFM Slot Adherence



With the drastic drop in traffic, the share of regulated departures from Spanish airports virtually disappeared until July 2021. All Spanish airports showed adherence above 95% and the national average was 97.2%, an improvement with respect to 2020's performance (95.3%). With regard to the 2.8% of flights that did not adhere, 1.3% was early and 1.5% was late.

The Spanish monitoring reports adds: *The result for 2021 (aggregate of the 7 airports subject to monitoring) improves by 2% the result of the previous year, being both results well above the value of 80% set in Regulation (EU) No. 255/2010 of the Commission . ANSPs does not believe it is necessary to establish specific improvement measures.*

*This PI is being monitored by AESA twice a year to evaluate the evolution of the indicators. If significant deviations are found, the possible causes will be analysed by contacting the relevant stakeholder.*

#### 5. ATC Pre-departure Delay

The calculation of the ATC pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF) which is properly implemented at all 6 Spanish airports subject to monitoring of this indicator.

However, there are several quality checks before EUROCONTROL can produce the final value which is established as the average minutes of pre-departure delay (delay in the actual off block time) associated to the IATA delay code 89 (through the APDF, for each delayed flight, the reasons for that delay have to be transmitted and coded according to IATA delay codes.

However, sometimes the airport operator has no information concerning the reasons for the delay in the off block, or they cannot convert the reasons to the IATA delay codes. In those cases, the airport operator might:

- Not report any information about the reasons for the delay for that flight (unreported delay)
- Report a special code to indicate they do not have the information (code ZZZ)
- Report a special code to indicate they do not have the means to collect and/or translate the information (code 999)

To be able to calculate with a minimum of accuracy the PI for a given month, the minutes of delay that are not attributed to any IATA code reason should not exceed 40% of the total minutes of pre-departure delay observed at the airport.

Finally, to be able to produce the annual figure, at least 10 months of valid data is requested by EUROCONTROL.

The high share of unidentified delay reported by 4 of these airports is a long standing issue, only worsened by the special traffic composition since April 2020. Gran Canaria and Alicante had a proper reporting prior to the pandemic.

The Spanish monitoring report includes some analysis on the monthly values that could be calculated:

-GCLP only has monthly data for 2 months (January and October), with a resulting value of 0,33, similar than in previous year. Until 2019, all monthly data were available.

-LEAL has data for 9 months, with a resultant value of 0,25, slightly lower than in previous year. The lack of data started in 2019.

-LEBL only has data for one month (November), its value is 0.35, higher than in previous year (in which only March data was available). The availability of monthly data has been getting worse every year since 2017.

-LEMD does not have data available for any month in 2021. The lack of data started in 2017 and from 2020 there is not data available for any month.

-LEMG does not have data available for any month in 2021. The lack of data started in 2019 and has increased in 2020 and 2021.

-LEPA does not have data available for any month in 2021. The lack of data started in 2017 and has increased from 2019 onwards.

-Although LEIB does not yet reach >80k movements, it is monitored together with these 6 airports since it is one of the airports considered in the Spanish performance plan (ESPP3) for RP3. LEIB does not have data available for any month in 2021. The lack of data started in 2017 and from 2020 there is not data available for any month.

*This PI is being monitored by AESA twice a year to evaluate the evolution of the indicators. If significant deviations are found, the possible causes will be analysed by contacting the relevant stakeholder but at the moment it is focused on investigating the origin of the lack of data.*

*The lack of some data is due to the fact that the reporting by Spanish airports does not meet the required data quality, when more than 40% of the reported delays are not assigned to any cause. Sometimes it happens that the airport operator has no information on the reasons for the delay or it cannot be associated with an IATA code.*

*ANSPs has been contacted but no further information is available at this time.*

*AESA plans to further investigate to identify the origin of the lack of data by contacting the airport operator or other relevant stakeholders if possible to obtain more information in order to establish an effective measure.*

## 6. All Causes Pre-departure Delay

Contrary to most airports in RP3, the total (all causes) delay in the actual off block time at most Spanish airports (with the exception of Palma and Madrid) decreased in 2021 with figures between 8.06 min/dep for Alicante (LEAL) and 10.86 min/dep. for Malaga (LEMG). At most airports the delays increased in the second half of the year, and the annual figure at Madrid is strongly driven by the high delays observed in January (more than 21 min/dep) due to the Filomena snow storm.

According to the Spanish monitoring report: *the aggregated result for 2021 (of the 6 airports subject to monitoring) is 9,09 min/dep, which improves the result for 2020 by -0,3% (9,12 min/dep).*

*This PI is being monitored by AESA twice a year to evaluate the evolution of the indicators. If significant deviations are found, the possible causes will be analysed by contacting the relevant stakeholder.*

## 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Alicante-LEAL	0.02	0				98.8%	99.7%				n/a	n/a				9.03	8.06			
Barcelona-LEBL	0.12	0.06				94.9%	98.7%				n/a	n/a				8.74	8.27			
Gran Canaria-GCLP	0.97	0.44				96.4%	95.5%				n/a	n/a				11.30	9.42			
Madrid/Barajas-LEMD	0.49	0.27				94.2%	96.6%				n/a	n/a				9.52	9.68			
Malaga-LEMG	0.01	0.02				93.4%	95.0%				n/a	n/a				11.33	10.86			
Palma de Mallorca-LEPA	0.05	0.29				97.3%	96.8%				n/a	n/a				5.44	8.20			
Ibiza-LEIB	0	0.09				99.0%	98.6%				-	-				-	-			

1. Contextual economic information: en route air navigation services						
Spain Continental ECZ represents 9.8% of the SES en route ANS actual costs in 2019			FAB: SW FAB			
National currency: EUR						
Performance Plan: RP3 draft performance plan dated 26 January 2022 and found consistent as per Commission Decision (EU) 2022/776 of 13 April 2022						
The final version of the plan was adopted and published on 05 July 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317.						
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Spain Continental: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)	598,351,394	592,163,350	1,190,514,743	622,143,018	629,825,005	633,678,309
Inflation %	0.0%	1.0%		1.3%	1.5%	1.6%
Inflation index (100 in 2017)	102.5	103.6		104.9	106.5	108.2
Real en route costs (EUR2017)	587,141,409	576,803,493	1,163,944,902	600,260,618	601,512,333	598,574,451
Total en route service units	4,436,942	6,369,718	10,806,660	11,190,159	11,637,507	12,421,049
<b>Real en route DUC per service unit (EUR2017)</b>	<b>132.33</b>	<b>90.55</b>	<b>107.71</b>	<b>53.64</b>	<b>51.69</b>	<b>48.19</b>
Spain Continental: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)	598,351,394	581,225,503	1,179,576,897			
Inflation %	0.0%	3.0%				
Inflation index (100 in 2017)	102.5	105.6				
Real en route costs (EUR2017)	587,141,409	558,011,545	1,145,152,954			
Total en route service units	4,436,942	6,382,913	10,819,854			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>132.33</b>	<b>87.42</b>	<b>105.84</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)	in value	0	-10,937,847	-10,937,847		
	in %	-	-1.8%	-0.9%		
Inflation %	in p.p.	0.0 p.p.	2.0 p.p.			
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	2.0 p.p.			
Real en route costs (EUR2017)	in value	0	-18,791,948	-18,791,948		
	in %	-	-3.3%	-1.6%		
Total en route service units	in value	0	13,195	13,195		
	in %	-	+0.2%	+0.1%		
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-3.13</b>	<b>-1.87</b>		
	<b>in %</b>	<b>-</b>	<b>-3.5%</b>	<b>-1.7%</b>		
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs DUC</b>						
In the combined year 2020-2021, the AUC was lower than the planned DUC (by -1.7%, or -1.87€2017). This results from the combination of slightly higher than planned TSUs (+0.1%) and lower than planned en route costs in real terms (by -1.6%, or -18.8 M€2017).						
<b>En route service units</b>						
The difference between actual and planned TSUs (+0.1) falls within the ±2% dead band. Hence the resulting additional revenue is kept by the ANSPs (see items 10 to 14).						
<b>En route costs by entity at charging zone level</b>						
Actual real en route costs for 2020-2021 are -1.6% (-18.8 M€2017) lower than planned. This result is driven by the main ANSP, ENAIRE (-1.8%, or -17.9 M€2017), the MET service provider (-0.4% or -0.2 M€2017) and the NSA/EUROCONTROL costs (-3.8%, or -2.9 M€2017), whereas other ANSPs cost are higher than planned (+4.9% or +2.2 M€2017).						
<b>En route costs for the main ANSP (ENAIRE) at charging zone level</b>						
Lower than planned en route costs in real terms for ENAIRE in 2020-2021 (-1.8%, or -17.9 M€2017 lower) results from:						
<ul style="list-style-type: none"> <li>- lower staff costs (-1.5%), although the additional information to the en route reporting tables clarify that "two provisional rulings unfavourable to ENAIRE, as a consequence of claims of control staff, have impacted in 2021 Annual Accounts for ENAIRE, with a total amount of 32.2M€ higher salaries. This mentioned total amount, although included as higher staff expenses in the 2021 ENAIRE Accounts, has not been considered in the costs submitted by ENAIRE pending national Supreme Court final rulings";</li> <li>- lower other operating costs (-6.6%), as result of restrictive expenditure policy;</li> <li>- slightly higher depreciation (+0.3%);</li> <li>- lower cost of capital (-3.2%), due to lower asset base (-1.6%) and WACC.</li> </ul>						
<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      +0.1%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>						
<p>Costs by entity at ECZ level (M€2017):</p> <p>Main ANSP -1.8%</p> <p>Other ANSP(s) 4.9%</p> <p>METSP(s) -0.4%</p> <p>NSA/EUROCONTROL -3.8%</p> <p>Total CZ -1.6%</p>						
<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs -1.5%</p> <p>Other operating costs -6.6%</p> <p>Depreciation 0.3%</p> <p>Cost of capital -3.2%</p> <p>Exceptional costs 0.0%</p> <p>VFR exempted flights -1.8%</p> <p>Total Main ANSP -1.8%</p>						



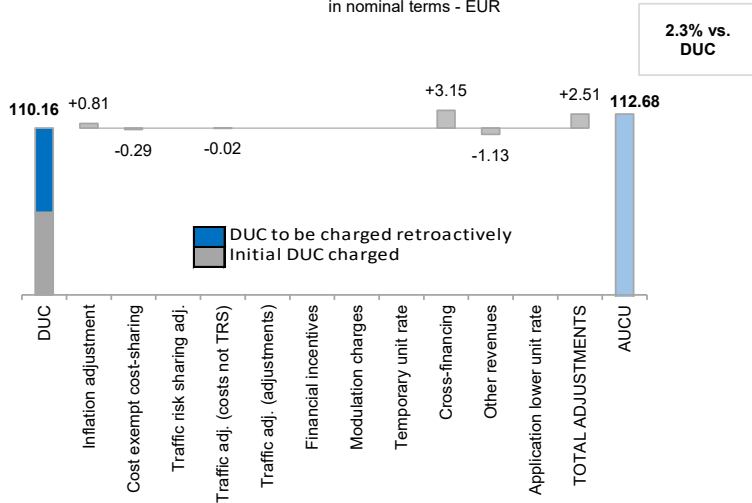
5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level

Spain Continental 2020-2021 DUC vs. Actual Unit Cost for users in national currency in nominal terms - EUR



Components of the AUCU	EUR/SU
Initial DUC charged	54.45
DUC to be charged retroactively	55.71
<b>DUC</b>	<b>110.16</b>
Inflation adjustment	0.81
Cost exempt from cost-sharing	-0.29
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.02
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	3.15
Other revenues	-1.13
Application of lower unit rate	0.00
Total adjustments	2.51
<b>AUCU</b>	<b>112.68</b>
<b>AUCU vs. DUC</b>	<b>2.3%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

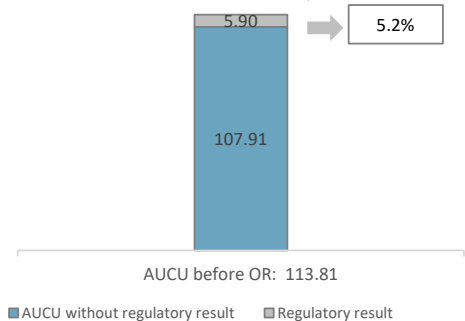
7. En route costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-262	-0.02
Competent authorities and qualified entities costs	-392	-0.04
Eurocontrol costs	-2,493	-0.23
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-3,147</b>	<b>-0.29</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	EUR '000	EUR/SU
ENAIRE (Continental)	62,215	5.75
EA (Continental)	-1,905	-0.18
<b>METSP(s)</b>	<b>EUR '000</b>	<b>EUR/SU</b>
Spain Continental AEMET	3,551	0.33
<b>Total charging zone</b>	<b>63,860</b>	<b>5.90</b>
<b>Actual cost for users***</b>	<b>1,231,387</b>	<b>113.81</b>
<b>Regulatory result (% AUCU)</b>	<b>5.2%</b>	<b>5.2%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Spain Continental en route charging zone (112.68€) is +2.3% higher than the nominal DUC (110.16€) which includes DUC initially charged: 54.45€; and to be charged: 55.71€. The difference between these two figures (+2.51€/SU) is due to:

- cross-financing Spain Canarias (+3.15/SU);
- the positive inflation adjustment resulting from higher than planned inflation (+0.81€/SU);
- the deduction of the traffic adjustment (-0.02€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;
- the deduction of the other revenues (-1.13€/SU);
- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.29€/SU).

