



**SES II Performance Scheme**

**Assessment of National / FAB  
Performance Plans with Performance  
Targets for the period 2012-2014**

**Prepared by the  
Performance Review Body (PRB)  
of the Single European Sky**

20 September 2011



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## FOREWORD by the PRB Chairman, Mr Peter Griffiths



I have great pleasure in presenting to you the first report of the Performance Review Body of the Single European Sky on national/FAB Performance Plans submitted for the 1<sup>st</sup> Reference Period (RP1: 2012-2014) to address the performance targets adopted by the European Commission for RP1. After three years of work, and for the first such planning cycle, the results are significant: there is only a little way to go in order to reach the agreed EU-wide targets. The plans will need to be fine-tuned accordingly. As you will recall from public meetings and speeches I have made on this subject, this is just the start. It is a transitional period, and we have much to learn about how we can use this new programme.

This report presents the PRB's independent assessments of individual plans and overall conclusions, which should become the foundation for future planning. It also gives clues on the performance objectives that will need to be addressed in future cycles.

The assessments contained herein are comprehensive and objective. They seek to provide an understanding of the complexity of the task, as well as future opportunities. They acknowledge the positive contributions and recognise the areas that will need further work as the performance cycle matures. There are also comments on the content of the plans themselves. The PRB thanks everyone concerned for their work and hope that this report is taken in the spirit of cooperation required to build an effective Single European Sky.

I would however like to draw your attention, prior to reading the report, to the prevailing macro-economic climate. All of the States' economies are under pressure to reassess the size of their public expenses and deficits. Political will and economic necessity are therefore adding to the pressures to increase efficiency.

Expectations in the airline industry are high that investments made in previous years will start to deliver in this, and subsequent reference periods, benefits for capacity and cost efficiency. The driver for this is that the airline industry is just emerging from the worst economic shock in its history which, according to IATA figures, has removed 9% of traffic growth.

All of this affects our combined ability to deliver the targets, which is essential for the sustainability of the industry. The key challenge over the next three years is to build delivery mechanisms, which recognise negative trends early enough, allow agility to contain costs whilst maintaining performance trend and still deliver the changes necessary for future ATM programmes.

The Performance Plans provide the industry with new tools to address these challenges, to look for opportunities and to enable all concerned to become more adaptable to change. We also see new cooperative mechanisms with the formation of a cross-boundary service provider in the Scandinavian region and extensive cooperation within the FABEC region, which are expected to start delivering results already in RP1.

In closing, I would like to acknowledge on behalf of the PRB the personal contribution of all of the members of the Performance Review Unit who could not have helped deliver this report without considerable personal sacrifice by them and their families. This report is a tribute to their dedication and professionalism.

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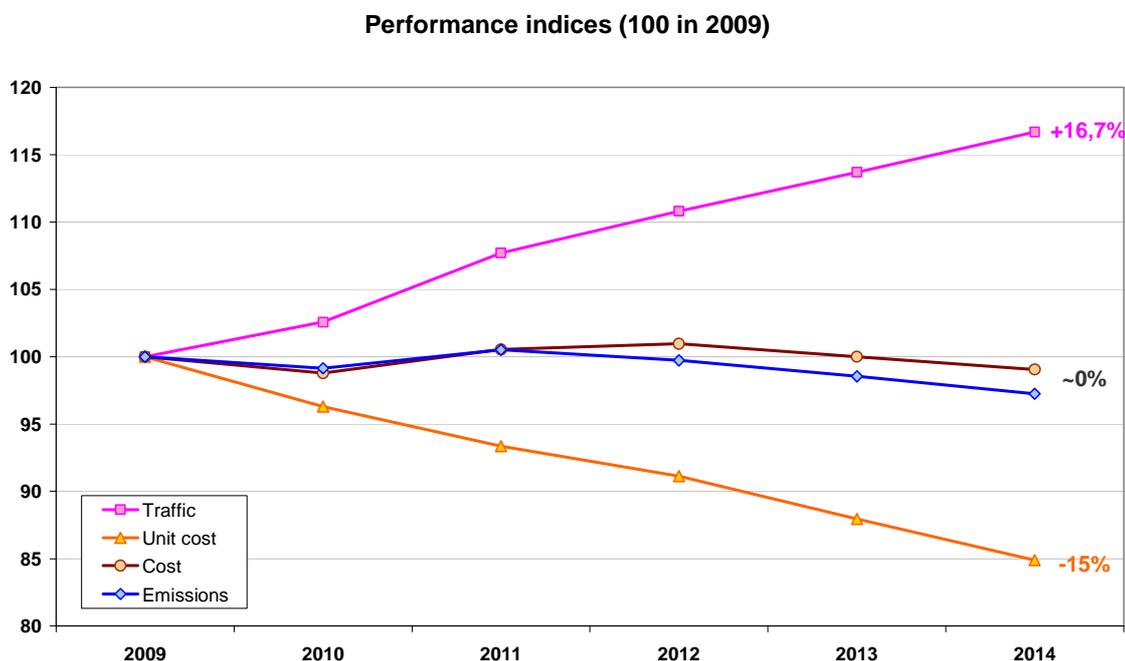
# Executive Summary

## Introduction

1. The performance scheme is a fundamental element of the Single European Sky legislative package (SES II) that was adopted by the European Union in 2009 to improve the operational, environmental and financial efficiency of European Air Navigation Services (ANS) whilst maintaining safety, and optimising it where possible.
2. The European Commission adopted EU-wide targets<sup>1</sup> for the first reference period (RP1: 2012-14) in February 2011, covering three Key Performance Areas: Environment, Capacity and Cost-Efficiency.
3. Volume I of this report presents the Performance Review Body's (PRB) overall assessment of national/FAB Performance Plans for RP1, as well as PRB recommendations to the European Commission. The PRB's assessment of individual Performance Plans can be found in Volume II.
4. Based on this report, the European Commission will prepare acceptance letters or draft recommendations to submit revised plans by end 2011. The European Commission may also wish to take further action. These recommendations will be discussed at the Single Sky Committee ad-hoc meeting on 24 October 2011.

## EU-wide performance targets for RP1 (2012-14)

5. Safety will continue to be ensured through regulatory requirements and, during RP1, safety will also transition to monitoring using harmonised indicators,



**Figure 1: Impact of EU-wide targets for RP1**

6. Achievement of these targets will have a significant impact on ANS performance, as shown in Figure 2, while traffic grows +3.2% per annum in the nominal scenario<sup>2</sup>:

<sup>1</sup> Commission decision of 21 February 2011 setting the European Union-wide performance targets and alert thresholds for the provision of air navigation services for the years 2012 to 2014 (OJ L 48, 23.2.2011, p.16).

- The environmental target will ensure carbon-neutrality of aviation growth insofar as en-route ANS is concerned.
  - The capacity target is designed to avoid major disruptions and indirect costs for airspace users and their passengers from ANS delays.
  - The cost-efficiency target, together with the charging regime, will secure progressive improvement in unit rates and maintain route charges nearly constant over the period.
7. National or Functional Airspace Blocks (FAB) Performance Plans, consistent with EU-wide targets as a whole, have to be adopted before RP1 starts (i.e. by end 2011) or shortly thereafter if they are subject to a revision. These plans and the monitoring of their delivery are fundamental to meeting the EU-wide targets.
8. The table below gives key figures about national/FAB plans vs. EU-wide targets and illustrates the narrow gap between them.

EU27 + CH, NO	2014	2012 – 2014
<b>Total traffic</b>	<b>9.8 Million flights</b>	
<b>Staff</b>	<b>~ 40.000</b>	
<b>En-route ANS charges</b>	<b>€6.2 Billion</b>	<b>€18.9 Billion</b>
<b>EU Cost efficiency target</b>	<b>€53.92</b>	
Total of all Performance Plans	€55.22 (+2.4%)	
Value of the gap	€157 M	<b>€256 M</b>
<b>EU capacity target</b>	<b>0.5 minutes/flight</b>	
Total of all Performance Plans	0.76 minutes/flight	
Value of the gap	€195 M	<b>€922 M</b>

**Figure 2: European ANS key data**

## 9. PRB's overall conclusions

10. The PRB is pleased to acknowledge major progress and efforts made towards adoption of national/FAB Performance Plans for RP1.
11. For the first time ever, 28 Performance Plans (26 national and 2 FAB) were prepared in a harmonised way, consulted with airspace users and submitted by the due date (end June 2011), or very shortly thereafter.
12. Moreover, these Performance Plans collectively are not too far from the EU-wide targets for RP1. This constitutes a very solid and encouraging base on which to adopt Performance Plans that meet EU-wide targets.

## SAFETY

13. Even though national targets are not mandatory for safety during RP1<sup>3</sup>, all Performance Plans include substantial elements on safety performance, such as safety processes, performance indicators and targets in some cases.