The share of regulatory result (see items 10 to 14) in the AUCU is 5.2%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

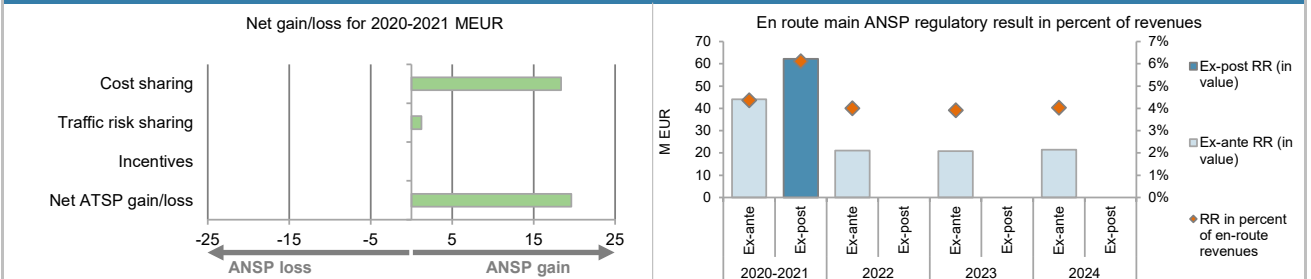
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	10,875			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	7,992			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-490			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>18,378</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	0.1%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	1,010,523			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>1,234</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>19,612</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

ENAIRES (Continental) planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	457,138	448,005	905,143	475,226	529,766	570,677
Proportion of financing through equity (in %)	73%	72%	73%	61%	48%	44%
RoE pre-tax rate (in %)	6.7%	6.7%	6.7%	7.2%	8.2%	8.6%
RoE (in value)	22,366	21,666	44,032	21,072	20,804	21,508
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>22,366</b>	<b>21,666</b>	<b>44,032</b>	<b>21,072</b>	<b>20,804</b>	<b>21,508</b>
<b>Revenue for the en route charging zone</b>	<b>510,411</b>	<b>500,112</b>	<b>1,010,523</b>	<b>526,613</b>	<b>532,271</b>	<b>534,414</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>4.4%</b>	<b>4.3%</b>	<b>4.4%</b>	<b>4.0%</b>	<b>3.9%</b>	<b>4.0%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>6.7%</b>	<b>6.7%</b>	<b>6.7%</b>	<b>7.2%</b>	<b>8.2%</b>	<b>8.6%</b>
ENAIRES (Continental) actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	457,138	433,289	890,427			
Proportion of financing through equity (in %)	73%	69%	71%			
RoE pre-tax rate (in %)	6.7%	6.7%	6.7%			
RoE (in value)	22,366	20,236	42,603			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	19,612	19,612			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>22,366</b>	<b>39,848</b>	<b>62,215</b>			
<b>Revenue for the en route charging zone</b>	<b>510,411</b>	<b>508,849</b>	<b>1,019,260</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>4.4%</b>	<b>7.8%</b>	<b>6.1%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>6.7%</b>	<b>13.3%</b>	<b>9.8%</b>			

13. Focus on the main ANSP regulatory result on en route activity



ENAIRES net gain on en route activity in the Spain Continental charging zone in the combined year 2020-2021

ENAIRES's net gain amounts to +19.6 M€, as a combination of a gain of +18.4 M€ arising from the cost sharing mechanism and a gain of +1.2 M€ arising from the traffic risk sharing mechanism.

ENAIRES overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+19.6 M€) and the actual RoE (+42.6 M€) amounts to +62.2 M€ (6.1% of the en route revenues). The resulting ex-post rate of return on equity is 9.8%, which is higher than the 6.7% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
<b>EA (Continental) planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	56	185	240	331	546	829
Revenue for the en route charging zone	22,834	24,166	47,000	25,764	26,878	28,098
Ex-ante regulatory result (+/-) in percent of revenues	0.2%	0.8%	0.5%	1.3%	2.0%	3.0%
Ex-ante RoE pre-tax rate (in %)	0.4%	0.8%	0.6%	1.0%	1.5%	2.0%
<b>EA (Continental) actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	56	-1,961	-1,905			
Revenue for the en route charging zone	22,834	24,791	47,625			
Ex-post regulatory result (+/-) in percent of revenues	0.2%	-7.9%	-4.0%			
Ex-post RoE pre-tax rate (in %)	0.4%	-5.1%	-3.6%			
<b>Spain Continental AEMET planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	1,647	1,663	3,310	1,713	1,764	1,782
Revenue for the en route charging zone	27,933	28,508	56,441	29,433	30,177	30,768
Ex-ante regulatory result (+/-) in percent of revenues	5.9%	5.8%	5.9%	5.8%	5.8%	5.8%
Ex-ante RoE pre-tax rate (in %)	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
<b>Spain Continental AEMET actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	1,647	1,904	3,551			
Revenue for the en route charging zone	27,933	28,856	56,789			
Ex-post regulatory result (+/-) in percent of revenues	5.9%	6.6%	6.3%			
Ex-post RoE pre-tax rate (in %)	3.0%	3.4%	3.2%			
<b>Total other ANSPs planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	1,702	1,848	3,550	2,044	2,311	2,611
Revenue for the en route charging zone	50,767	52,674	103,442	55,196	57,055	58,865
Ex-ante regulatory result (+/-) in percent of revenues	3.4%	3.5%	3.4%	3.7%	4.0%	4.4%
Ex-ante RoE pre-tax rate (in %)	2.4%	2.4%	2.4%	2.3%	2.4%	2.6%
<b>Total other ANSPs actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	1,702	-56	1,646			
Revenue for the en route charging zone	50,767	53,648	104,415			
Ex-post regulatory result (+/-) in percent of revenues	3.4%	-0.1%	1.6%			
Ex-post RoE pre-tax rate (in %)	2.4%	-0.1%	1.0%			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for other ANSPs (EA and AEMET) in Spain Continental en route charging zone corresponds to 1.6% of the en route revenues.						
The ex-post RoE 1.0% is lower than planned 2.4%.						

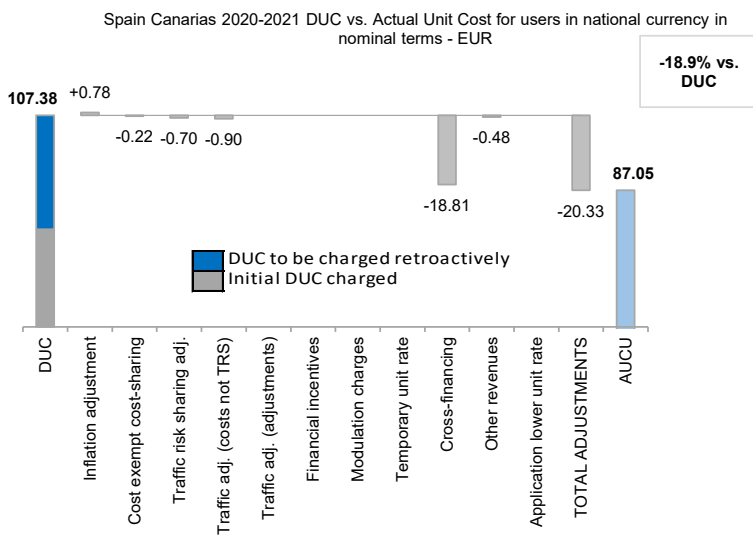
1. Contextual economic information: en route air navigation services						
Spain Canarias ECZ represents 1.6% of the SES en route ANS actual costs in 2019			FAB: SW FAB			
National currency: EUR						
Performance Plan: RP3 draft performance plan dated 26 January 2022 and found consistent as per Commission Decision (EU) 2022/776 of 13 April 2022						
The final version of the plan was adopted and published on 5 July 2022, in accordance with Article 16 (a) of Regulation (EU) 2019/317.						
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Spain Canarias: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal EUR)	94,071,894	94,122,644	188,194,538	98,205,202	99,602,071	101,565,300
Inflation %	0.0%	1.0%		1.3%	1.5%	1.6%
Inflation index (100 in 2017)	102.5	103.6		104.9	106.5	108.2
Real en route costs (EUR2017)	92,318,035	91,644,355	183,962,389	94,667,134	94,956,026	95,745,531
Total en route service units	802,932	949,650	1,752,582	1,414,576	1,610,163	1,775,489
<b>Real en route DUC per service unit (EUR2017)</b>	<b>114.98</b>	<b>96.50</b>	<b>104.97</b>	<b>66.92</b>	<b>58.97</b>	<b>53.93</b>
Spain Canarias: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal EUR)	94,071,894	91,801,425	185,873,319			
Inflation %	0.0%	3.0%				
Inflation index (100 in 2017)	102.5	105.6				
Real en route costs (EUR2017)	92,318,035	88,092,429	180,410,464			
Total en route service units	802,932	1,007,563	1,810,495			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>114.98</b>	<b>87.43</b>	<b>99.65</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal EUR)						
in value	0	-2,321,219	-2,321,219			
in %	-	-2.5%	-1.2%			
Inflation %						
in p.p.	0.0 p.p.	2.0 p.p.				
Inflation index (100 in 2017)						
in p.p.	0.0 p.p.	2.0 p.p.				
Real en route costs (EUR2017)						
in value	0	-3,551,926	-3,551,926			
in %	-	-3.9%	-1.9%			
Total en route service units						
in value	0	57,913	57,913			
in %	-	+6.1%	+3.3%			
<b>Real en route unit cost per service unit (EUR2017)</b>						
in value	<b>0.00</b>	<b>-9.07</b>	<b>-5.32</b>			
in %	-	<b>-9.4%</b>	<b>-5.1%</b>			
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs DUC</b>						
In the combined year 2020-2021, the AUC was lower than the planned DUC (by -5.1%, or -5.32€2017). This results from the combination of higher than planned TSUs (+3.3%) and lower than planned en route costs in real terms (by -1.9%, or -3.6 M€2017).						
<b>En route service units</b>						
The difference between actual and planned TSUs (+3.3%) falls outside the ±2% dead band, but does not exceed the ±10% threshold foreseen in the traffic risk sharing mechanism. The resulting gain of additional en route revenues is therefore shared between the ATSP and the airspace users, with the ATSP (ENAIRES) retaining an amount of +3.3 M€2017.						
<b>En route costs by entity at charging zone level</b>						
Actual real en route costs for 2020-2021 are -1.9% (-3.6 M€2017) lower than planned. This result is driven by the main ANSP, ENAIRES (-2.6%, or -3.5 M€2017), the MET service provider (-0.4% or -0.1 M€2017) and the NSA/EUROCONTROL costs (-3.4%, or -0.5 M€2017), whereas other ANSPs cost are higher than planned (+2.5% or +0.5 M€2017).						
<b>En route costs for the main ANSP (ENAIRES) at charging zone level</b>						
Lower than planned en route costs in real terms for ENAIRES in 2020-2021 (-2.6%, or -3.5 M€2017 lower) results from:						
- lower staff costs (-2.9%), although the additional information to the en route reporting tables clarify that "two provisional rulings unfavourable to ENAIRES, as a consequence of claims of control staff, have impacted in 2021 Annual Accounts for ENAIRES, with a total amount of 32.2M€ higher salaries. This mentioned total amount, although included as higher staff expenses in the 2021 ENAIRES accounts, has not been considered in the costs submitted by ENAIRES pending national Supreme Court final rulings";						
- lower other operating costs (-5.2%), as result of restrictive expenditure policy;						
- higher depreciation (+2.1%);						
- lower cost of capital (-6.0%), due to lower asset base (-4.5%) and WACC.						
			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      +3.3%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
			<p>Costs by entity at ECZ level (M€2017):</p> <p>Main ANSP -2.6%</p> <p>Other ANSP(s) 2.5%</p> <p>METSP(s) -0.4%</p> <p>NSA/EUROCONTROL -3.4%</p> <p>Total CZ -1.9%</p>			
			<p>Costs by nature for main ANSP (M€2017):</p> <p>Staff costs -2.9%</p> <p>Other operating costs -5.2%</p> <p>Depreciation 2.1%</p> <p>Cost of capital -6.0%</p> <p>Exceptional costs 0.0%</p> <p>VFR exempted flights 0.0%</p> <p>Total Main ANSP -2.6%</p>			

5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	49.54
DUC to be charged retroactively	57.84
<b>DUC</b>	<b>107.38</b>
Inflation adjustment	0.78
Cost exempt from cost-sharing	-0.22
Traffic risk sharing adjustment	-0.70
Traffic adj. (costs not TRS)	-0.90
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	-18.81
Other revenues	-0.48
Application of lower unit rate	0.00
Total adjustments	-20.33
<b>AUCU</b>	<b>87.05</b>
<b>AUCU vs. DUC</b>	<b>-18.9%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

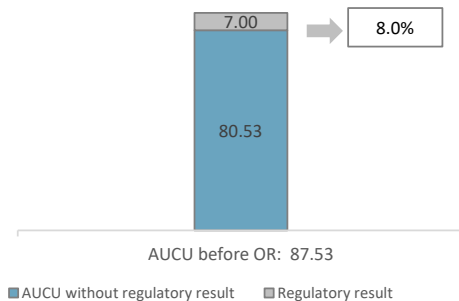
7. En route costs exempt from cost sharing

		EUR '000	EUR/SU
by item	New and existing investments	127	0.07
	Competent authorities and qualified entities costs	-70	-0.04
	Eurocontrol costs	-463	-0.26
	Pension costs	0	0.00
	Interest on loans	0	0.00
	Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>		<b>-405</b>	<b>-0.22</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level

Share of regulatory result in the AUCU (before deduction of other revenue)



ANSP(S)	EUR '000	EUR/SU
ENAIRE (Canarias)	12,381	6.84
EA (Canarias)	-411	-0.23
METSP(s)	EUR '000	EUR/SU
Spain Canarias AEMET	701	0.39
<b>Total charging zone</b>	<b>12,671</b>	<b>7.00</b>
<b>Actual cost for users***</b>	<b>158,475</b>	<b>87.53</b>
<b>Regulatory result (% AUCU)</b>	<b>8.0%</b>	<b>8.0%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Spain Canarias en route charging zone (87.05€) is -18.9% lower than the nominal DUC (107.38€) which includes DUC initially charged: 49.54€; and to be charged: 57.84€. The difference between these two figures (-20.33€/SU) is due to:

- cross-financing from Spain Continental (-18.81/SU);
  - the positive inflation adjustment resulting from higher than planned inflation (+0.78€/SU);
  - the deduction of the traffic risk sharing adjustment (-0.70€/SU) and the traffic adjustment (-0.90€/SU) for the costs not subject to traffic risk sharing;
  - the deduction of the other revenues (-0.48€/SU);
  - and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.22€/SU).
- The share of regulatory result (see items 10 to 14) in the AUCU is 8.0%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

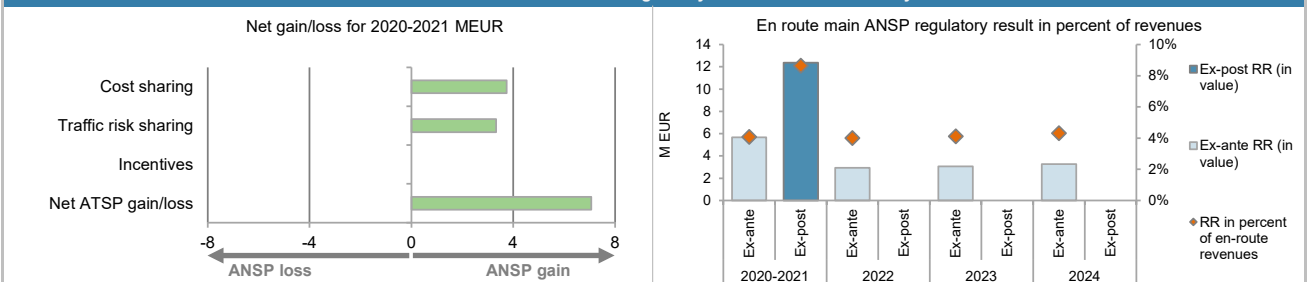
11. Net gain/loss for the main ANSP for the en route activity at charging zone level

Cost sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	2,539			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	1,145			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	55			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>3,739</b>			
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	3.3%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	138,944			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>3,323</b>			
Incentives (EUR '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>7,061</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

ENAIRES (Canarias) planned regulatory result (EUR '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	58,405	58,016	116,421	66,256	78,077	86,972
Proportion of financing through equity (in %)	73%	72%	73%	61%	48%	44%
RoE pre-tax rate (in %)	6.7%	6.7%	6.7%	7.2%	8.2%	8.6%
RoE (in value)	2,858	2,806	5,663	2,938	3,066	3,278
<b>Ex-ante regulatory result (+/-) for the en route charging zone</b>	<b>2,858</b>	<b>2,806</b>	<b>5,663</b>	<b>2,938</b>	<b>3,066</b>	<b>3,278</b>
<b>Revenue for the en route charging zone</b>	<b>69,474</b>	<b>69,471</b>	<b>138,944</b>	<b>73,461</b>	<b>74,535</b>	<b>76,099</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>4.1%</b>	<b>4.0%</b>	<b>4.1%</b>	<b>4.0%</b>	<b>4.1%</b>	<b>4.3%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>6.7%</b>	<b>6.7%</b>	<b>6.7%</b>	<b>7.2%</b>	<b>8.2%</b>	<b>8.6%</b>
ENAIRES (Canarias) actual regulatory result (EUR '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	58,405	52,731	111,136			
Proportion of financing through equity (in %)	73%	69%	71%			
RoE pre-tax rate (in %)	6.7%	6.7%	6.7%			
RoE (in value)	2,858	2,463	5,320			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	7,061	7,061			
<b>Ex-post regulatory result (+/-) for the en route charging zone</b>	<b>2,858</b>	<b>9,524</b>	<b>12,381</b>			
<b>Revenue for the en route charging zone</b>	<b>69,474</b>	<b>73,993</b>	<b>143,466</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>4.1%</b>	<b>12.9%</b>	<b>8.6%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>6.7%</b>	<b>26.0%</b>	<b>15.6%</b>			

13. Focus on the main ANSP regulatory result on en route activity



ENAIRES net gain on en route activity in the Spain Canarias charging zone in the combined year 2020-2021

ENAIRES's net gain amounts to +7.1 M€, as a combination of a gain of +3.7 M€ arising from the cost sharing mechanism and a gain of +3.3 M€ arising from the traffic risk sharing mechanism.

ENAIRES overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+7.1 M€) and the actual RoE (+5.3 M€) amounts to +12.4 M€ (8.6% of the en route revenues). The resulting ex-post rate of return on equity is 15.6%, which is higher than the 6.7% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
<b>EA (Canarias) planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	25	103	128	188	284	393
Revenue for the en route charging zone	10,747	11,039	21,785	11,699	12,070	12,485
Ex-ante regulatory result (+/-) in percent of revenues	0.2%	0.9%	0.6%	1.6%	2.4%	3.1%
Ex-ante RoE pre-tax rate (in %)	0.4%	0.8%	0.7%	1.0%	1.5%	2.0%
<b>EA (Canarias) actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	25	-436	-411			
Revenue for the en route charging zone	10,747	11,302	22,049			
Ex-post regulatory result (+/-) in percent of revenues	0.2%	-3.9%	-1.9%			
Ex-post RoE pre-tax rate (in %)	0.4%	-4.8%	-2.6%			
<b>Spain Canarias AEMET planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	324	327	651	337	347	350
Revenue for the en route charging zone	5,805	5,926	11,731	6,119	6,273	6,397
Ex-ante regulatory result (+/-) in percent of revenues	5.6%	5.5%	5.5%	5.5%	5.5%	5.5%
Ex-ante RoE pre-tax rate (in %)	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
<b>Spain Canarias AEMET actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	324	377	701			
Revenue for the en route charging zone	5,805	6,001	11,806			
Ex-post regulatory result (+/-) in percent of revenues	5.6%	6.3%	5.9%			
Ex-post RoE pre-tax rate (in %)	3.0%	3.5%	3.3%			
<b>Total other ANSPs planned regulatory result (EUR '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	349	429	778	524	631	743
Revenue for the en route charging zone	16,552	16,965	33,517	17,819	18,343	18,883
Ex-ante regulatory result (+/-) in percent of revenues	2.1%	2.5%	2.3%	2.9%	3.4%	3.9%
Ex-ante RoE pre-tax rate (in %)	2.0%	1.8%	1.9%	1.7%	2.1%	2.4%
<b>Total other ANSPs actual regulatory result (EUR '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	349	-59	290			
Revenue for the en route charging zone	16,552	17,303	33,855			
Ex-post regulatory result (+/-) in percent of revenues	2.1%	-0.3%	0.9%			
Ex-post RoE pre-tax rate (in %)	2.0%	-0.3%	0.8%			
<b>Total other ANSP overall regulatory results (RR) for the en route activity</b>						
Ex-post, the overall RR for other ANSPs (EA and AEMET) in Spain Canarias en route charging zone corresponds to 0.9% of the en route revenues.						
The ex-post RoE 0.8% is lower than planned 1.9%.						

1. Contextual economic information: terminal air navigation services						
· Spain TCZ represents 8.5% of the SES terminal ANS actual costs in 2019 · Number of airports in charging zone in 2021: 7 of which: <ul style="list-style-type: none"> <li>· Airports with fewer than 80,000 IFR mvmts: 1</li> <li>· Airports with more than 80,000 IFR mvmts: 6</li> </ul>						
· National currency: EUR · Performance Plan: See item 1 for the en route charging zone(s).						
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)						
Spain: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
Terminal costs (nominal EUR)	95,964,862	104,576,746	200,541,608	103,842,314	104,878,596	105,253,510
Inflation %	0.0%	1.0%		1.3%	1.5%	1.6%
Inflation index (100 in 2017)	102.5	103.6		104.9	106.5	108.2
Real terminal costs (EUR2017)	93,857,401	101,330,684	195,188,085	99,507,764	99,223,546	98,238,295
Total terminal service units	349,849	497,176	847,024	840,734	880,377	924,351
<b>Real terminal DUC per service unit (EUR2017)</b>	<b>268.28</b>	<b>203.81</b>	<b>230.44</b>	<b>118.36</b>	<b>112.71</b>	<b>106.28</b>
Spain: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
Terminal costs (nominal EUR)	95,964,862	100,387,940	196,352,802			
Inflation %	0.0%	3.0%				
Inflation index (100 in 2017)	102.5	105.6				
Real terminal costs (EUR2017)	93,857,401	95,606,763	189,464,164			
Total terminal service units	349,849	504,497	854,346			
<b>Real terminal AUC per service unit (EUR2017)</b>	<b>268.28</b>	<b>189.51</b>	<b>221.77</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
Terminal costs (nominal EUR)						
in value	0	-4,188,806	-4,188,806			
in %	-	-4.0%	-2.1%			
Inflation %						
in p.p.	0.0 p.p.	2.0 p.p.				
Inflation index (100 in 2017)						
in p.p.	0.0 p.p.	2.0 p.p.				
Real terminal costs (EUR2017)						
in value	0	-5,723,921	-5,723,921			
in %	-	-5.6%	-2.9%			
Total terminal service units						
in value	0	7,322	7,322			
in %	-	+1.5%	+0.9%			
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-14.30</b>	<b>-8.67</b>		
	<b>in %</b>	<b>-</b>	<b>-7.0%</b>	<b>-3.8%</b>		
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>					
	<b>in %</b>					
4. Focus on terminal DUC monitoring at charging zone level						
<b>AUC vs. DUC</b> In the combined year 2020-2021, the terminal AUC was -3.8% (or -8.67€2017) lower than the planned DUC. This results from the combination of higher than planned TNSUs (+0.9%) and lower than planned terminal costs in real terms (-2.9%, or -5.7 M€2017).						
<b>Terminal service units</b> The difference between actual and planned TNSUs (+0.9) falls within the ±2% dead band. Hence the resulting additional revenue is kept by the ANSPs (see items 10 to 14).						
<b>Terminal costs by entity</b> Actual real terminal costs are -2.9% (-5.7 M€2017) lower than planned. This is driven by the main ANSP, ENAIRE (-3.3%, or -6.2 M€2017) and the MET service provider (-1.3%, or -0.1 M€2017), whereas NSA cost are higher than planned (+27.6% or +0.5 M€2017).						
<b>Terminal costs for the main ANSP (ENAIRE) at charging zone level</b> The lower than planned terminal costs in real terms for ENAIRE (-3.3%, or -6.2 M€2017) result from: <ul style="list-style-type: none"> <li>- lower staff costs (-2.8%), although the additional information to the terminal reporting tables clarify that "two provisional rulings unfavourable to ENAIRE, as a consequence of claims of control staff, have impacted in 2021 Annual Accounts for ENAIRE, with a total amount of 32.2M€ higher salaries. This mentioned total amount, although included as higher staff expenses in the 2021 ENAIRE Accounts, has not been considered in the costs submitted by ENAIRE pending national Supreme Court final rulings";</li> <li>- lower other operating costs (-10.7%), as result of restrictive expenditure policy;</li> <li>- lower depreciation (-3.1%);</li> <li>- lower cost of capital (-7.9%), due to lower asset base (-6.5%) and WACC.</li> </ul>						

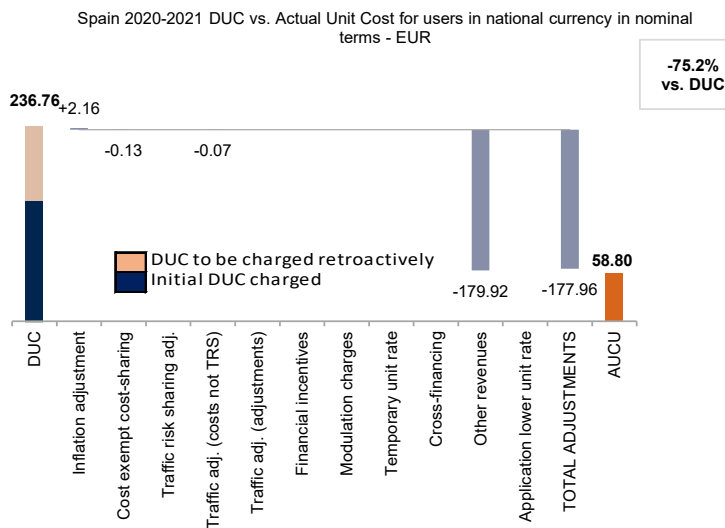


5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	EUR/SU
Initial DUC charged	108.14
DUC to be charged retroactively	128.62
<b>DUC</b>	<b>236.76</b>
Inflation adjustment	2.16
Cost exempt from cost-sharing	-0.13
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.07
Traffic adj. (adjustments)*	
Financial incentives	0.00
Modulation of charges	0.00
Temporary UR**	
Cross-financing	0.00
Other revenues	-179.92
Application of lower unit rate	0.00
Total adjustments	-177.96
<b>AUCU</b>	<b>58.80</b>
<b>AUCU vs. DUC</b>	<b>-75.16%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

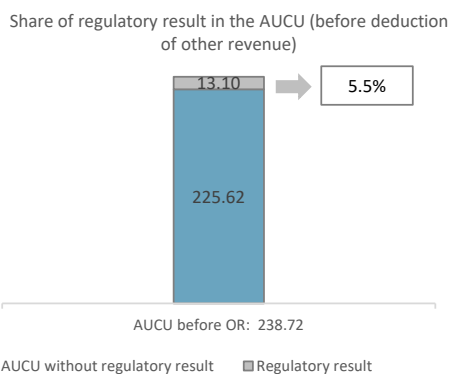
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

by item	EUR '000	EUR/SU
New and existing investments	-651	-0.76
Competent authorities and qualified entities costs	544	0.64
Eurocontrol costs	0	0.00
Pension costs	0	0.00
Interest on loans	0	0.00
Changes in law	0	0.00
<b>Total costs exempt from cost sharing</b>	<b>-107</b>	<b>-0.13</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	EUR '000	EUR/SU
ENAIRES	10,822	12.67
METSP(s)	EUR '000	EUR/SU
Spain-MET-AEMET	374	0.44
<b>Total charging zone</b>	<b>11,196</b>	<b>13.10</b>
<b>Actual cost for users***</b>	<b>203,951</b>	<b>238.72</b>
<b>Regulatory result (% AUCU)</b>	<b>5.5%</b>	<b>5.5%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual terminal unit cost incurred by airspace users (AUCU) in respect of activities performed in combined year 2020-2021 for Spain terminal charging zone (58.80€) is -75.16% lower than the nominal DUC (236.76€) which includes DUC initially charged: 108.14€, and to be charged: 128.62€. The difference between these two figures (-177.96€/SU) is due to:

- the deduction of the other revenues (-179.92€/SU); "Since aerodrome service is subject to a contract between AENA (the airport operator) and ENAIRES, and with a view that only the final approach costs are actually recovered via terminal unit rate, not the aerodrome ones, the amount of this contract for each year represents a subtraction of the cost base for the calculation of the unit rate under the form of other revenues."

- the positive inflation adjustment resulting from higher than planned inflation (+2.16€/SU);

- the deduction of the traffic adjustment (-0.07€/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years;

- and the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-0.13€/SU).

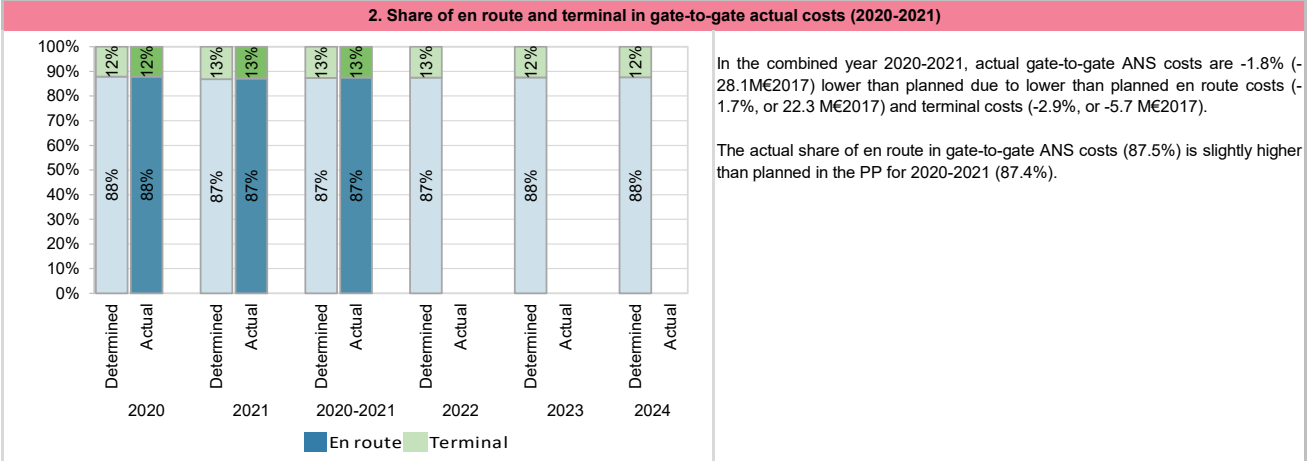
The share of regulatory result (see items 10 to 14) in the terminal AUCU is 5.5%.