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<sup>2</sup> Maintaining ANS costs constant in real terms is consistent with the original policy objective given by then EC Vice President Mr Barrot to halve unit costs when traffic has doubled.

<sup>3</sup> The performance regulation specifies three Key Performance Indicators for safety, so as to foster harmonised Safety performance monitoring during RP1. Safety performance was not harmonised enough for the EU. legislator to mandate adoption of EU-wide safety targets for RP1. The safety part of national/FAB plans is therefore essential to address safety performance.

14. These plans were assessed by the PRB together with EASA as to their suitability for safety performance monitoring during RP1. A number of observations are made, notably the need to reinforce the safety capabilities of National Supervisory Authorities (NSA) within the concerned State or preferably through the corresponding FAB.

## **ENVIRONMENT**

15. Even though national targets are not mandatory for environment during RP1, most Performance Plans include elements on environmental performance, but only FABEC and the Netherlands included performance targets.
16. The Network Manager will have a fundamental role in ensuring delivery of the EU-wide target for environment. Corresponding performance objectives should be included in the Network Strategic Plan, to be presented before RP1 starts, and adopted with high priority.

## **CAPACITY**

17. The majority of Performance Plans nearly meet the reference values provided by EUROCONTROL for en-route ATC capacity, including in the densest part of Europe. This is a major step toward significant improvement of the network performance, which can be further amplified by action of the Network Manager. This action should be identified and quantified in the Network Strategic Plan.
18. However, current Performance Plans collectively reach 0.76 min/flight in 2014. This falls short of the EU-wide capacity target (0.5 min/flight) by a relatively small margin in delay terms, but leads to financially significant consequences for the airspace users. Some €920M additional delay costs could be saved over RP1 if the EU target was met.
19. The PRB's detailed analysis shows that there are opportunities for further improvement in en-route capacity, and that the EU-wide capacity target could be reached through co-ordinated actions from States, ANSPs, FABs and the Network Manager.
20. No State, other than Italy and the UK, included financial incentives on capacity in their Performance Plans. The PRB in principle welcomes incentives. However, the PRB considers that bonuses should only reward tangible performance improvements. Incentives are an area that needs further work for RP2.

## **COST-EFFICIENCY**

21. The EU-wide target for cost-effectiveness is a Determined Unit Rate (DUR) of €53.92 per service unit (SU) in 2014. Intermediate targets set for 2012 and 2013 are €57.88 and €55.87 per SU, respectively.
22. Performance Plans collectively fit within the total cost for 2012 specified in the EC decision on EU-wide targets for RP1, and are close to the intermediate DUR value for 2012 (+0.3%). This constitutes a solid basis on which to start the reference period.
23. However, the Performance Plans collectively fall short of the EU-wide cost-efficiency target for 2014 by a relatively small margin (+2.4%) in delay terms. In monetary terms, further savings of €256M out of a total of €18 900M need to be made in order to meet the EU-wide target and intermediate values over RP1.
24. The PRB's detailed analysis shows that there are significant opportunities to close this gap in most Performance Plans.
25. Areas of improvement are identified in the PRB's detailed assessments. Depending on States/FABs, they include: adoption of refined traffic and inflation hypotheses, return on equity consistent with actual risks borne given the protection offered by the Charging Scheme regulation (sharing of the traffic risk, uncontrollable costs), rationalisation of investment programmes, convergence towards peers in the comparator group, and specific national initiatives.

## **General remarks**

26. The fact that very few of the Performance Plans fully pass all technical checks is to be expected as this is the first time of such EU-wide target setting. The gaps in capacity and cost-efficiency are relatively small and most Performance Plans clearly identified scope for improvement.
27. The submission of revised plans by end 2011 gives a formal opportunity to close the remaining gaps and collectively agree on Performance Plans aiming at meeting the EU targets in 2014.
28. The experience gained by the PRB from assessing these Performance Plans, and the knowledge gained of best practices in the States/FABs, will constitute a solid foundation for performance monitoring and target setting in the second reference period.

## **Recommendations**

29. Based on the detailed assessment of the 28 Performance Plans, the PRB proposes in Chapter 5 a number of recommendations to close the gap with the EU-wide targets. It also proposes some recommendations in order to prepare for the 2<sup>nd</sup> Reference Period (RP2: 2015-2019).

# 1 Introduction and context

## 1.1 This report

- 1.1.1 This report has been prepared by the Performance Review Body (PRB) of the Single European Sky (SES). EUROCONTROL, acting through its Performance Review Commission (PRC) supported by the Performance Review Unit (PRU), has been designated as the PRB until mid-2015 [Ref. i]. In this context, the PRB reports to the European Commission in accordance with the provisions of Article 3(2) of Regulation (EU) No 691/2010 (the performance Regulation).
- 1.1.2 It presents the PRB's assessment of Performance Plans submitted by States or Functional Airspace Blocks (FAB) for the first reference period (RP1: 2012-2014) under the SES performance scheme, as well as PRB recommendations to the European Commission.
- 1.1.3 Based on this report, the European Commission will prepare either acceptance letters or draft recommendations to revise the plans. These recommendations will be discussed at an ad-hoc meeting of the Single Sky Committee on 24 October 2011.
- 1.1.4 The PRB's assessment of Performance Plans is broken down into two volumes:
  - Volume I: High level report presented in the main body of this report;
  - Volume II: 28 assessment reports, one for each Performance Plan. It is attached to this report.
- 1.1.5 The remainder of this report (Volume I) is organised as follows:
  - Chapter 2: PRB's approach.
  - Chapter 3: General assessment of Performance Plans.
  - Chapter 4: Summary of National/ FAB Performance Plans assessments.
  - Chapter 5: Recommendations.
  - Annex I: Assessment methodology.

## 1.2 Adoption of Performance targets and plans for RP1

1.2.1 As the first step in the implementation of the performance scheme Regulation [Ref. ii], the European Commission adopted EU-wide performance targets and alert thresholds for the provision of air navigation services for the first reference period 2012-2014 [Ref.iii].

1.2.2 As illustrated in Figure 1-1, this decision sets the following EU-wide performance targets:

- **Environment target:** an improvement by 0.75% point of the average horizontal en route flight efficiency indicator in 2014 as compared to the situation in 2009.
- **Capacity target:** an improvement of the average en route Air Traffic Flow Management (ATFM) delay so as to reach a maximum of 0.5 minutes per flight in 2014.
- **Cost efficiency target:** a reduction of the average European Union-wide determined unit rate for en route air navigation services from €59.97 in 2011 to €53.92 in 2014 (expressed in real terms, Euros 2009), with intermediate annual values of €57.88 in 2012 and €55.87 in 2013.

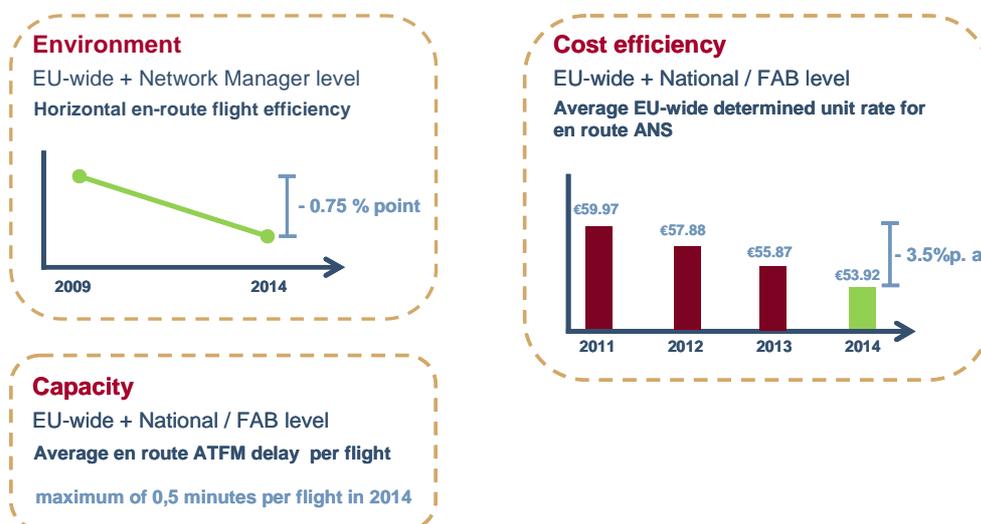


Figure 1-1: EU-wide performance targets adopted by the Commission

1.2.3 The geographical scope of the EU-wide targets corresponds to the airspace controlled by the 27 EU Member States plus Norway and Switzerland (29 States) in the ICAO EUR region, as well as the Canaries FIR (Spain), Bodø FIR (Norway) and NOTA/SOTA (UK/IRL).