10. Monitoring of the terminal ANSPs regulatory results (RR)						
<p>The <b>Regulatory Result (RR)</b> corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.</p> <p>The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.</p> <p>- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.</p> <p>- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.</p> <p>The <b>net gain/loss</b> calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).</p> <p>The monitoring of the RR is carried out in national currency in nominal terms.</p>						
11. Net gain/loss for the main ANSP for the terminal activity at charging zone level						
Cost sharing (EUR '000)	2020-2021	2022	2023	2024		
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	4,692					
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	1,814					
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-651					
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>5,855</b>					
Traffic risk sharing (EUR '000)	2020-2021	2022	2023	2024		
Difference in total service units (actual vs PP) %	0.9%					
Determined costs subject to traffic risk sharing for the ANSP (PP)	193,223					
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing, see note</b>	<b>1,670</b>					
Incentives (EUR '000)	2020-2021	2022	2023	2024		
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>					
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>7,525</b>					
12. Regulatory result (RR) for the main ANSP at charging zone level						
ENAIRES planned regulatory result (EUR '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	36,398	37,234	73,632	39,507	43,790	47,474
Proportion of financing through equity (in %)	73%	72%	73%	61%	48%	44%
RoE pre-tax rate (in %)	6.7%	6.7%	6.7%	7.2%	8.2%	8.6%
RoE (in value)	1,781	1,801	3,582	1,752	1,720	1,789
<b>Ex-ante regulatory result (+/-) for the terminal charging zone</b>	<b>1,781</b>	<b>1,801</b>	<b>3,582</b>	<b>1,752</b>	<b>1,720</b>	<b>1,789</b>
<b>Revenue for the terminal charging zone</b>	<b>92,353</b>	<b>100,869</b>	<b>193,223</b>	<b>99,782</b>	<b>100,430</b>	<b>100,445</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>1.9%</b>	<b>1.8%</b>	<b>1.9%</b>	<b>1.8%</b>	<b>1.7%</b>	<b>1.8%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>6.7%</b>	<b>6.7%</b>	<b>6.7%</b>	<b>7.2%</b>	<b>8.2%</b>	<b>8.6%</b>
ENAIRES actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	36,398	32,456	68,854			
Proportion of financing through equity (in %)	73%	69%	71%			
RoE pre-tax rate (in %)	6.7%	6.7%	6.7%			
RoE (in value)	1,781	1,516	3,297			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	7,525	7,525			
<b>Ex-post regulatory result (+/-) for the terminal charging zone</b>	<b>1,781</b>	<b>9,041</b>	<b>10,822</b>			
<b>Revenue for the terminal charging zone</b>	<b>92,353</b>	<b>103,703</b>	<b>196,056</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>1.9%</b>	<b>8.7%</b>	<b>5.5%</b>			
<b>Ex-post RoE pre-tax rate (in %), see note</b>	<b>6.7%</b>	<b>40.1%</b>	<b>22.0%</b>			
<p><b>Note:</b> It is noted that only a smaller portion of terminal determined costs (≈20% in 2020-2021) is charged to airspace users through terminal charges, while the rest is financed through the income relating to the service agreement with the airport operator (see also box 9), which is "for somewhat fixed amount independent from the traffic levels". This should be taken into consideration when interpreting the regulatory result for Spain TCZ.</p>						
13. Focus on main ANSP regulatory result on terminal activity						
<p>Net gain/loss for 2020-2021 MEUR</p>				<p>Terminal main ANSP regulatory result in percent of revenues</p>		
<p><b>ENAIRES net gain on activity in the Spain terminal charging zone in the combined year 2020-2021</b></p> <p>ENAIRES's net gain amounts to +7.5 M€ due to gains of +5.9 M€ from the cost sharing mechanism and of +1.7 M€ from the traffic risk sharing mechanism.</p>						
<p><b>ENAIRES overall regulatory results (RR) for the terminal charging zone activity</b></p> <p>Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+7.5 M€) and the actual RoE (+3.3 M€) amounts to +10.8 M€ (5.5% of the terminal revenues). The resulting ex-post rate of return on equity is 22.0%, which is higher than the 6.7% planned in the PP.</p>						

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
Spain-MET-AEMET planned regulatory result (EUR '000)	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	150	154	304	161	176	188
Revenue for the terminal charging zone	2,639	2,708	5,347	2,817	2,956	3,077
Ex-ante regulatory result (+/-) in percent of revenues	5.7%	5.7%	5.7%	5.7%	6.0%	6.1%
Ex-ante RoE pre-tax rate (in %)	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Spain-MET-AEMET actual regulatory result (EUR '000)	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	150	224	374			
Revenue for the terminal charging zone	2,639	2,741	5,380			
Ex-post regulatory result (+/-) in percent of revenues	5.7%	8.2%	6.9%			
Ex-post RoE pre-tax rate (in %)	3.0%	4.5%	3.7%			

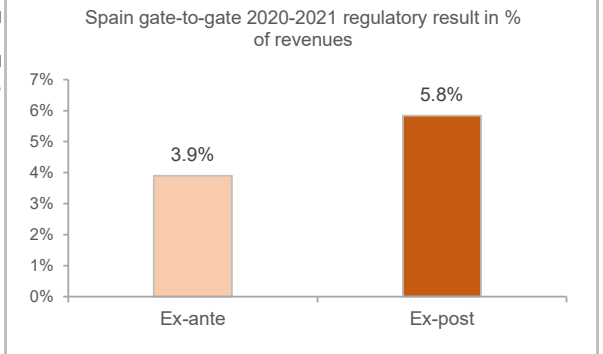
Ex-post, the overall RR for METSP in Spain terminal charging zone corresponds to 6.9% of the terminal revenues.  
The ex-post RoE 3.7% is higher than planned 3.0%.

1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1:	Spain Continental	En route charging zone 2:	Spain Canarias				
Terminal charging zone 1:	Spain	Terminal charging zone 2:					
Spain: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		679,459,443	668,447,848	1,347,907,291	694,927,752	696,468,359	694,319,982
Real terminal costs (EUR2017)		93,857,401	101,330,684	195,188,085	99,507,764	99,223,546	98,238,295
Real gate-to-gate costs (EUR2017)		773,316,844	769,778,531	1,543,095,376	794,435,516	795,691,906	792,558,277
En route share (%)		87.9%	86.8%	87.4%	87.5%	87.5%	87.6%
Spain: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		679,459,443	646,103,975	1,325,563,418			
Real terminal costs (EUR2017)		93,857,401	95,606,763	189,464,164			
Real gate-to-gate costs (EUR2017)		773,316,844	741,710,738	1,515,027,582			
En route share (%)		87.9%	87.1%	87.5%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017)	in value	0	-28,067,794	-28,067,794			
	in %	0.0%	-3.6%	-1.8%			
En route share	in p.p.	0.0 p.p.	0.3 p.p.	0.1 p.p.			



3. Gate-to-gate regulatory result (RR) 2020-2021							
In EUR '000	ANSP(S)	Ex-ante			Ex-post		
		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	ENAIRES (Spain)	53,277	1,342,690	4.0%	85,418	1,358,782	6.3%
	EA (Spain)	368	68,786	0.5%	-2,316	69,674	-3.3%
METSP(s)		RR	Revenues	RR % revenues	RR	Revenues	RR % revenues
	AEMET (Spain)	4,264	73,519	5.8%	4,625	73,975	6.3%
<b>Total</b>		<b>57,909</b>	<b>1,484,995</b>	<b>3.9%</b>	<b>87,727</b>	<b>1,502,431</b>	<b>5.8%</b>

For the ANSPs providing services in the en route and terminal charging zones of Spain covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to +87.7 M€ (+63.9 M€ for en route Continental, +12.7 M€ for en route Canarias and +11.2 M€ for terminal - see boxes 10 to 13 for the detailed analysis at charging zones level), corresponding to 5.8% of gate-to-gate ANS revenues.  
This is higher than the return planned for the year (3.9%).



# **Annual Monitoring Report 2021**

Local level view

Sweden

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Effectiveness of Safety Management						
	Score	Safety Culture	Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
LFV	85	C	C	D	C	C
ACR	78	B	C	C	B	C
SDATS	85	B	C	D	C	C
AFAB	81	C	C	C	C	C

Note: EoSM questionnaire has been updated in RP3 using CANSO Standard of Excellence as the basis, maturity levels of study areas and calculation of the score have been updated too. A direct comparison with maturity levels and scoring of EoSM used RP2 is not advisable.

**Observations**

LFV: All five EoSM components of LFV meet already the 2024 target level.

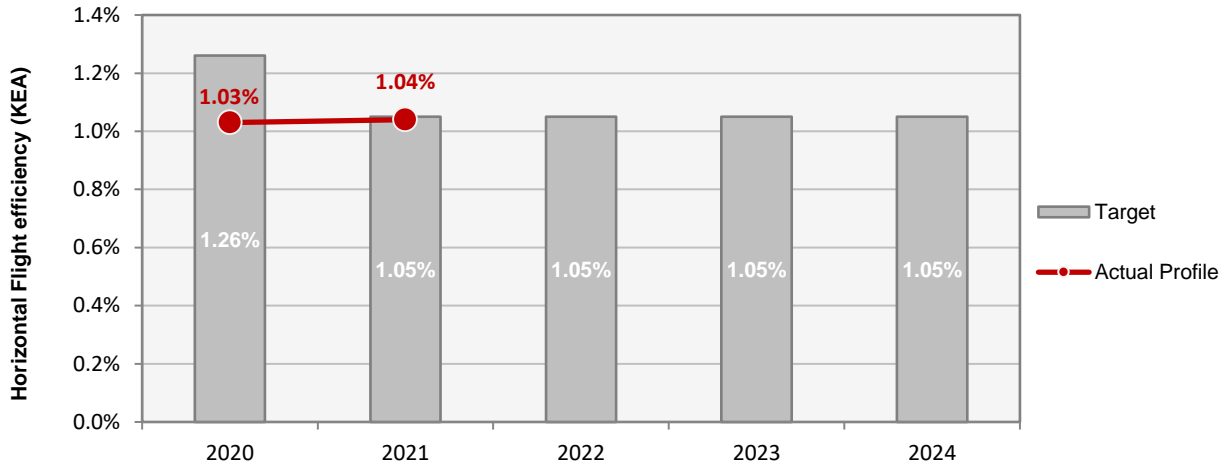
ACR: two out of five EoSM components of ACR meet already the 2024 target level. Improvements in the other three components, namely "Safety Culture", "Safety risk management" and "Safety Assurance" are still expected during RP3 to achieve 2024 targets.

SDATS: Four out of five EoSM components of SDATS meet already the 2024 target level. Improvements in "Safety Culture" are still expected during RP3 to achieve 2024 targets.

AFAB: Four out of five EoSM components of AFAB meet already the 2024 target level. Improvements in "Safety risk management" are still expected during RP3 to achieve 2024 targets.

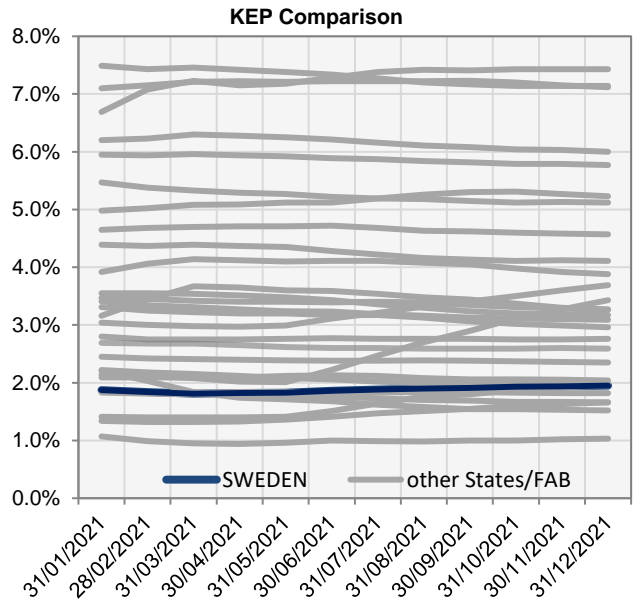
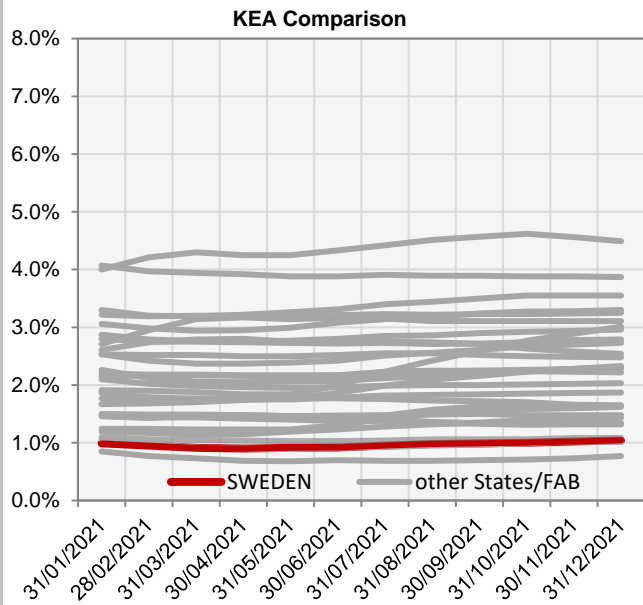
IMPORTANT: EASA/European Commission did not received the verified questionnaire from the NSA on time. This is an important step to receive confirmation that the self-evaluated questionnaire by the ANSP has been actually verified. It should be sent in due time to allow proper and timely drafting of the Monitoring Report.

KEA					
	2020	2021	2022	2023	2024
Target	1.26%	1.05%	1.05%	1.05%	1.05%
Actual performance	1.03%	1.04%			



End of month indicators evolution in 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
KEA	0.99%	0.95%	0.91%	0.90%	0.91%	0.92%	0.95%	0.98%	0.99%	1.00%	1.02%	1.04%
KEP	1.87%	1.84%	1.81%	1.82%	1.83%	1.86%	1.88%	1.90%	1.91%	1.93%	1.94%	1.95%
KES	1.67%	1.66%	1.65%	1.66%	1.68%	1.71%	1.73%	1.75%	1.76%	1.78%	1.79%	1.80%



The indicators are the ratio of flown distance and achieved distance over all (portions of) trajectories over a one year rolling window, excluding the ten best and ten worst days. The rolling window stops at the last day of the month.