1.2.4 This scope is illustrated in Figure 1-2.

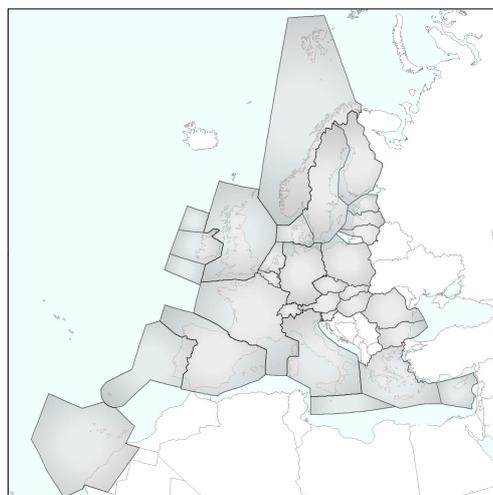
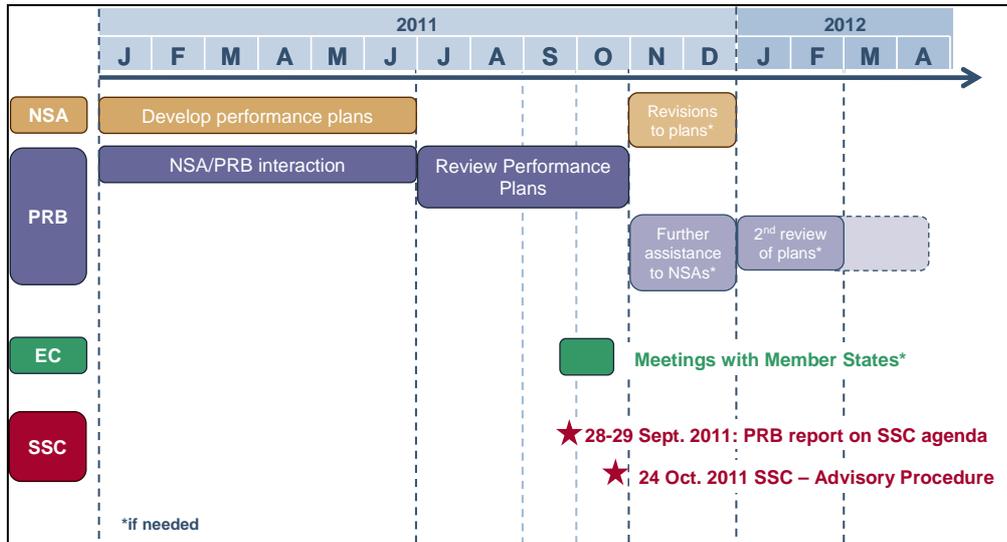


Figure 1-2: Geographical scope of EU-wide targets

1.2.5 The next steps are related to the preparation and adoption of national/FAB Performance Plans. These steps are described in Article 13 of the performance scheme regulation and illustrated in Figure 1-3.



**Figure 1-3: Process and timing of the assessment**

1.2.6 As a second step, States were required to prepare Performance Plans at National or Functional Airspace Block (FAB) level. Section 3.2 describes in more detail this phase which successfully ended on time, by the end of June 2011.

1.2.7 The third step, which this report addresses, covers the assessment by the European Commission, assisted by the PRB, of these national or FAB Performance Plans against the EU-wide performance targets.

- The final PRB report to the European Commission assessing national Performance Plans will be presented and distributed to Single Sky Committee (SSC) members for consideration at SSC/43 of 28/29 September 2011.
- The European Commission will notify those States whose national/FAB Performance Plans are considered to be consistent and contributing adequately to the EU-wide targets as soon as possible. This notification will quote the key figures of the Performance Plan which have been agreed and adopted (Article 13.2).
- The Recommendations from the European Commission will be discussed during the ad-hoc meeting of the Single Sky Committee on 24 October 2011 (Advisory procedure). Prior to issuing such a recommendation, the European Commission will consult the States(s) concerned (Article 13.3).

1.2.8 The fourth and fifth steps will apply only for those States/FABs who have to revise their Performance Plan.

- The States concerned will have two months at the latest after the issuance of the recommendation to revise their Performance Plan and adopt revised targets, taking due account of the European Commission's views together with the appropriate measures for reaching those targets (Article 13.4).
- The European Commission will then have 2 months to assess the revised performance targets (Article 14).

## 2 PRB's approach

### 2.1 Support to NSAs

2.1.1 In the first half of 2011, the PRB provided support and guidance to National Supervisory Authorities (NSAs), to assist them in developing their Performance Plans and to ensure that they have access to the relevant data held by the PRB and the EUROCONTROL Agency. This support has taken the form of:

- Guidance material for Performance Plans: issued in February 2011.
- NSA Co-ordination Platform meetings (as well as its dedicated Performance Working Group) including discussion of the guidance material and progress reports on the development of Performance Plans.
- A web page providing access to data and information on the stakeholder meetings taking place on the development of the States' Performance Plans<sup>4</sup>.
- Bilateral meetings with 23 NSAs, at their request, between March and May 2011 to discuss: background data, performance of their ANSPs, timing and process, specific questions NSAs may have as well as their planning and expectations for the Performance Plans.
- When draft versions of Performance Plans were shared during these bilateral meetings, a compliance check was provided against the requirements of the performance scheme Regulation.

### 2.2 Legal requirements

2.2.1 The assessment of each Performance Plan has been carried out according to the requirements of the performance scheme Regulation (Article 13 and Annex III), as well as the recitals of European Commission's Decision 2011/121/EU setting the EU-wide targets for RP1. These stipulate, inter alia, that:

- *the Performance Plans are assessed on the basis of the criteria laid down in Annex III to the performance scheme Regulation;*
- *the consistency and contribution of the national/FAB targets are assessed against the EU-wide targets;*
- *the evolution of the context that may have occurred between the date of adoption of the EU-wide targets and the date of assessment of the Performance Plan should be taken into account;*
- *the assessment should take into account the local context, in particular for States with low unit rates or under the 'European Support Mechanism', such as cost containment measures already undertaken, planned costs for specific programmes to gain performance improvements in dedicated performance fields, and specificities including achievements as well as failures;*
- *the assessment should also take into account the progress already made by Member States since the adoption of Regulation (EC) No 1070/2009 of the European Parliament and of the Council in the various key performance areas and in particular the cost-efficiency area;*
- *the PRB should make recommendations for the revision of national/FAB performance targets PRB when these targets are found not to be consistent with, and adequately contributing to, the EU-wide targets;*

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<sup>4</sup> [http://www.eurocontrol.int/prc/public/standard\\_page/Support\\_to\\_NSAs.html](http://www.eurocontrol.int/prc/public/standard_page/Support_to_NSAs.html)

- *The Commission will then take a decision after consultation with the Member State(s) concerned. This decision will identify precisely which target(s) has/have to be revised, as well as the rationale of the Commission’s assessment.*

## 2.3 Principles, methodology, processes and organisation

### PRINCIPLES

2.3.1 The PRB applied the following principles in its assessment of national and FAB Performance Plans:

- **Independent assessment:** The assessment team comprised independent members of the PRB supported by the PRU and consultants bound by confidentiality and code of conduct clauses.
- **Evidence based analysis:** the analytical framework used information from the national/FAB plans, reports and web sites, as well as verified data, statistics and forecasts from States (e.g. LSSIPs, SSPs), EUROCONTROL (e.g. STATFOR, Network Manager), EASA, International Monetary Fund (IMF) and EUROSTAT.
- **Objective and impartial assessment:** an objective and predefined analysis framework was applied consistently to all Plans.
- **Transparent and fair processes:** Transparency and fairness of the processes were sought by sharing the approach to assessments and explaining processes ahead of submission of Performance Plans, e.g. through the NSA platform. Extensive guidance material was developed in consultation with NSAs and other interested parties and published well in advance. This gave everyone a uniform level of information as to what was expected, and helped ensure some consistency across the Performance Plans. This consistency itself made it easier to apply a uniform approach to all Plans.
- **Checking the collective contribution to EU-wide targets:** the analysis sought to identify whether Performance Plans collectively meet the EU-wide targets.
- **Proportionality and realism:** the Plans were assessed to determine whether they were proportional and realistic.
- **Clear accountability for meeting the targets:** Evidence was sought for such accountability, especially in case of multiple accountable entities or FAB plans.

### METHODOLOGY

2.3.2 The assessment methodology was developed by the PRB supported by the PRU during the first half of 2011, in consultation with stakeholders, and was presented at the 42nd meeting of the Single Sky Committee on 7 July 2011. This methodology closely follows the legal requirements presented in Section 2.2 above. More details about this methodology can be found in Annex I.

### PROCESS AND ORGANISATION

2.3.3 The corresponding reference data were assembled, tools were developed and the methodology was tested based on initial plans submitted by States for consultation purposes, prior to the due date for submission of official Performance Plans. A “risk register” was maintained and regularly shared with the Commission to monitor variances from EU-wide targets.