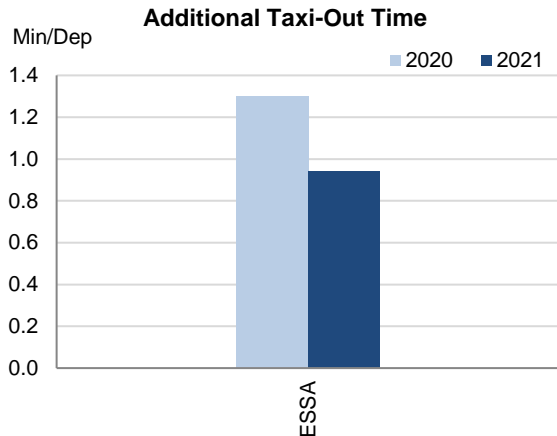
**1. Overview**

Sweden only has Stockholm (ESSA) airport subject to RP3 monitoring for which the APDF is successfully established and the monitoring of the environmental indicators can be performed. Traffic at this airport in 2021 was still 61% lower than the 2019 levels, with a low recovery of only 6% of the traffic compared to 2020.

Stockholm showed excellent performance in terms of additional times during RP2, which was further improved in 2020 with the reduction of traffic and even further in 2021.

The share of CDO flights is relatively high compared to other airports monitored in RP3 and has increased slightly with respect to 2020.

**2. Additional Taxi-Out Time**



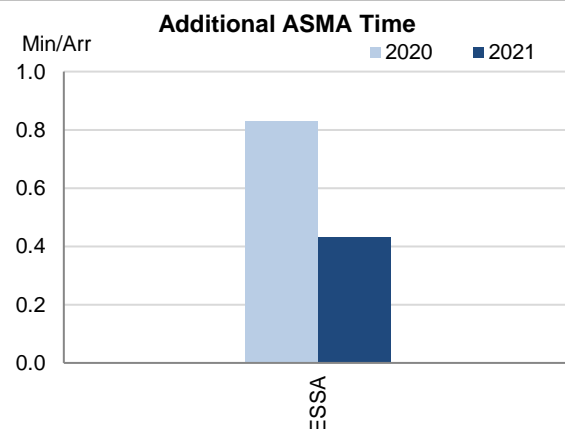
The additional taxi-out times at Stockholm decreased once again (ESSA; 2019: 2.05 min/dep.; 2020: 1.3 min/dep.; 2021: 0.94 min/dep.)

This indicator is significantly affected by the de-icing procedures so it reached almost 2 min/dep in the months of January and December.

According to the Swedish monitoring report: *The A-CDM process is active at Stockholm Arlanda airport and is the main tool to control and limit the actual taxitimes for departures. All the stands have individual VTT (Variable Taxi Time) to the different runways and we also make a difference between aircraft turbulence category, as statistics show that heavy aircraft have tendency to taxi slower. The taxitimes (VTT) are monitored on a daily basis and can be modified based on seasonal changes or any other change in the infrastructure at the maneuvering area.*

*For arrivals, Swedavia have together with Eurocontrol initiated a project (ECRA) in order to get better control over the departure times from domestic airports. This project will lead to better predictability of the ELDT/EIBT (Estimated Landing Time/ Estimated in Block Time) at Stockholm Arlanda, enabling ramp management to plan the stand allocation in the most optimal way. This will avoid excessive waiting time for arrival aircraft at taxiway or apron.*

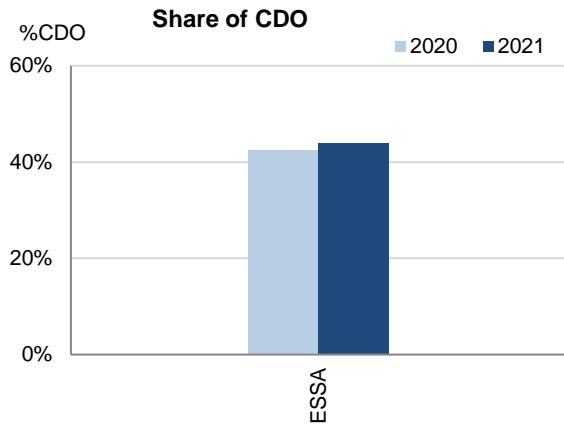
**3. Additional ASMA Time**



The additional time in the terminal area at Stockholm Arlanda was low and very stable around 1.2 min/arr during RP2. The traffic reduction led to an improvement in performance in 2020 and even further in 2021 (ESSA; 2019: 1.15 min/arr.; 2020: 0.83 min/arr.; 2021: 0.43 min/arr.)

Additional times were zero or nearly zero from May to August, rising at the end of the year to reach 1.02 min/arr. in December.

#### 4. Share of arrivals applying CDO



The share of CDO flights at Stockholm (ESSA) increased from 42.5% to 44.1% in 2021 which is above the overall RP3 value in 2021 (30.5%). From June to September, the monthly values were above 47%.

#### 5. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Additional taxi-out time					Additional ASMA time					Share of arrivals applying CDO				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Stockholm/Arlanda-ESSA	1.3	0.94				0.83	0.43				43%	44%			

**Update on Military dimension of the plan**

FUA has been implemented in Sweden since 1978, before the concept was defined on European level and the benefit is already achieved, therefore its limitations to environmental factors are small.

Sweden has implemented extended FUA to the extent that it doesn't limit the capacity.

**Military - related measures implemented or planned to improve capacity**

**PI#6 Effective use of reserved or segregated airspace - national level**

Ratio PI#6	2020	2021	2022	2023	2024
Sweden	10%	11%			

**PI#6 Effective use of reserved or segregated airspace (per ACC)**

Ratio PI#6	2020	2021	2022	2023	2024
Malmö ACC	22%	22%			
Stockholm ACC	21%	20%			

**Initiatives implemented or planned to improve PI#6**

During the ASM level 1 meeting, which is held 5-6 times a year, various airspace issues are discussed regularly. Prior to each meeting, LFV level 2 writes a special report to level 1 with follow-up of certain issues, including the number of allocated hours of airspace blocks with a comparison of hours then used. Various problems and measures are discussed when so is deemed necessary by level1, level2 and level3.

**PI#7 Rate of planning via available airspace structures - national level**

Ratio PI#7	2020	2021	2022	2023	2024
Sweden					

**PI#7 Rate of planning via available airspace structures (per ACC)**

Ratio PI#7	2020	2021	2022	2023	2024
Malmö ACC					
Stockholm ACC					

**Initiatives implemented or planned to improve PI#7**

No information provided.

**PI#8 Rate of using available airspace structures - national level**

Ratio PI#8	2020	2021	2022	2023	2024
Sweden					

**PI#8 Rate of using available airspace structures (per ACC)**

Ratio PI#8	2020	2021	2022	2023	2024
Malmo ACC					
Stockholm ACC					

**Initiatives implemented or planned to improve PI#8**

No information provided.

Minutes of ATFM en-route delay						
	2020	2021	2022	2023	2024	Observations
National Target	0.12	0.05	0.07	0.08	0.08	
Actual performance	0.01	0.00				

**NSA's assessment of capacity performance**

Due to low traffic volumes and well functioning systems no delays were registered in 2021

**Monitoring process for capacity performance**

No information provided.

**Capacity Planning**

No information provided.

**ATCO in OPS (FTE)**

Malmö ACC	2019	2020	2021	2022	2023	2024	Observations
Planned (2021 Perf Plan)		149	130	138	141	144	* Sweden has previously reported 147,5 FTE ATCOs for 2020 in ESMM ACC.
Planned (2022 Perf Plan)			130	136	134	137	
Actual performance	149	129*	130				

**Stockholm ACC**

Stockholm ACC	2019	2020	2021	2022	2023	2024	Observations
Planned (2021 Perf Plan)		145	137	143	146	148	* Sweden has previously reported 143 FTE ATCOs for 2020 in ESOS ACC.
Planned (2022 Perf Plan)			137	143	143	145	
Actual performance	145	132*	136				

The number of ATCOs are calculated as total ATCOs reduced with ATCOs on other duties, outside the opsroom. The number of FTEs reported are december each year (not the average FTE over the year of 2018 which was earlier reported). Overtime and sickness leave is not included. The number of additional ATCOs in OPS, includes 13 ATCOs that are planned to be converted to En Route from the control-tower of Malmö airport (3 ATCOs 2021, 2 2022, 8 2023).

**Application of Corrective Measures for Capacity (if applicable)**

Not applicable.

**Summary of capacity performance**

Sweden experienced an increase in traffic from 351k flights in 2020 to 380k flights in 2021, with practically zero ATFM delay. However, traffic levels were still substantially below the 823k flights in 2019.

**En route Capacity Incentive Scheme**

	2020	2021	2022	2023	2024	Observations
National Capacity target	0.12	0.05	0.07	0.08	0.08	
Deadband +/-	-	-	[0.02-0.12]	[0.03-0.13]	[0.03-0.13]	
Actual performance	0.01	0.00				

In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

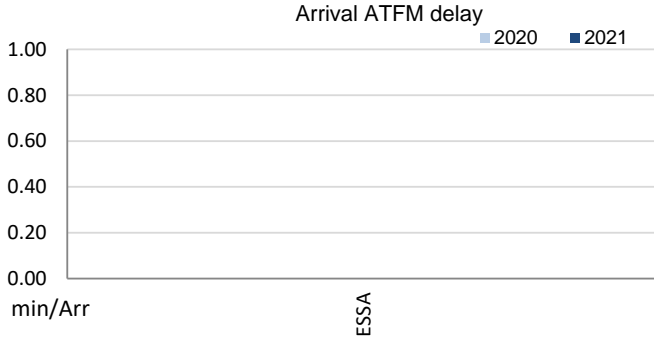
1. Overview

Sweden only has Stockholm (ESSA) airport subject to RP3 monitoring for which the APDF is successfully established and the monitoring of the capacity indicators can be performed.

Traffic at this airport in 2021 was still 61% lower than the 2019 levels, with a low recovery of only 6% of the traffic compared to 2020.

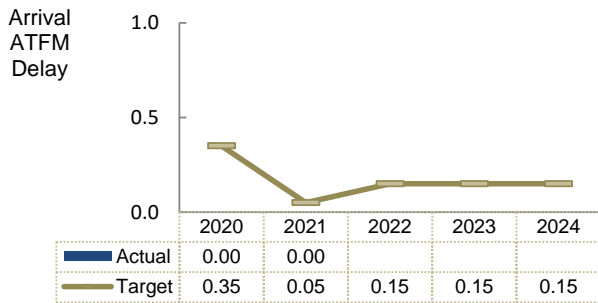
Average arrival ATFM delays in 2021 was 0.00 min/arr, same as in 2020.  
 ATFM slot adherence has slightly deteriorated (2021: 97.9%; 2020: 98.2%).

2. Arrival ATFM Delay



Only 77 minutes of arrival ATFM delay were registered in 2021 at Stockholm, in August, resulting in an average of 0 min/arr for the year. According to the Swedish monitoring report this was due to *low traffic volumes and well functioning systems*.

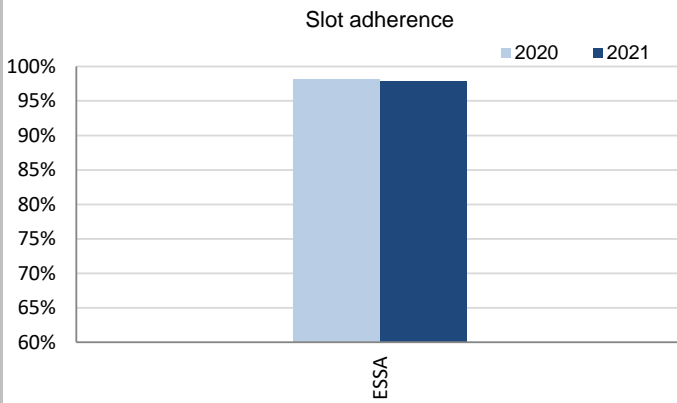
3. Arrival ATFM Delay – National Target and Incentive Scheme



The provisional national target on arrival ATFM delay in 2021 was met.

In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

#### 4. ATFM Slot Adherence



With the drastic drop in traffic, regulated departures from Stockholm virtually disappeared until July 2021. Stockholm's ATFM slot compliance was 97.9%, slightly worse than the performance in 2020 (98.2%). With regard to the 2.1% of flights that did not adhere, 0.6% was early and 1.6% was late. The Swedish monitoring report adds: *The ATC provider LFV reports the actual performance which is monitored by the NSA. There is no present risk at the awareness of the NSA that there will be a violation to EU 255/2010.*

#### 5. ATC Pre-departure Delay

The calculation of the ATC pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF) which is properly implemented at Stockholm. The quality of the airport data reported by ESSA has improved after the COVID crisis and it is possible again to calculate this indicator. Unlike at most airports, at Stockholm the annual value has increased with respect to 2019 (ESSA: 2019: 0.09 min/dep; 2021: 0.13 min/dep). At monthly level, in general figures have been significantly higher than in 2019, despite the lower traffic.

#### 6. All Causes Pre-departure Delay

The total (all causes) delay in the actual off block time at Sweden increased in 2021 (ESSA: 2020: 8.34 min/dep.; 2021: 11.48 min/dep.), with the highest delays observed in January and December.

#### 7. Appendix

n/a: airport operator data flow not established, or more than two months of missing / non-validated data

Airport Name	Avg arrival ATFM delay					Slot adherence					ATC pre-departure delay					All Causes Pre-departure Delay				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Stockholm/Arlanda-ESSA	0	0				98.2%	97.9%				n/a	0.13				8.34	11.48			

1. Contextual economic information: en route air navigation services						
· Sweden ECZ represents 3.6% of the SES en route ANS actual costs in 2019			· FAB: DK-SE FAB			
· National currency:	SEK	Exchange rates (1 EUR=)	2017: 9.63311 SEK	2020: 10.4769 SEK	2021: 10.1376 SEK	
· Performance Plan:	RP3 draft performance plan dated 3 February 2022 and found inconsistent as per Commission Decision (EU) 2022/728 of 13 April 2022 Sweden submitted a revised RP3 draft performance plan in July 2022, currently under assessment.					
2. Monitoring of the en route determined unit cost (DUC) at charging zone level						
The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.						
The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.						
3. En route actual unit cost (AUC) vs. en route determined unit cost (DUC)						
Sweden: Data from RP3 Performance Plan	2020D	2021D	2020-2021D	2022D	2023D	2024D
En route costs (nominal SEK)	2,690,169,529	2,145,575,013	4,835,744,542	2,309,764,674	2,358,551,456	2,234,106,189
Inflation %	0.7%	1.5%		4.8%	2.2%	1.7%
Inflation index (100 in 2017)	104.5	106.0		112.4	114.9	116.9
Real en route costs (SEK2017)	2,593,079,553	2,048,853,289	4,641,932,842	2,110,148,089	2,114,368,392	1,978,523,470
Total en route service units	1,676,463	1,732,000	3,408,463	2,724,000	3,248,000	3,367,000
<b>Real en route DUC per service unit (SEK2017)</b>	<b>1,546.76</b>	<b>1,182.94</b>	<b>1,361.88</b>	<b>774.65</b>	<b>650.98</b>	<b>587.62</b>
<b>Real en route DUC per service unit (EUR2017)</b>	<b>160.57</b>	<b>122.80</b>	<b>141.38</b>	<b>80.42</b>	<b>67.58</b>	<b>61.00</b>
Sweden: Actual data from Reporting Tables	2020A	2021A	2020-2021A	2022A	2023A	2024A
En route costs (nominal SEK)	2,690,169,529	2,088,780,547	4,778,950,076			
Inflation %	0.7%	2.7%				
Inflation index (100 in 2017)	104.5	107.3				
Real en route costs (SEK2017)	2,593,079,553	1,976,031,466	4,569,111,019			
Total en route service units	1,676,463	1,794,889	3,471,353			
<b>Real en route AUC per service unit (SEK2017)</b>	<b>1,546.76</b>	<b>1,100.92</b>	<b>1,316.23</b>			
<b>Real en route AUC per service unit (EUR2017)</b>	<b>160.57</b>	<b>114.29</b>	<b>136.64</b>			
Difference between Actuals and Planned	2020	2021	2020-2021	2022	2023	2024
En route costs (nominal SEK)	in value	0	-56,794,466	-56,794,466		
	in %	-	-2.6%	-1.2%		
Inflation %	in p.p.	0.0 p.p.	1.2 p.p.			
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	1.3 p.p.			
Real en route costs (SEK2017)	in value	0	-72,821,823	-72,821,823		
	in %	-	-3.6%	-1.6%		
Total en route service units	in value	0	62,889	62,889		
	in %	-	+3.6%	+1.8%		
<b>Real en route unit cost per service unit (SEK2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-82.02</b>	<b>-45.65</b>		
	<b>in %</b>	<b>-</b>	<b>-6.9%</b>	<b>-3.4%</b>		
<b>Real en route unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-8.51</b>	<b>-4.74</b>		
	<b>in %</b>	<b>-</b>	<b>-6.9%</b>	<b>-3.4%</b>		
4. Focus on en route DUC monitoring at charging zone level						
<b>AUC vs. DUC</b> In the combined year 2020-2021, the AUC was -3.4% (or -45.65 SEK2017, -4.74 €2017) lower than the planned DUC. This results from the combination of higher than planned TSUs (+1.8%) and lower than planned en route costs in real terms (-1.6%, or -72.8 MSEK2017, -7.6 ME2017).			<p>2020-2021 actual vs. planned TSUs</p> <p>Threshold -10%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p>			
<b>En route service units</b> The difference between actual and planned TSUs (+1.8%) falls within the ±2% dead band. Hence the resulting additional en route revenue is kept by the ANSPs (see items 10 to 14).						
<b>En route costs by entity at charging zone level</b> Actual real en route costs are -1.6% (-7.6 ME2017) lower than planned. This is driven by the main ANSP, LfV (-1.0%, or -3.8 ME2017), other ANSPs (-5.4%, or -2.3 ME2017) and NSA/EUROCONTROL (-3.0%, or -1.6 ME2017), while the actual costs of the MET service provider are close to the determined costs (+0.6%, or +0.1 ME2017).			<p>Costs by entity at ECZ level (ME2017):</p>			
<b>En route costs for the main ANSP (LfV) at charging zone level (see also Note 1 in item 12)</b> The lower than planned en route costs in real terms for LfV in 2020-2021 reflect a combination of:			<p>Costs by nature for main ANSP (ME2017):</p>			
<ul style="list-style-type: none"> <li>- slightly lower staff costs (-0.6%); due to lower than planned pension costs. In addition, "staff costs were reduced by the revenues for staff participating in projects or other parts not financed by en route charges";</li> <li>- lower other operating costs (-3.9%); "mainly due to lower costs for maintaining the systems and pandemic effects of less travelling and consultants";</li> <li>- lower depreciation costs (-2.6%); reflecting "delayed investments as a result of the pandemic and lack of staff"; and,</li> <li>- significantly higher cost of capital (+16.7%); linked with a higher interest rate on debt used to compute the cost of capital.</li> </ul>						

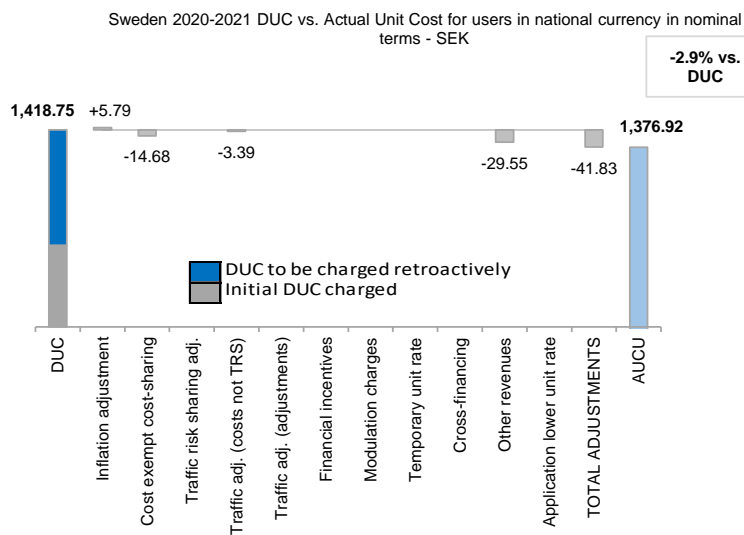


5. Monitoring of the en route actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. En route actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	SEK/SU	EUR/SU
Initial DUC charged	588.37	57.13
DUC to be charged retroactively	830.38	80.29
<b>DUC</b>	<b>1,418.75</b>	<b>137.43</b>
Inflation adjustment	5.79	0.57
Cost exempt from cost-sharing	-14.68	-1.45
Traffic risk sharing adjustment	0.00	0.00
Traffic adj. (costs not TRS)	-3.39	-0.33
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	-29.55	-2.87
Application of lower unit rate	0.00	0.00
Total adjustments	-41.83	-4.08
<b>AUCU</b>	<b>1,376.92</b>	<b>133.35</b>
<b>AUCU vs. DUC</b>	<b>-2.9%</b>	<b>-3.0%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

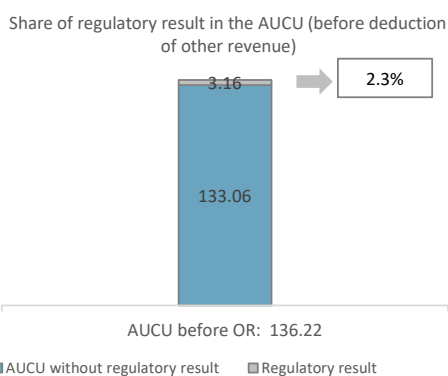
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. En route costs exempt from cost sharing

		SEK '000	EUR '000	SEK/SU	EUR/SU
by item	New and existing investments	-7,593	-749	-2.19	-0.22
	Competent authorities and qualified entities costs	-1,304	-129	-0.38	-0.04
	Eurocontrol costs	-13,779	-1,359	-3.97	-0.39
	Pension costs	-28,303	-2,792	-8.15	-0.80
	Interest on loans	17	2	0.01	0.00
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>-50,962</b>	<b>-5,027</b>	<b>-14.68</b>	<b>-1.45</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. En route regulatory result at charging zone level



ANSP(S)	SEK '000	EUR '000	SEK/SU	EUR/SU
LFV	81,592	8,041	23.50	2.32
ACR	29,276	2,886	8.43	0.83
ARV	675	67	0.19	0.02
SDATS	613	60	0.18	0.02
METSP(s)	SEK '000	EUR '000	SEK/SU	EUR/SU
Sweden MET	-761	-75	-0.22	-0.02
<b>Total charging zone</b>	<b>111,395</b>	<b>10,979</b>	<b>32.09</b>	<b>3.16</b>
<b>Actual cost for users***</b>	<b>4,882,342</b>	<b>472,855</b>	<b>1,406.47</b>	<b>136.22</b>
<b>Regulatory result (% AUCU)</b>	<b>2.3%</b>	<b>2.3%</b>	<b>2.3%</b>	<b>2.3%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on en route AUCU monitoring at charging zone level

The actual en route unit cost incurred by airspace users (AUCU) in respect of activities performed in the combined year 2020-2021 (1,376.92 SEK or 133.35 €) is -2.9% lower than the nominal DUC (1,418.75 SEK or 137.43 €) which includes DUC initially charged: 588.37 SEK or 57.13 €; and to be charged: 830.38 SEK or 80.29 €. The difference between these two figures (-41.83 SEK/SU or -4.08 €/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+5.79 SEK/SU or +0.57 €/SU);
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-14.68 SEK/SU or -1.45 €/SU);
- the deduction of the traffic adjustment (-3.39 SEK/SU or -0.33 €/SU) for the costs not subject to traffic risk sharing to be reimbursed in future years; and,
- the deduction of the other revenues (-29.55 SEK/SU or -2.87 €/SU).

The share of regulatory result (see item 8) in the AUCU (before the deduction of other revenues) is 2.3%.

10. Monitoring of the en route ANSPs regulatory results (RR)

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.

- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

11. Net gain/loss for the main ANSP for the en route activity at charging zone level

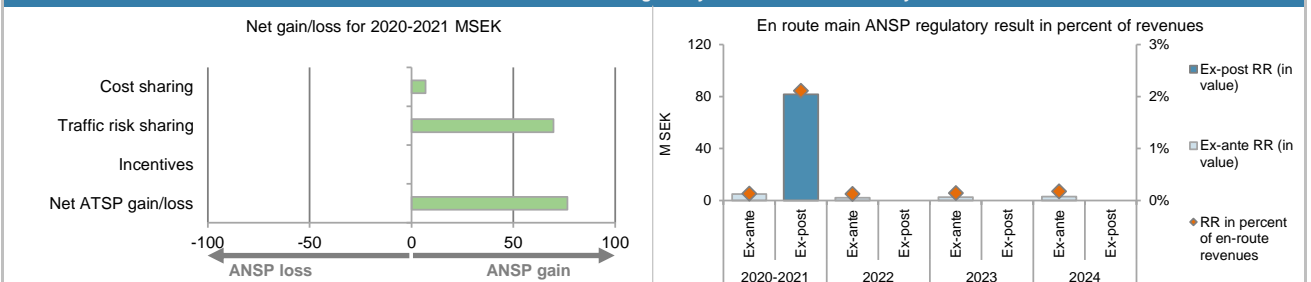
Cost sharing (SEK '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	22,181			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	16,997			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-32,282			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>6,895</b>			
Traffic risk sharing (SEK '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	1.8%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	3,774,443			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>69,642</b>			
Incentives (SEK '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (SEK '000)</b>	<b>76,537</b>			
<b>Net ANSP gain(+)/loss(-) on en route activity (EUR '000)</b>	<b>7,550</b>			

12. Regulatory result (RR) for the main ANSP at charging zone level

LFV planned regulatory result (SEK '000) from RP3 PP	2020D	2021D	2020-2021D	2022D	2023D	2024D
Total asset base	3,040,952	3,165,939	6,206,891	2,442,562	2,499,281	2,491,362
Proportion of financing through equity (in %)	18%	16%	17%	22%	19%	15%
RoE pre-tax rate (in %)	0.5%	0.5%	0.5%	0.4%	0.5%	0.8%
RoE (in value)	2,440	2,431	4,871	2,211	2,479	2,909
<b>Ex-ante regulatory result (+/-) for the en route charging zone *see Note 1</b>	<b>2,440</b>	<b>2,431</b>	<b>4,871</b>	<b>2,211</b>	<b>2,479</b>	<b>2,909</b>
<b>Revenue for the en route charging zone</b>	<b>2,197,449</b>	<b>1,616,030</b>	<b>3,813,479</b>	<b>1,750,189</b>	<b>1,779,074</b>	<b>1,672,504</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>0.1%</b>	<b>0.2%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.2%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>0.5%</b>	<b>0.5%</b>	<b>0.5%</b>	<b>0.4%</b>	<b>0.5%</b>	<b>0.8%</b>
LFV actual regulatory result (SEK '000)	2020A	2021A	2020-2021A	2022A	2023A	2024A
Total asset base	3,040,952	2,432,702	5,473,653			
Proportion of financing through equity (in %)	18%	22%	20%			
RoE pre-tax rate (in %)	0.5%	0.5%	0.5%			
RoE (in value)	2,440	2,615	5,055			
Net ANSP gain(+)/loss(-) for the en route charging zone	0	76,537	76,537			
<b>Ex-post regulatory result (+/-) for the en route charging zone *see Note 1</b>	<b>2,440</b>	<b>79,152</b>	<b>81,592</b>			
<b>Revenue for the en route charging zone</b>	<b>2,197,449</b>	<b>1,670,387</b>	<b>3,867,836</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>0.1%</b>	<b>4.7%</b>	<b>2.1%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>0.5%</b>	<b>14.9%</b>	<b>7.6%</b>			

**Note 1:** The analysis presented for LFV is affected by two factors:  
a) LFV reports a financing of asset base at the level of some 80% of debt in 2020-2021, corresponding to its pension liabilities, which are remunerated at the inflation rate.  
b) Information reported in the en route reporting tables of LFV includes also the costs for CNS infrastructure owned by the airport operators.

13. Focus on the main ANSP regulatory result on en route activity



LFV net gain on en route activity in the Sweden charging zone in the combined year 2020-2021

LFV generated a net gain of +76.5 MSEK, as a combination of a gain of +6.9 MSEK arising from the cost sharing mechanism and a gain of +69.6 MSEK arising from the traffic risk sharing mechanism.