2.3.4 Upon receipt (see dates in Figure 3-1), Performance Plans were published on PRB’s public website, validated and cross-checked against other independent sources. Where

necessary, the team contacted the NSAs concerned, raised specific questions and asked for clarification. In most cases, these exchanges resulted in a formal corrigendum which was then published on PRB's public website.

- 2.3.5 The assessment reports were prepared under PRB Chairman's oversight with regular meetings and teleconferences of the PRB during Summer 2011. In order to further enhance independence of analysis, the PRB Chairman and members were excluded from taking part in the deliberations related to the assessment of the Performance Plan of the State or FAB corresponding to their nationality.
- 2.3.6 A team of more than 20 dedicated specialists in the PRU worked throughout July and August to analyse carefully each of the Performance Plans. The PRB acknowledges, with gratitude, the dedication, professionalism and commitment of each of them. Between July 2011 and mid September 2011, this work represented some 675 man days.
- 2.3.7 The PRB takes this opportunity also to thank the NSAs for having submitted the national/FAB Performance Plans by the stipulated deadline and for their support in July when clarifications were needed.

### 3 General assessment of Performance Plans

#### 3.1 Introduction

3.1.1 The PRB reviewed and assessed all 28 national/FAB Performance Plans for RP1 in detail in order to advise the Commission as to the contribution of Plans to the EU wide targets and, where necessary, to make recommendations for improvements. This chapter presents an overview at European level:

- Observations on safety and environmental items in Performance Plans, as national/FAB targets for RP1 are not mandatory for those two KPAs.
- Consolidated views of proposed national/FAB capacity and cost-effectiveness targets (bottom-up view) against EU-wide targets (top down view);
- General observations from the assessment of the Performance Plans with reference to SES objectives and legal requirements.

3.1.2 Assessment reports for individual States or FABs can be found in Volume II. Detailed technical assessment reports of the safety, environment, capacity and cost-efficiency parts of individual national/FAB Performance Plans will be placed on the PRB web site after the Single Sky Committee meeting of 28-29 September 2011.

3.1.3 As presented in 2.3.1, the PRB consulted the various LSSIPs, CAA websites, national legislation and regulations and other publicly available sources of information, when compiling the technical reports for each State.

#### 3.2 Receipt of Performance Plans

3.2.1 As shown on Figure 3-1, all Performance Plans were formally sent to the Commission by the deadline of 30 June 2011 or shortly thereafter<sup>5</sup>.

Performance Plans	Status	Date of receipt	Performance Plans	Status	Date of receipt
Austria	Final	29 June 2011	Hungary	Final	30 June 2011
Bulgaria	Final	01 July 2011	Ireland	Final	28 June 2011
Cyprus	Final	30 June 2011	Italy	Final	30 June 2011
Czech Republic	Final	28 June 2011	Latvia	Final	30 June 2011
Danish / Swedish FAB	Final	30 June 2011	Lithuania	Final	30 June 2011
Estonia	Final	30 June 2011	Malta	Final	30 June 2011
FAB EC	Provisional	29 June 2011	Norway	Provisional	01 July 2011
Belgium / Lux.	Final	29 June 2011	Poland	Final	30 June 2011
France	Final	29 June 2011	Portugal	Final	30 June 2011
Germany	Final	29 June 2011	Romania	Final	04 July 2011
Switzerland	Final	29 June 2011	Slovak Republic	Final	30 June 2011
The Netherlands	Final	29 June 2011	Slovenia	Final	05 July 2011
Finland	Final	30 June 2011	Spain	Final	01 July 2011
Greece	Final	21 June 2011	United Kingdom	Final	30 June 2011

Figure 3-1: Date of receipt and status of Performance Plans

<sup>5</sup> Pending the transposition of the performance scheme Regulation into EEA legal order, Norway submitted a provisional version on 1 July and plans to submit a final version before 24 October 2011.

- 3.2.2 This is a very significant achievement. For the first time ever, all concerned States prepared and adopted Performance Plans for their Air Navigation Services (ANS) for the next three years under a common framework. This included consultation with airspace users and staff representative organisations. The PRB gratefully acknowledges efforts made by all concerned parties to achieve timely delivery.
- 3.2.3 Most States opted for a national Performance Plan, except Denmark and Sweden, which submitted a DK-SE FAB Performance Plan and the FABEC States (Belgium, France, Germany, Luxembourg, Switzerland and The Netherlands) which adopted a FAB plan for safety, environment, capacity and mission effectiveness, complemented by individual national Performance Plans for cost-efficiency. The PRB welcomes the FAB approach as it provided a better indication of what is being achieved and suggests that the benefits of the FAB submissions are further analysed to promote best practice from the lessons learnt of the first submissions for Performance planning. In addition, Belgium and Luxembourg presented a common Performance Plan.

### **3.3 Interdependencies between key performance areas and targets**

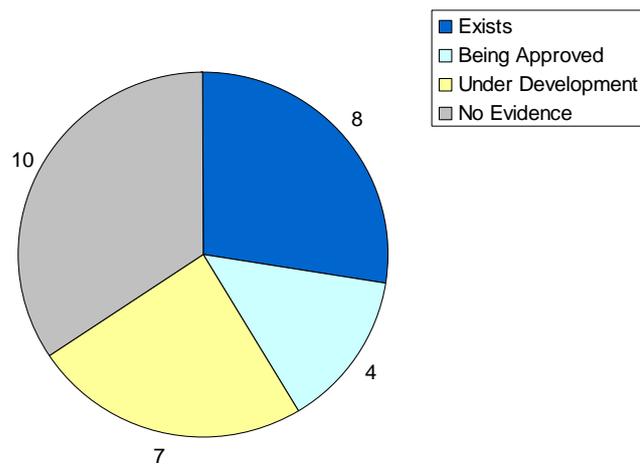
- 3.3.1 The PRB has carefully considered the potential interdependencies and trade-offs between the different KPAs. The most obvious trade-offs are linked to the additional costs and resources needed to increase ATC capacity.
- 3.3.2 NSAs have been invited to provide information in the Performance Plan on how a balanced approach has been taken to the proposed KPAs targets. Most Performance Plans comprise some information, however the justification is generally of qualitative nature and does not allow the PRB to fully assess the robustness of the approach.
- 3.3.3 This is an area to consider for RP2. More information and data would be required. In particular additional quantitative information based on cost-benefits analysis of key investments.
- 3.3.4 Overall, the PRB notes that the Performance Plans strive to improve cost-efficiency and capacity, while showing a commitment to maintain or improve the already achieved levels of ANS safety.

### **3.4 Safety review**

- 3.4.1 The Regulation (EC) No 691/2010 does not require EU-wide targets to be set for safety during the first reference period (RP1), consequently the Member States are not obliged to adopt national safety targets and therefore no consolidation at EU level is possible. Nevertheless, Member States were encouraged to set and include in the National/FAB Performance Plans, their own national safety targets or at least the safety indicators for monitoring safety performance. Safety is a fundamental constituent of the performance scheme and cannot be isolated from it. The PRB welcomes that the vast majority of Member States included a safety part in their Performance Plan, as it applies the total performance approach within the field of ATM/ANS, which seeks to find a balance across different performance areas (safety, capacity, environment, cost-efficiency, military dimension) whilst respecting the overriding safety requirements.
- 3.4.2 The qualitative assessment of Performance Plans, on the basis of submitted evidence within the plans, conducted by PRB and EASA, mainly verified four items related to safety performance:
- the capability and processes to monitor safety performance with a focus on NSA (risk management in relation with the implementation of the State Safety Programme (SSP) and further establishment of the State Safety Plan, occurrences reporting and investigation, data processing and storage, access and publication of safety data),
  - the safety indicators which will be used for monitoring safety performance in RP1,

- the application of safety requirements (NSA resources, audit/inspection processes, oversight of safety changes, and cross-border arrangements), and
- the interrelation between safety and the other performance areas.

3.4.3 In terms of risk management, ICAO requires the implementation of a SSP at State level and of a Safety Management System (SMS) at each ANSP. Regulation (EC) No 2096/2005 requires the relevant ANSPs to implement a SMS. While SMSs have been implemented in all ANSPs accountable to deliver performance in RP1, the SSP implementation is still at its early stage. SSPs are not consistently available in Europe. Many Member States have just developed a draft SSP document and only a few have either fully implemented it or are advanced in their SSP implementation (See Figure 3-2). States are encouraged to give priority to ensuring that the work on SSP is completed prior to the start of RP2.



**Figure 3-2: SSP implementation status**

3.4.4 In addition, even States with an advanced SSP implementation have not yet fully established Acceptable Level(s) of Safety (ALoS)<sup>6</sup> for the SSP in accordance with ICAO Annex 11 requirements<sup>7</sup>. This is typically explained by a statement that the approval of the State ALoS awaits the development of a common European approach to ALoS<sup>8</sup>. The PRB supports the States’ view and would suggest that the Commission, supported by the EASA and EUROCONTROL as appropriate, develop acceptable means of compliance for this programme to be deployed prior to RP2. This is particularly relevant for States that have delegated services to a neighbouring country and has high significance to the maturity of FAB development. The PRB noted that some ANSPs have established safety targets for the safety performance indicators they monitor. These ANSP safety targets are already monitored by the corresponding NSAs. The PRB welcomes this approach, provided these targets are established in accordance with ICAO philosophy and EU aviation regulations. The qualitative safety assessment supports the notion that a common and harmonised European methodology for development of safety performance

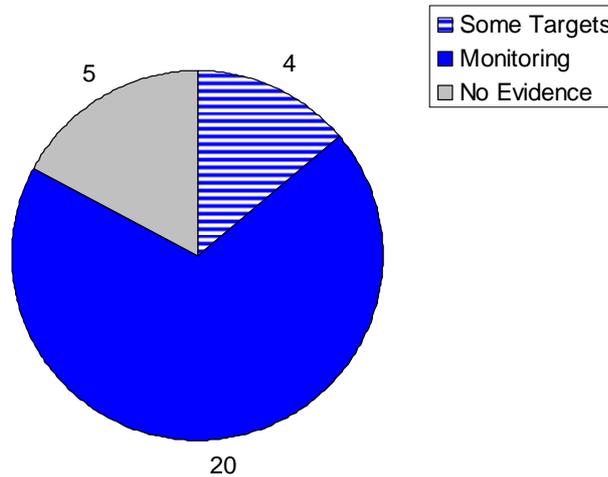
<sup>6</sup> The concept of ALoS is the combination of several performance targets that are measured using safety indicators, and action plans needed to be performed to achieve the targets set.

<sup>7</sup> The guidance to NSAs (regarding preparation of Performance Plans) asked the Member States to provide information on ALoS in particular because it is required by ICAO.

<sup>8</sup> ALoS in this context should be understood as a combination of: Safety measurements as information relative to events with high consequences: 1st tiers SPI (Safety performance Indicators) in Annual Safety Review providing a general assessment of safety and informing the public and stakeholders; Safety performance measurement of events: focus or 2nd tiers SPI topics (“high risk areas”) which requires measures; and Safety requirements: monitor or 3rd tiers SPI providing information on the effectiveness of the measures.

indicators and corresponding targets on State level (taking into account EU-wide performance targets) is needed.

- 3.4.5 There is a clear commitment from the vast majority of Member States to monitor all three safety indicators (See Figure 3-3). All but five Member States have agreed to monitor the three Safety performance indicators with four setting targets for a subset. The majority of European Member States have included at least one lagging indicator (based on safety occurrences) and at least one leading indicator for measuring the effectiveness of safety management processes.



**Figure 3-3: Safety performance indicators and targets**

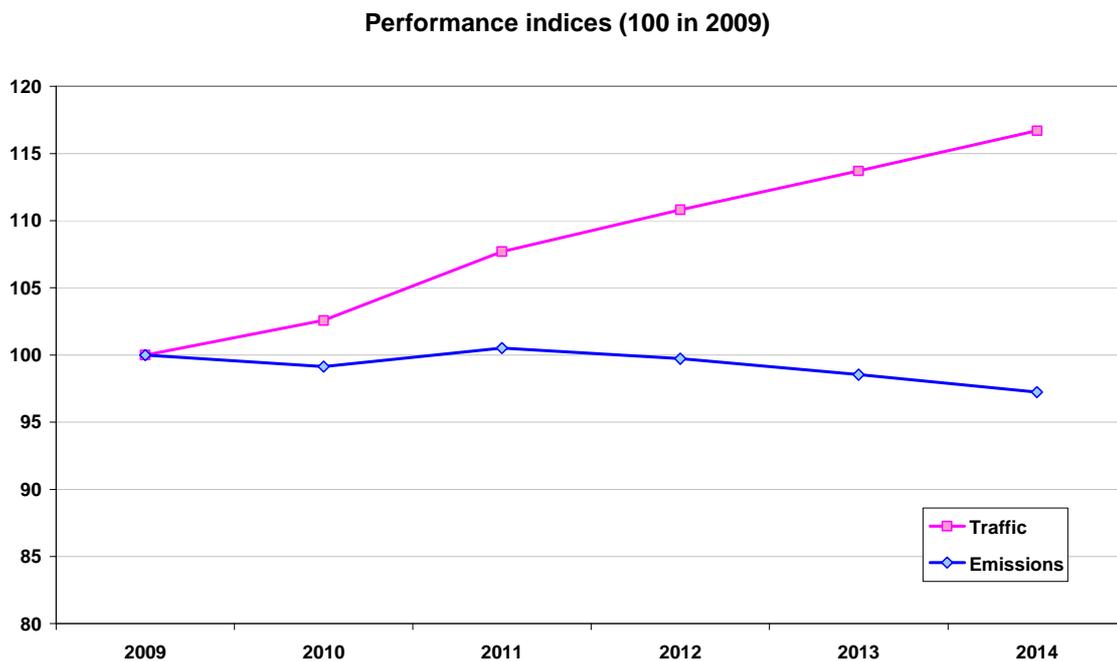
- 3.4.6 The PRB acknowledges the clear commitment that the indicator “Effectiveness of Safety Management” will be monitored during RP1 is present in the majority of Member States. This is evidenced by the fact that the ATM safety framework maturity survey is already used by most ANSPs/CAAs. Work on the measurement of Just Culture is still in its early stages and it is in the PRB’s opinion, this work should be expedited across the whole of the region. Although the PRB recognises State efforts in development of just culture systems which is evidenced in several Performance Plans, which state that Just Culture is being put in place at both NSA and ANSP levels, it still questions the existence of Just Culture on a State level (MoT, Department of Justice, MoD, etc).
- 3.4.7 The use of the RAT methodology is fundamental to harmonise the severity classification of safety occurrences across Europe. The PRB notes that the RAT methodology is not yet applied in many Member States. In the PRB’s opinion, the common usage of the RAT methodology will be one of the essentials in establishing the common indicators in FABs. States are encouraged to address this issue during this reference period so that a suitable benchmark can be used across all States in future reference periods.
- 3.4.8 The safety performance monitoring process and capability vary across Europe. Many Member States have indicated limited resources in the NSA (and/or the AAIB) for conducting risk analyses, safety investigations and occurrences analyses. Common sharing and exchange of high-quality safety data<sup>9</sup> between NSA, AIB, and ANSP is a fundamental pre-requisite for an effective safety performance monitoring at State level, however, this is a reality only in few a Member States. This issue is fully recognised by the Danish-Swedish FAB and FABEC, where efforts are being made to pool resources. The PRB supports this approach and encourages other FAB developments to follow this approach.

<sup>9</sup> The sharing of safety information is a requirement in the EASA Basic Regulations and other regulations.

- 3.4.9 Some of the Member States have set targets on either lagging or leading indicators. Especially when FAB is concerned this initiative represents best practice and the PRB suggests that other States should be encouraged to adopt similar measures.
- 3.4.10 The safety targets adopted at national level illustrate a difficulty to monitor the contribution to safety targets of cross-border accountable entities (e.g. Skyguide, the Swiss ATM provider which provides services over a part of French territory). However, as FABs increase in maturity this will become a relevant issue. Therefore, it is suggested that FAB development teams look at this issue early, in order to assure States that safety levels are being maintained.
- 3.4.11 The period in RP1 represents an opportunity for improvement and enhancement of safety performance monitoring process and capability across Europe in order to prepare each NSA for managing safety targets in RP2. The evidence from Performance Plans suggest that during RP1 NSAs should focus on improving their process for monitoring of safety performance and capability.
- 3.4.12 From the review of LSSIP, CAA-websites, national legislation and regulations, publicly available information on audits (USOAP and ESIMS) etc., the application of safety requirements (audits/inspections, oversight of ANS-related changes, etc.) in Europe is quite satisfactory. There are only a few cases where the lack of effective implementation of safety requirements would appear to be an obstacle for a successful implementation of the total performance approach introduced by the (EC) 549/2004.
- 3.4.13 The main common European issue appears to be the lack of NSA resources or the lack of efficient use of NSA resources. There is quite an imbalance of NSA resources across Europe. One of the ways to address this problem could be by utilising the scarce NSA resources at FAB level rather than at National level.
- 3.4.14 In some Member States there is a potential inconsistency between the NSA cost trend planned, as reported by the Performance Plan, and the planned increase of NSA resources included in the Corrective Action Plan (CAP) agreed between Member States and ICAO (USOAP) or EUROCONTROL (ESIMS).
- 3.4.15 In general, the Performance Plans provide indications that specified levels of safety can be achieved in the context of the proposed national cost-efficiency, capacity and environment targets and in the context of civil military coordination.
- 3.4.16 On the whole, PRB welcomes the way in which States have balanced their activities in the different Key Performance Areas, considering the safety aspect of all capacity and financial activities.