LFV overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+76.5 MSEK) and the actual RoE (+5.1 MSEK) amounts to +81.6 MSEK (2.1% of the en route revenues). The resulting ex-post rate of return on equity is 7.6%, which is higher than the 0.5% planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for en route activity						
<b>ACR planned regulatory result (SEK '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	520	1,737	2,257	2,532	2,276	1,691
Revenue for the en route charging zone	132,885	158,958	291,843	182,034	194,984	186,023
Ex-ante regulatory result (+/-) in percent of revenues	0.4%	1.1%	0.8%	1.4%	1.2%	0.9%
Ex-ante RoE pre-tax rate (in %)	6.0%	13.5%	10.5%	18.2%	14.3%	10.3%
<b>ACR actual regulatory result (SEK '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	520	28,756	29,276			
Revenue for the en route charging zone	132,885	165,540	298,425			
Ex-post regulatory result (+/-) in percent of revenues	0.4%	17.4%	9.8%			
Ex-post RoE pre-tax rate (in %)	6.0%	231.0%	138.3%			
<b>ARV planned regulatory result (SEK '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	5,918	6,450	12,368	6,958	7,056	6,499
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>ARV actual regulatory result (SEK '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	675	675			
Revenue for the en route charging zone	5,918	6,751	12,669			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	10.0%	5.3%			
Ex-post RoE pre-tax rate (in %)	0.0%	113.4%	46.6%			
<b>SDATS planned regulatory result (SEK '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	697	697	1,098	927	451
Revenue for the en route charging zone	53,782	66,772	120,553	65,135	66,696	57,679
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	1.0%	0.6%	1.7%	1.4%	0.8%
Ex-ante RoE pre-tax rate (in %)	0.0%	2.2%	1.1%	3.8%	3.9%	2.8%
<b>SDATS actual regulatory result (SEK '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	613	613			
Revenue for the en route charging zone	53,782	66,821	120,603			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	0.9%	0.5%			
Ex-post RoE pre-tax rate (in %)	0.0%	1.8%	0.9%			
<b>Sweden MET planned regulatory result (SEK '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	0	0	0	0	0	0
Revenue for the en route charging zone	48,904	49,900	98,804	51,264	52,708	52,991
Ex-ante regulatory result (+/-) in percent of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Sweden MET actual regulatory result (SEK '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	0	-761	-761			
Revenue for the en route charging zone	48,904	50,292	99,196			
Ex-post regulatory result (+/-) in percent of revenues	0.0%	-1.5%	-0.8%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSPs</b>						
<b>Total other ANSPs planned regulatory result (SEK '000)</b>						
	2020D	2021D	2020-2021D	2022D	2023D	2024D
Ex-ante regulatory result (+/-) for the en route charging zone	520	2,433	2,954	3,631	3,203	2,142
Revenue for the en route charging zone	241,488	282,079	523,568	305,391	321,444	303,192
Ex-ante regulatory result (+/-) in percent of revenues	0.2%	0.9%	0.6%	1.2%	1.0%	0.7%
Ex-ante RoE pre-tax rate (in %)	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total other ANSPs actual regulatory result (SEK '000)</b>						
	2020A	2021A	2020-2021A	2022A	2023A	2024A
Ex-post regulatory result (+/-) for the en route charging zone	520	29,283	29,803			
Revenue for the en route charging zone	241,488	289,404	530,892			
Ex-post regulatory result (+/-) in percent of revenues	0.2%	10.1%	5.6%			
Ex-post RoE pre-tax rate (in %)	N/A	N/A	N/A			
<b>Total other ANSPs overall regulatory result (RR) for the en route activity</b>						
Ex-post, the overall RR for the other ANSPs in the en route charging zone of Sweden (ACR, ARV, SDATS and MET service provider) corresponds to 5.6% of the en route revenues. The RoE cannot be calculated for the MET service provider, as its assets are fully financed through loans.						

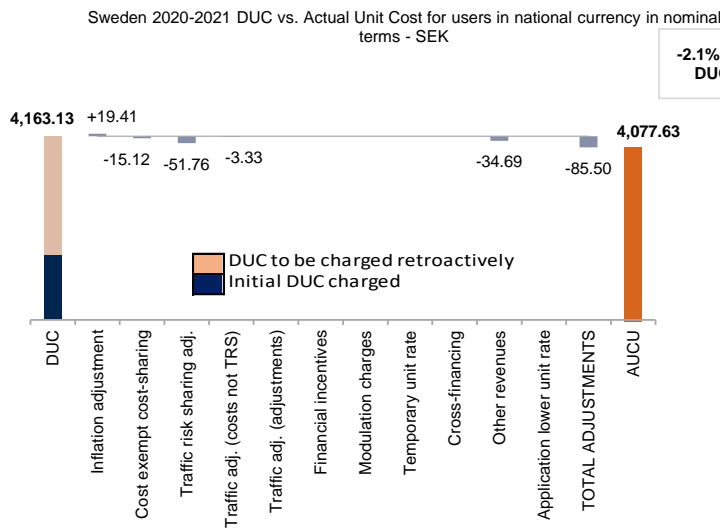
1. Contextual economic information: terminal air navigation services																					
<ul style="list-style-type: none"> <li>Sweden TCZ represents 1.6% of the SES terminal ANS actual costs in 2019</li> <li>Number of airports in charging zone in 2021: 1 of which:                             <ul style="list-style-type: none"> <li>Airports with fewer than 80,000 IFR mvmts: 0</li> <li>Airports with more than 80,000 IFR mvmts: 1</li> </ul> </li> <li>National currency: SEK Exchange rates (1 EUR=) 2017: 9.63311 SEK 2020: 10.4769 SEK 2021: 10.1376 SEK</li> <li>Performance Plan: See item 1 for the en-route charging zone(s).</li> </ul>																					
2. Monitoring of the terminal determined unit cost (DUC) at charging zone level																					
<p>The <b>Determined Unit Costs (DUC)</b> is the cost per service unit, at which the service is planned to be provided during the year. The <b>Actual Unit Cost (AUC)</b> reflects the cost per service unit, at which service has actually been provided during the year.</p> <p>The monitoring of the DUC / AUC is carried out in national currency in real terms, at 2017 prices.</p>																					
3. Terminal actual unit cost (AUC) vs. terminal determined unit cost (DUC)																					
Sweden: Data from RP3 Performance Plan		2020D	2021D	2020-2021D	2022D	2023D	2024D														
Terminal costs (nominal SEK)		252,628,250	189,276,363	441,904,612	200,172,902	205,638,071	208,304,348														
Inflation %		0.7%	1.5%		4.8%	2.2%	1.7%														
Inflation index (100 in 2017)		104.5	106.0		112.4	114.9	116.9														
Real terminal costs (SEK2017)		242,281,335	178,987,820	421,269,155	179,131,197	180,624,386	180,161,203														
Total terminal service units		54,147	52,000	106,147	104,000	137,000	142,000														
<b>Real terminal DUC per service unit (SEK2017)</b>		<b>4,474.50</b>	<b>3,442.07</b>	<b>3,968.73</b>	<b>1,722.42</b>	<b>1,318.43</b>	<b>1,268.74</b>														
<b>Real terminal DUC per service unit (EUR2017)</b>		<b>464.49</b>	<b>357.32</b>	<b>411.99</b>	<b>178.80</b>	<b>136.86</b>	<b>131.71</b>														
Sweden: Actual data from Reporting Tables		2020A	2021A	2020-2021A	2022A	2023A	2024A														
Terminal costs (nominal SEK)		252,628,250	189,671,860	442,300,110																	
Inflation %		0.7%	2.7%																		
Inflation index (100 in 2017)		104.5	107.3																		
Real terminal costs (SEK2017)		242,281,335	177,397,868	419,679,203																	
Total terminal service units		54,147	56,124	110,271																	
<b>Real terminal AUC per service unit (SEK2017)</b>		<b>4,474.50</b>	<b>3,160.80</b>	<b>3,805.87</b>																	
<b>Real terminal AUC per service unit (EUR2017)</b>		<b>464.49</b>	<b>328.12</b>	<b>395.08</b>																	
Difference between Actuals and Planned		2020	2021	2020-2021	2022	2023	2024														
Terminal costs (nominal SEK)	in value	0	395,497	395,497																	
	in %	-	+0.2%	+0.1%																	
Inflation %	in p.p.	0.0 p.p.	1.2 p.p.																		
Inflation index (100 in 2017)	in p.p.	0.0 p.p.	1.3 p.p.																		
Real terminal costs (SEK2017)	in value	0	-1,589,952	-1,589,952																	
	in %	-	-0.9%	-0.4%																	
Total terminal service units	in value	0	4,124	4,124																	
	in %	-	+7.9%	+3.9%																	
<b>Real terminal unit cost per service unit (SEK2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-281.27</b>	<b>-162.86</b>																	
	<b>in %</b>	<b>-</b>	<b>-8.2%</b>	<b>-4.1%</b>																	
<b>Real terminal unit cost per service unit (EUR2017)</b>	<b>in value</b>	<b>0.00</b>	<b>-29.20</b>	<b>-16.91</b>																	
	<b>in %</b>	<b>-</b>	<b>-8.2%</b>	<b>-4.1%</b>																	
4. Focus on terminal DUC monitoring at charging zone level																					
<p><b>AUC vs. DUC</b> The AUC was -4.1% (or -162.86 SEK2017, -16.91 €2017) lower than the planned DUC resulting from the combination of higher than planned TNSUs (+3.9%) and slightly lower than planned terminal costs in real terms (-0.4%, or -1.6 MSEK2017, -0.2 M€2017).</p> <p><b>Terminal service units</b> The difference between actual and planned TNSUs (+3.9%) falls outside the ±2% dead band. Hence the resulting additional terminal revenue is shared between the ANSPs and airspace users, with the main ANSP (LFV) retaining an amount of 8.4 MSEK (0.8 M€) (see item 11).</p> <p><b>Terminal costs by entity at charging zone level</b> Actual real terminal costs are slightly lower than planned (-0.4% or -0.2 M€2017). This is driven by the other ANSP, Swedavia (-3.8%, or -0.4 M€2017) and MET SP (-7.7%, or -0.1 M€2017), while the actual costs of the main ANSP, LFV are slightly higher than planned (+0.9%, or +0.3 M€2017). NSA costs are close to the planned costs (-0.5%).</p> <p><b>Terminal costs for the main ANSP (LFV) at charging zone level (see also Note 1 in item 12)</b> The slightly higher than planned terminal costs in real terms for LFV in 2020-2021 reflect a combination of:                      - lower staff costs (-1.5%); due to lower than planned pension costs. In addition, "staff costs were reduced by the revenues for staff participating in projects or other parts not financed by terminal charges";                      - significantly higher other operating costs (+14.7%); mainly due to higher training costs;                      - no depreciation costs are reported for LFV since these costs are fully borne by the other ANSP (Swedavia, airport operator) owning the CNS infrastructure at Arlanda;                      - nevertheless, LFV reports the cost of capital (computed on costs exempt from cost sharing from RP2), which turned out higher than planned (+6.2%); linked with a higher interest rate on debt used to compute the cost of capital.</p>				<p>2020-2021 actual vs. planned TNSUs</p> <p>Threshold -10%      Threshold +10%</p> <p>Dead-band -2%      Dead-band +2%</p> <p>+3.9%</p>																	
<p><b>Costs by entity at TCZ level (M€2017):</b></p> <table border="1"> <tr><td>Main ANSP</td><td>0.9%</td></tr> <tr><td>Other ANSP(s)</td><td>-3.8%</td></tr> <tr><td>METSP(s)</td><td>-7.7%</td></tr> <tr><td>NSA</td><td>-0.5%</td></tr> <tr><td>Total CZ</td><td>-0.4%</td></tr> </table>				Main ANSP	0.9%	Other ANSP(s)	-3.8%	METSP(s)	-7.7%	NSA	-0.5%	Total CZ	-0.4%	<p>Costs by entity at TCZ level (M€2017):</p>							
Main ANSP	0.9%																				
Other ANSP(s)	-3.8%																				
METSP(s)	-7.7%																				
NSA	-0.5%																				
Total CZ	-0.4%																				
<p><b>Costs by nature for main ANSP (M€2017):</b></p> <table border="1"> <tr><td>Staff costs</td><td>-1.5%</td></tr> <tr><td>Other operating costs</td><td>14.7%</td></tr> <tr><td>Depreciation</td><td>6.2%</td></tr> <tr><td>Cost of capital</td><td>0.9%</td></tr> <tr><td>Exceptional costs</td><td>0.9%</td></tr> <tr><td>VFR exempted flights</td><td>0.9%</td></tr> <tr><td>Total Main ANSP</td><td>0.9%</td></tr> </table>				Staff costs	-1.5%	Other operating costs	14.7%	Depreciation	6.2%	Cost of capital	0.9%	Exceptional costs	0.9%	VFR exempted flights	0.9%	Total Main ANSP	0.9%	<p>Costs by nature for main ANSP (M€2017):</p>			
Staff costs	-1.5%																				
Other operating costs	14.7%																				
Depreciation	6.2%																				
Cost of capital	0.9%																				
Exceptional costs	0.9%																				
VFR exempted flights	0.9%																				
Total Main ANSP	0.9%																				

5. Monitoring of the terminal actual unit cost for users (AUCU) at charging zone level

The **Actual Unit Cost for Users (AUCU)** reflects the price per service units that is charged *in fine* to users for the services provided in the year. It corresponds to the sum of the DUC for the year and of the different adjustments stemming from that year.

The monitoring of the AUCU is carried out in national currency in nominal terms.

6. Terminal actual unit cost for users (AUCU) at charging zone level



Components of the AUCU	SEK/SU	EUR/SU
Initial DUC charged	1,472.46	142.95
DUC to be charged retroactively	2,690.67	260.11
<b>DUC</b>	<b>4,163.13</b>	<b>403.06</b>
Inflation adjustment	19.41	1.91
Cost exempt from cost-sharing	-15.12	-1.49
Traffic risk sharing adjustment	-51.76	-5.11
Traffic adj. (costs not TRS)	-3.33	-0.33
Traffic adj. (adjustments)*		
Financial incentives	0.00	0.00
Modulation of charges	0.00	0.00
Temporary UR**		
Cross-financing	0.00	0.00
Other revenues	-34.69	-3.37
Application of lower unit rate	0.00	0.00
Total adjustments	-85.50	-8.38
<b>AUCU</b>	<b>4,077.63</b>	<b>394.68</b>
<b>AUCU vs. DUC</b>	<b>-2.1%</b>	<b>-2.1%</b>

\* The traffic adjustment on adjustments for 2020-2021 relates to other revenues or cross-financing between charging zones that relate to years 2020 and 2021 and that were included in the temporary unit rates billed in these two years. As these adjustments are presented in full, the traffic adjustment is not considered, in order to avoid double counting.

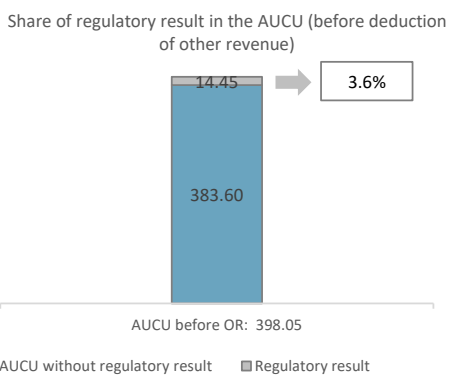
\*\* The difference in revenue due to the application of the temporary unit rates in 2020 and 2021 is already reflected in the DUC (part to be charged retroactively) and is therefore not considered in the total adjustments, in order to avoid double counting.

7. Terminal costs exempt from cost sharing

		SEK '000	EUR '000	SEK/SU	EUR/SU
by item	New and existing investments	535	53	4.85	0.48
	Competent authorities and qualified entities costs	-4	0	-0.04	0.00
	Eurocontrol costs	0	0	0.00	0.00
	Pension costs	-2,198	-217	-19.93	-1.97
	Interest on loans	0	0	0.00	0.00
	Changes in law	0	0	0.00	0.00
<b>Total costs exempt from cost sharing</b>		<b>-1,667</b>	<b>-164</b>	<b>-15.12</b>	<b>-1.49</b>

Source: "NSA Report on the verification of cost-sharing for the combined year 2020-2021" submitted in accordance with Article 28 (7) of Regulation (EU) 2019/317.