### 3.5 Environment review

- 3.5.1 The EU-wide target for environment during RP1 is set with reference to the average horizontal route efficiency (see Figure 1-1). No national/FAB environmental target is required during RP1. However, there are requirements for specified data reporting and monitoring performance indicators for en-route and terminal/airports.
- 3.5.2 The EU-wide target for environment has been set so as to provide Environmental benefits by decoupling ANS-related emissions (stable) from traffic (+16%). As shown in Figure 3-4 (and in Section 3.3 of the PRB's report to the European Commission proposing EU-wide targets [Ref. iv]), this target will result in a carbon-neutral growth of aviation insofar as ANS is concerned and will save 500k tons of CO<sub>2</sub> in 2014 vs. the 2009 performance level.



**Figure 3-4: EU-wide environmental target vs. emission index**

- 3.5.3 Here are the PRB's main observations concerning the environmental part of the Performance Plans:
- **National/FAB targets (KPI):** Only FABEC included en-route environmental targets in their plans. The Netherlands also included a number of airport related targets, with associated financial incentives.
  - **National performance indicators (PI):** The French plan includes an environmental performance indicator. The UK plans to introduce a 3D flight efficiency metric during RP1.
  - **Associated Measures:** Many States included a list of measures being undertaken to improve environmental performance, in particular the introduction Free Route Airspace at State or FAB level.
- 3.5.4 The PRB welcomes the efforts made by several States to develop and implement Free Route Airspace and invite other States to develop this concept. Free Route Airspace should not be limited to the respective States' or FAB boundaries but should extend in an airspace as big as possible. In order to ensure a co-ordinated approach to Free Route, the PRB proposes that the Network Manager should assess the overall performance

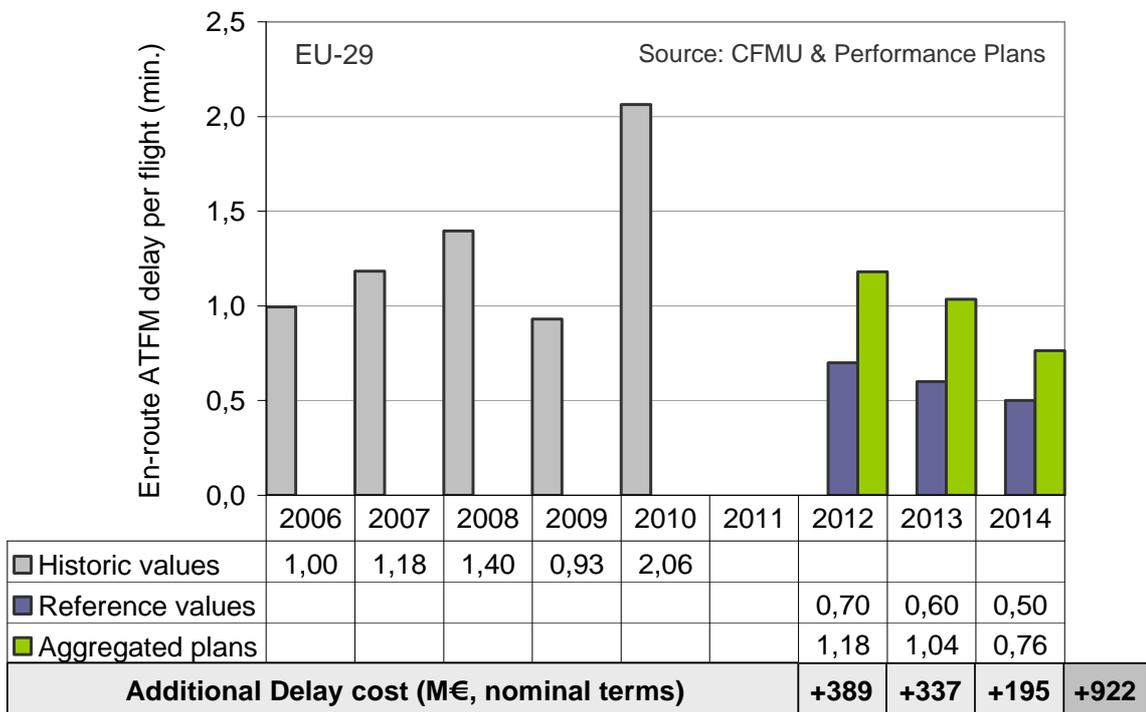
implications of Free Route Airspace at FAB level, and then at pan-European level, as part of the Network Manager's Performance Plan.

- 3.5.5 In view of the significant environmental and economic impacts of the EU-wide environmental target and of the absence of national/FAB targets, accountability for meeting this target has been clarified by the adoption of Commission Regulation (EU) No 677/2011 laying down detailed rules for the implementation of air traffic management (ATM) network functions and amending Regulation (EU) No 691/2010.
- 3.5.6 According to this Regulation, the Network Manager will have to develop a Performance Plan, which must be adopted as part of the Network Strategy Plan before the beginning of each reference period.
- 3.5.7 Considering the substantial influence the Network Manager can have on airspace design and use, as well as the network-wide dimension of flight-efficiency, the regulation requires that the Performance Plan of the Network Manager contains, at least, an environment performance target that is consistent with the European Union-wide performance target. It must be noted that the Network Manager does not have executive authority on a number of key factors, and could therefore not be held accountable for meeting the target alone.
- 3.5.8 According to the latest information, it is expected that the Network Manager's Performance Plan will be available by Spring 2012. The PRB will then complete the preparation of RP1 by assessing this plan, in accordance with the performance scheme Regulation.

### 3.6 Capacity assessment

#### EU-LEVEL VIEW

- 3.6.1 The methodology used for the consolidation of national/FAB targets is straightforward. The aggregated delay per flight for a particular year is calculated as the product of individual delay per flight of each Performance Plan with the expected traffic in the State/FAB concerned (using STATFOR May forecast) divided by the expected traffic at EU-wide level (using STATFOR May forecast).
- 3.6.2 The EU-wide capacity target for RP1 is for the EU-level capacity KPI not to exceed 0.5 min/flight in 2014. Indicative values for 2012 and 2013 (0.7 and 0.6 min/flight respectively) were proposed by the PRB [Ref. v] in December 2010 to EUROCONTROL capacity planning process for the calculation of the individual capacity reference values.



**Figure 3-5: Capacity targets and KPIs (EU-level)**

- 3.6.3 Figure 3-5 shows the aggregated capacity KPIs and EU-wide targets over 2006-2014. Several observations can be made at this stage:
- For 2014, the aggregated capacity targets (0.76 min/flight) offer better performance than ever achieved (0.93 min/flight in 2009), which shows the efforts made by the parties concerned and also the positive effect of target-setting under the SES. However, they collectively fall short of the EU target (0.5 min/flight) by a significant margin.
  - For 2012, the aggregated capacity targets (1.18 min/flight) do not meet the indicative value (0.7 min/flight<sup>10</sup>) and exceed delay values achieved in 2009 (0.93 min/flight), although traffic growth is relatively slow. This indicates that there is room for further improvement from States/FABs.

<sup>10</sup> A target of 0.7 min/flight for the whole year is equivalent to the current EUROCONTROL target of 1 min/flight for the summer.

- The gap between the aggregated capacity plans and the SES targets<sup>11</sup> is reducing over the period, which is a positive trend.
  - The aggregation of national/FAB capacity targets does not take into account actions of the Network Manager. Through adequate airspace, flow and capacity management, the Network Manager and ANSPs together can achieve a better outcome than the sum of individual capacity plans.
- 3.6.4 It must be noted that the aggregated values for RP1 are subject to potential revisions (i.e. some States will be asked to revise their capacity target) and that the effect of the Network Manager is not yet accounted for.