8. Terminal regulatory result at charging zone level



ATSP(S)	SEK '000	EUR '000	SEK/SU	EUR/SU
LFV	3,827	378	34.71	3.42
SWEDAVIA	12,354	1,211	112.03	10.98
METSP(s)	SEK '000	EUR '000	SEK/SU	EUR/SU
Sweden-Arlanda-MET	55	5	0.50	0.05
<b>Total charging zone</b>	<b>16,236</b>	<b>1,594</b>	<b>147.24</b>	<b>14.45</b>
<b>Actual cost for users***</b>	<b>453,472</b>	<b>43,893</b>	<b>4,112.33</b>	<b>398.05</b>
<b>Regulatory result (% AUCU)</b>	<b>3.6%</b>	<b>3.6%</b>	<b>3.6%</b>	<b>3.6%</b>

\*\*\* before deduction of other revenues, as is the case for the regulatory results (see items 10 to 14)

9. Focus on terminal AUCU monitoring at charging zone level

The actual unit cost incurred by airspace users (AUCU) in respect of terminal activities in the Sweden-Arlanda terminal charging zone for the combined year 2020-2021 (4,077.63 SEK or 394.68 €) is -2.1% lower than the nominal DUC (4,163.13 SEK or 403.06 €), which includes DUC initially charged: 1,472.46 SEK or 142.95 €; and to be charged: 2,690.67 SEK or 260.11 €. The difference between these two figures (-85.50 SEK/SU or -8.38 €/SU) is due to:

- the positive inflation adjustment resulting from higher than planned inflation (+19.41 SEK/SU or +1.91 €/SU);
- the impact of adjustments resulting from the costs exempted from cost-sharing mechanism (-15.12 SEK/SU or -1.49 €/SU);
- the deduction of traffic risk sharing (-51.76 SEK/SU or -5.11 €/SU) and traffic (-3.33 SEK/SU or -0.33 €/SU) adjustments; and,
- the deduction of the other revenues (-34.69 SEK/SU or -3.37 €/SU).

The share of regulatory result (see item 8) in the AUCU (before the deduction of other revenues) is 3.6%.

**10. Monitoring of the terminal ANSPs regulatory results (RR)**

The **Regulatory Result (RR)** corresponds to the revenues generated by the activities of the year, that exceed the direct and indirect operating costs of an ANSP, and so provide for a reasonable return on assets to contribute towards necessary capital improvements. The notion of RR focuses on the ANSP results entitled to the ANS activity in the year. It is therefore different from the net accounting profit disclosed in ANSPs financial statements. Also, it does not take into account of any opportunity cost.

The RR, when expressed in percentage of the revenues, can be associated to a "margin" generated by the ANSP with respect to the activity of the year, but it is not comparable to the margin that would be calculated straight from ANSPs financial statements.

- Ex-ante, the RR is equal to the RoE (in value) included in the determined cost of capital.
- Ex-post, the RR is the sum of the RoE (in value) in the actual cost of capital and the net gain/loss resulting from risk sharing and incentives generated from that year.

The **net gain/loss** calculated in box 11 results from the combination of three distinct items: a) the outcome of the cost-sharing mechanism to be retained by the ANSP (including the impact of costs exempted from cost-charging and of the inflation adjustment); b) the outcome of the traffic risk sharing mechanism; and c) the outcome of the financial incentive mechanism for capacity and environment targets (not applicable for the combined year 2020-2021).

The monitoring of the RR is carried out in national currency in nominal terms.

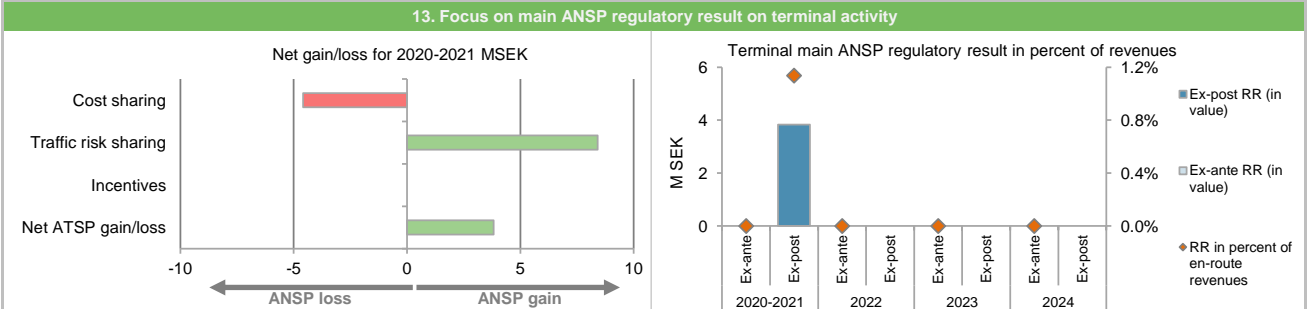
**11. Net gain/loss for the main ANSP for the terminal activity at charging zone level**

Cost sharing (SEK '000)	2020-2021	2022	2023	2024
Difference in costs: gain (+)/Loss (-) retained/borne by the ANSP	-4,588			
Inflation adjustment to be recovered from (+) or reimbursed to (-) users	1,562			
Amounts excluded from cost sharing to be recovered from (+) or reimbursed to (-) users	-1,560			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of cost sharing</b>	<b>-4,586</b>			
Traffic risk sharing (SEK '000)	2020-2021	2022	2023	2024
Difference in total service units (actual vs PP) %	3.9%			
Determined costs subject to traffic risk sharing for the ANSP (PP)	327,912			
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of traffic risk sharing</b>	<b>8,413</b>			
Incentives (SEK '000)	2020-2021	2022	2023	2024
<b>Gain (+)/Loss (-) to be retained by the ANSP in respect of incentives (bonus/penalty)</b>	<b>0</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (SEK '000)</b>	<b>3,827</b>			
<b>Net ANSP gain(+)/loss(-) on terminal activity (EUR '000)</b>	<b>378</b>			

**12. Regulatory result (RR) for the main ANSP at charging zone level**

LFV planned regulatory result (SEK '000) from RP3 PP	2020	2021	2020-2021D	2022	2023	2024
Total asset base	98,951	86,582	185,534	74,213	61,845	49,476
Proportion of financing through equity (in %)	17%	15%	16%	10%	7%	4%
RoE pre-tax rate (in %)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
RoE (in value)	0	0	0	0	0	0
<b>Ex-ante regulatory result (+/-) for the terminal charging zone *see Note 1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Revenue for the terminal charging zone</b>	<b>194,939</b>	<b>132,972</b>	<b>327,912</b>	<b>139,239</b>	<b>141,303</b>	<b>143,837</b>
<b>Ex-ante regulatory result (+/-) in percent of revenues</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Ex-ante RoE pre-tax rate (in %)</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
LFV actual regulatory result (SEK '000)	2020	2021	2020-2021A	2022	2023	2024
Total asset base	98,951	92,767	191,718			
Proportion of financing through equity (in %)	17%	21%	19%			
RoE pre-tax rate (in %)	0.0%	0.0%	0.0%			
RoE (in value)	0	0	0			
Net ANSP gain(+)/loss(-) for the terminal charging zone	0	3,827	3,827			
<b>Ex-post regulatory result (+/-) for the terminal charging zone *see Note 1</b>	<b>0</b>	<b>3,827</b>	<b>3,827</b>			
<b>Revenue for the terminal charging zone</b>	<b>194,939</b>	<b>141,387</b>	<b>336,327</b>			
<b>Ex-post regulatory result (+/-) in percent of revenues</b>	<b>0.0%</b>	<b>2.7%</b>	<b>1.1%</b>			
<b>Ex-post RoE pre-tax rate (in %)</b>	<b>0.0%</b>	<b>19.5%</b>	<b>10.5%</b>			

**Note 1:** LFV reports a financing of asset base at the level of some 80% of debt in 2020-2021, corresponding to its pension liabilities, which are remunerated at the inflation rate.



**LFV net gain on terminal activity in the Sweden-Arlanda terminal charging zone in the combined year 2020-2021**

LFV generated a net gain of +3.8 MSEK (+0.4 M€), as a combination of a loss of -4.6 MSEK arising from the cost sharing mechanism and a gain of +8.4 MSEK arising from the traffic risk sharing mechanism.

**LFV overall regulatory results (RR) for the terminal activity**

Ex-post, the overall RR is equal to the net gain from the terminal activity mentioned above and amounts to +3.8 MSEK (1.1% of the terminal revenues). The resulting ex-post rate of return on equity is 10.5%, which is higher than the 0.0% RoE planned in the PP.

14. Other ANSP(s) / METSP(s) regulatory results for terminal activity						
<b>SWEDAVIA planned regulatory result (SEK '000)</b>						
	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	2,378	2,686	5,064	3,314	3,741	4,185
Revenue for the terminal charging zone	52,847	51,689	104,536	56,130	59,559	59,623
Ex-ante regulatory result (+/-) in percent of revenues	4.5%	5.2%	4.8%	5.9%	6.3%	7.0%
Ex-ante RoE pre-tax rate (in %)	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
<b>SWEDAVIA actual regulatory result (SEK '000)</b>						
	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	2,378	9,976	12,354			
Revenue for the terminal charging zone	52,847	55,550	108,398			
Ex-post regulatory result (+/-) in percent of revenues	4.5%	18.0%	11.4%			
Ex-post RoE pre-tax rate (in %)	9.0%	35.3%	22.6%			
<b>Sweden-Arlanda-MET planned regulatory result (SEK '000)</b>						
	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	65	127	192	148	128	108
Revenue for the terminal charging zone	4,481	4,182	8,663	4,363	4,326	4,384
Ex-ante regulatory result (+/-) in percent of revenues	1.4%	3.0%	2.2%	3.4%	3.0%	2.5%
Ex-ante RoE pre-tax rate (in %)	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
<b>Sweden-Arlanda-MET actual regulatory result (SEK '000)</b>						
	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	65	-10	55			
Revenue for the terminal charging zone	4,481	3,478	7,958			
Ex-post regulatory result (+/-) in percent of revenues	1.4%	-0.3%	0.7%			
Ex-post RoE pre-tax rate (in %)	9.0%	-1.2%	3.5%			
<b>Total other ANSPs planned regulatory result (SEK '000)</b>						
	2020	2021	2020-2021D	2022	2023	2024
Ex-ante regulatory result (+/-) for the terminal charging zone	2,443	2,814	5,256	3,462	3,869	4,294
Revenue for the terminal charging zone	57,328	55,871	113,199	60,493	63,885	64,007
Ex-ante regulatory result (+/-) in percent of revenues	4.3%	5.0%	4.6%	5.7%	6.1%	6.7%
Ex-ante RoE pre-tax rate (in %)	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
<b>Total other ANSPs actual regulatory result (SEK '000)</b>						
	2020	2021	2020-2021A	2022	2023	2024
Ex-post regulatory result (+/-) for the terminal charging zone	2,443	9,966	12,409			
Revenue for the terminal charging zone	57,328	59,028	116,356			
Ex-post regulatory result (+/-) in percent of revenues	4.3%	16.9%	10.7%			
Ex-post RoE pre-tax rate (in %)	9.0%	34.3%	22.1%			
<b>Total other ANSPs overall regulatory result (RR) for the terminal activity</b>						
Ex-post, the overall RR for the other ANSPs in the terminal charging zone Arlanda-Sweden (Swedavia and MET service provider) corresponds to 10.7% of the terminal revenues, which is higher than the 4.6% planned in the PP.						

1. Monitoring of gate-to-gate ANS costs							
Charging zones concerned:							
En route charging zone 1: Sweden		En route charging zone 2:					
Terminal charging zone 1: Sweden		Terminal charging zone 2:					
Sweden: data from RP3 performance plan		2020D	2021D	2020-2021D	2022D	2023D	2024D
Real en route costs (EUR2017)		269,184,049	212,688,663	481,872,712	219,051,593	219,489,697	205,387,821
Real terminal costs (EUR2017)		25,150,895	18,580,481	43,731,376	18,595,365	18,750,371	18,702,289
Real gate-to-gate costs (EUR2017)		294,334,944	231,269,144	525,604,088	237,646,958	238,240,068	224,090,109
En route share (%)		91.5%	92.0%	91.7%	92.2%	92.1%	91.7%
Sweden: actual data from reporting tables		2020A	2021A	2020-2021A	2022A	2023A	2024A
Real en route costs (EUR2017)		269,184,049	205,129,129	474,313,178			
Real terminal costs (EUR2017)		25,150,895	18,415,431	43,566,325			
Real gate-to-gate costs (EUR2017)		294,334,944	223,544,560	517,879,503			
En route share (%)		91.5%	91.8%	91.6%			
Difference between actuals and planned (actuals vs. PP)		2020	2021	2020-2021	2022	2023	2024
Real gate-to-gate costs (EUR2017) in value		0	-7,724,585	-7,724,585			
in %		0.0%	-3.3%	-1.5%			
En route share in p.p.		0.0 p.p.	-0.2 p.p.	-0.1 p.p.			
2. Share of en route and terminal in gate-to-gate actual costs (2020-2021)							
				<p>In the combined year 2020-2021, actual gate-to-gate ANS costs are -1.5% (-7.7 M€2017) lower than planned, as both en route and terminal costs were lower (-7.6 M€2017 and -0.2 M€2017, respectively).</p> <p>The actual share of en route in gate-to-gate ANS costs (91.6%) is slightly below the plan (-0.1 p.p.) for that period.</p>			
3. Gate-to-gate regulatory result (RR) 2020-2021							
In SEK '000							
		Ex-ante			Ex-post		
ANSP(S)	RR	Revenues	RR % revenues	RR	Revenues	RR % revenues	
LFV	4,871	4,141,391	0.1%	85,420	4,204,162	2.0%	
ACR	2,257	291,843	0.8%	29,276	298,425	9.8%	
ARV	0	12,368	0.0%	675	12,669	5.3%	
SDATS	697	120,553	0.6%	613	120,603	0.5%	
Sweden-SWEDAVIA	5,064	104,536	4.8%	12,354	108,398	11.4%	
METSP(s)	RR	Revenues	RR % revenues	RR	Revenues	RR % revenues	
Sweden MET	0	98,804	0.0%	-761	99,196	-0.8%	
Sweden-Arlanda-MET	192	8,663	2.2%	55	7,958	0.7%	
<b>Total</b>	<b>13,081</b>	<b>4,778,157</b>	<b>0.3%</b>	<b>127,631</b>	<b>4,851,410</b>	<b>2.6%</b>	
<p>For the ANSPs providing services in the en route and terminal charging zones of Sweden covered by the SES performance scheme, the ex-post gate-to-gate regulatory result in 2020-2021 amounts to a gain of +127.6 MSEK (+111.4 MSEK for en route and +16.2 MSEK for terminal - see boxes 10 to 14 for the detailed analysis at charging zones level), corresponding to 2.6% of gate-to-gate ANS revenues.</p> <p>This is higher than the return planned for the year included in the performance plan (0.3%).</p>				<p>Sweden gate-to-gate 2020-2021 regulatory result in % of revenues</p>			