### **ASSESSMENT OF INDIVIDUAL CONTRIBUTIONS**

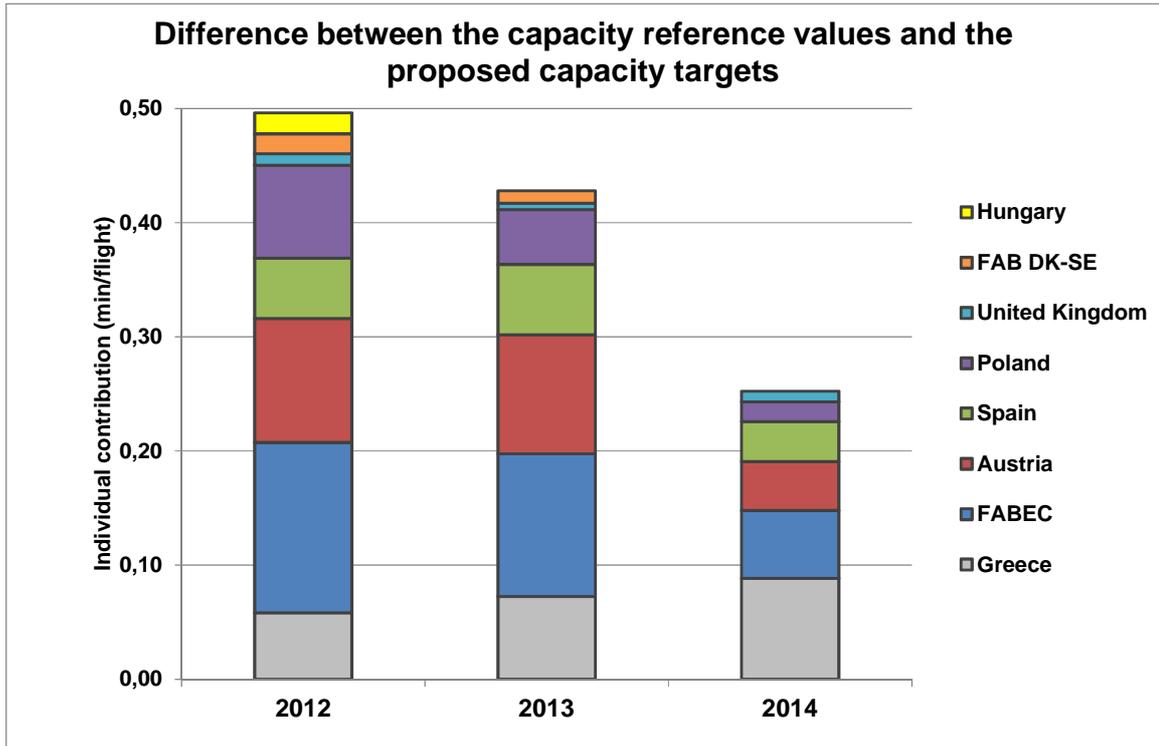
- 3.6.5 The assessment criterion for capacity plans, defined in the regulation, is a comparison of the national targets with reference values<sup>12</sup>, which were provided by the capacity planning process of EUROCONTROL early in 2011, as referred to in section 4 of Annex III of the performance scheme Regulation.
- 3.6.6 The PRB’s assessment of the capacity targets also took account of the latest Capacity Plan provided by the ANSP (typically through the LSSIP process) and the latest delay forecasts available from the Network Manager (NOP).
- 3.6.7 A majority of targets do not exceed the reference values, which is definitively an encouraging commitment provided by States and their en-route ANSPs.
- 3.6.8 However, a limited number of capacity plans would need to be improved to meet the EU-wide target. Six plans are assessed as contributing insufficiently to the EU-wide target set for 2014: Greece, FABEC, Austria, Spain, Poland and the United Kingdom (in order of decreasing impact).
- 3.6.9 Figure 3-6 shows the impact of those national/FAB targets, i.e. how far they contribute to exceeding the indicative values for 2012-13 and the EU-wide target for 2014<sup>13</sup>.

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<sup>11</sup> Target for 2014, indicative values for 2012 and 2013.

<sup>12</sup> The reference values are computed by EUROCONTROL using the same methodology as for its capacity planning process. The reference values seek to allocate a fair share of delays to each State, based on a minimisation of total cost of capacity and delays borne by airspace users to achieve the EU-wide target.

<sup>13</sup> For example, the aggregated capacity KPI for 2014 is 0.76 min/flight. The “2014” stacked bar shows the respective contributions to exceeding the EU-target for 2014 (0.5 min/flight) by 0.26 min/flight.

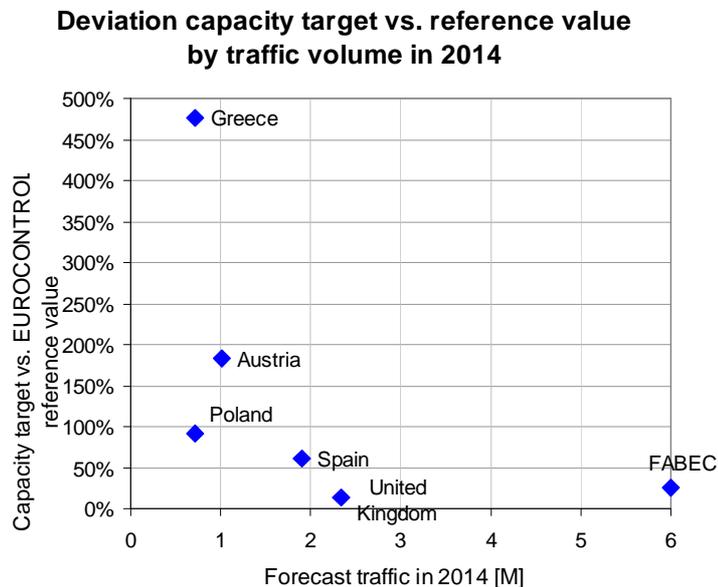


**Figure 3-6: Impact of plans exceeding the reference values on EU-wide capacity KPI**

3.6.10 With the exception of Greece, the delay contributions listed in §3.6.8 above are planned to decrease over RP1, which clearly is an encouraging trend. However, in the case of Greece, the delay contribution is anticipated to increase over time, and will be the highest of all States in 2014.

3.6.11 Figure 3-7 presents the deviation in % between the capacity target and the reference value in 2014 for each of the 6 Performance Plans which do not meet the reference values in 2014. This information is presented together with the forecast traffic in 2014.

3.6.12 For FABEC, UK and Spain, the difference in % is smaller, but more flights will be affected.



**Figure 3-7: Deviation of capacity target vs. reference values by traffic volume in 2014**

3.6.13 More effort is required from those States or FAB. Supporting action by the European Commission, the Network Manager and the PRB can be focused thereon.

3.6.14 There are encouraging signals that this can be achieved. For example, in the case of Austria, ongoing efforts managed to reduce delays in the first 8 months of 2011 well below the reference values for RP1.

3.6.15 Details of the capacity reference values, the capacity targets of the Performance Plans and the impacts on EU-wide KPI for 2012, 2013 & 2014 are shown in Figure 3-8 (Red shows a negative contribution in min/flight while green shows a positive contribution).

FABs	Performance Plan	Ref. values			Performance plans			Individual contribution (min/ flight)		
		2012	2013	2014	Target 2012	Target 2013	Target 2014	2012	2013	2014
FAB CE	Austria	0,30	0,24	0,23	1,39	1,28	0,65	0,11	0,10	0,04
	Czech Republic	0,15	0,16	0,15	0,15	0,16	0,15	0,00	0,00	0,00
	Hungary	0,03	0,07	0,07	0,30	0,07	0,03	0,02	0,00	0,00
	Slovak Republic	0,24	0,22	0,19	0,30	0,32	0,19	0,00	0,00	0,00
	Slovenia	0,31	0,26	0,22	0,31	0,03	0,03	0,00	-0,01	-0,01
	<b>FAB CE</b>		<b>0,41</b>	<b>0,38</b>	<b>0,33</b>					
UK - IR	Ireland	0,09	0,13	0,14	0,14	0,14	0,14	0,00	0,00	0,00
	United Kingdom	0,31	0,28	0,27	0,36	0,31	0,31	0,01	0,01	0,01
	<b>UK-IR</b>	<b>0,33</b>	<b>0,30</b>	<b>0,29</b>						
FAB EC	Belgium/Lux	0,25	0,27	0,21	<0,25	<0,27	<0,21			
	France	0,34	0,30	0,24						
	Germany	0,35	0,32	0,29						
	The Netherlands	0,12	0,14	0,18	0,20	0,20	0,18			
	Switzerland	0,22	0,18	0,14	0,32	0,28	0,24			
	<b>FABEC</b>		<b>0,52</b>	<b>0,47</b>	<b>0,40</b>	<b>0,77</b>	<b>0,68</b>	<b>0,50</b>	<b>0,15</b>	<b>0,13</b>
Baltic	Poland	0,32	0,31	0,26	1,50	1,00	0,50	0,08	0,05	0,02
	Lithuania	0,04	0,05	0,06	0,04	0,05	0,06	0,00	0,00	0,00
	<b>Baltic</b>	<b>0,30</b>	<b>0,29</b>	<b>0,24</b>						
Blue Med	Cyprus	0,93	0,59	0,30	0,93	0,59	0,30	0,00	0,00	0,00
	Greece	0,37	0,32	0,26	1,20	1,35	1,50	0,06	0,07	0,09
	Italy	0,14	0,14	0,12	0,14	0,14	0,12	0,00	0,00	0,00
	Malta	0,02	0,03	0,05	0,02	0,03	0,05	0,00	0,00	0,00
	<b>Blue Med</b>		<b>0,34</b>	<b>0,28</b>	<b>0,21</b>					
Danube	Bulgaria	0,11	0,14	0,12	0,11	0,14	0,12	0,00	0,00	0,00
	Romania	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	<b>Danube</b>	<b>0,07</b>	<b>0,09</b>	<b>0,08</b>						
Danish / Swedish	Denmark	0,06	0,06	0,07						
	Sweden	0,02	0,03	0,06						
	<b>DK-SE</b>	<b>0,04</b>	<b>0,05</b>	<b>0,08</b>	<b>0,20</b>	<b>0,15</b>	<b>0,08</b>	<b>0,02</b>	<b>0,01</b>	<b>0,00</b>
NEFAB	Estonia	0,11	0,16	0,22	0,11	0,16	0,22	0,00	0,00	0,00
	Finland	0,10	0,13	0,16	0,05	0,03	0,02	0,00	0,00	0,00
	Latvia	0,02	0,04	0,05	0,02	0,04	0,05	0,00	0,00	0,00
	Norway	0,04	0,04	0,05	0,04	0,04	0,05	0,00	0,00	0,00
	<b>NEFAB</b>		<b>0,07</b>	<b>0,09</b>	<b>0,12</b>					
SW Portugal - Spain	Portugal	0,28	0,21	0,16	0,25	0,20	0,15	0,00	0,00	0,00
	Spain	0,52	0,42	0,31	0,80	0,75	0,50	0,05	0,06	0,04
	<b>SW Port. - Spain</b>	<b>0,57</b>	<b>0,46</b>	<b>0,34</b>						

Figure 3-8: Capacity indicators, targets and reference values

3.6.16 The following comments can be made about individual plans:

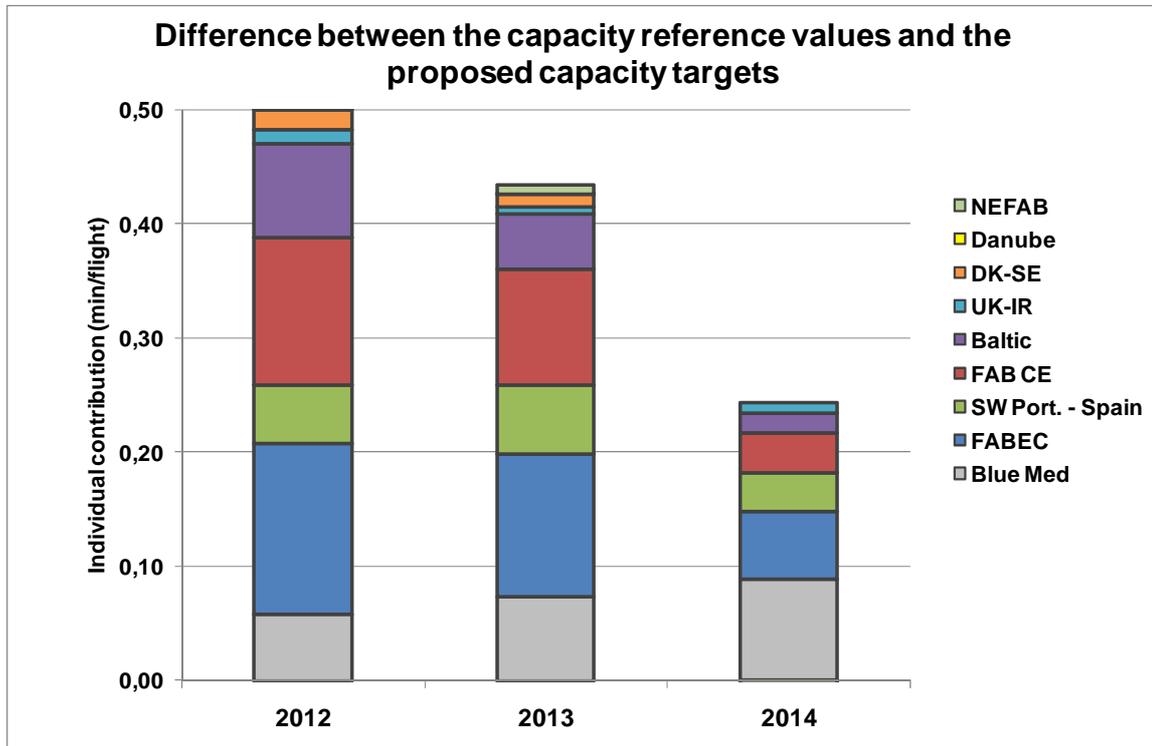
- Four States (Hungary, Slovenia, Finland and Portugal) adopted a more ambitious delay target than the capacity reference value, and therefore contribute more than their fair share to meeting the EU target, which is helpful and welcome.

- The significant efforts by States such as Cyprus, which tended to have high delays so far and present plans in line with the EU target, must be acknowledged. Specific monitoring and supporting actions by the Network Manager may be warranted to ensure that these targets are effectively met.
- In several cases, reference values and capacity targets are well above delays typically achieved. Those States (Bulgaria, Estonia, Ireland, Italy, Latvia, Lithuania, Malta and Portugal) should be encouraged to adopt a capacity target corresponding to historic performance.
- In most States, there is good correlation of the national capacity targets with the ANSP capacity plans and the latest delay forecasts available from the Network Manager (NOP), which reinforces their credibility.
- However, capacity targets for Poland and the UK are less demanding than their ANSP plans. It would appear that there is room to further improvement in their capacity targets.
- Capacity targets for Austria, Cyprus and Spain are more demanding than their ANSPs' capacity plans. NSAs should require revised capacity plans from their ANSPs, showing how they intends to meet the national targets, and involve the Network Manager as appropriate.
- The SES performance targets are set for the medium term (3-5 years), thereby giving time to build-up capacity. While all key resources are nearly fixed for next year (staffing, equipment), there is a margin of manoeuvre over 3-5 years. In general, there appears to be sufficient time for each State/FAB to plan and manage capacity so as to meet the respective reference values for 2014, and thereby provide a fair contribution to meeting the EU capacity target set for 2014.
- The case of Greece, which shows growing delays, the largest share of delays in 2014 and specific local issues, warrants specific action.
- A number of States set intermediate targets for 2012 and 2013 that are not consistent with the reference values. The reported issues relate to specific events (such as the London Olympics) and transition arrangements for the introduction of new systems (particularly in FAB CE).

## **FAB VIEW**

- 3.6.17 Figure 3-9 shows the impact of national/FAB targets exceeding the indicative values (2012-13) or the EU-wide target for 2014 on the capacity KPI, aggregated at FAB level.
- 3.6.18 FABs contributing to not meeting the capacity target in 2014 are, in order of decreasing impact: Blue-Med, FABEC, SW Portugal-Spain, FAB CE, Baltic and UK-IR.
- 3.6.19 Issues remaining in plans from Blue-Med in 2014 originate from Greece. Blue-Med could help Greece in addressing its capacity issues, and also support Cyprus in delivering its capacity target.
- 3.6.20 In FAB CE, there is both a significant capacity shortfall in Austria and spare capacity elsewhere. This generates significant penalties for airspace users, who have to bear both delay costs from Austria (some €65M in 2009, i.e. 41% of route charges) and extra costs associated with spare capacity elsewhere.
- 3.6.21 Taking a FAB approach would help solve delay issues in FAB CE with minimal impact on cost-efficiency, as no additional capacity is needed overall. The FAB CE Member States should be invited to jointly investigate the problems, find solutions within the FAB, such as controllers' mobility or delegation of air navigation services, and implement them promptly. FAB CE warrants specific attention of the FAB co-ordinator.

3.6.22 Although the FABEC plan misses the reference value by a relatively small margin, this FAB has the second highest impact on network performance in 2014 due to its size. FABEC should work to identify further capacity improvements.



**Figure 3-9: FAB contributions to the EU-wide capacity target**

3.6.23 The PRB considers that performance can be improved in a number of FABs, if FABs are effectively implemented and if the use of available capacity is managed at FAB level to ensure that any spare capacity in one particular State is used to improve the overall capacity situation at FAB level.

### NETWORK MANAGER PERFORMANCE

3.6.24 Active Network Management can achieve better network performance than the sum of individual capacity plans through e.g. capacity management (ensuring that the right capacity is provided at the right time), re-routing of individual flights to avoid congested areas.

3.6.25 In order to assess the consistency of capacity plans with the EU-wide capacity target, one should in principle take account of the Network Manager Performance Plan. However, the Network Management implementing rule was adopted recently, and the Network Manager has just been appointed. The Network Manager should therefore be invited to present a Performance Plan for adoption as part of the Network Strategic Plan in the coming months, including the implications of Free Route Airspace (see also §3.5.4)

3.6.26 In the meantime, the European Commission can consider that the overall network performance will necessarily be better than the sum of individual plans, and that it is sufficient for each plan to meet the corresponding reference value.

### DELAY COSTS

3.6.27 Delays translate into additional cost for airspace users, which is quantified using the latest estimate of delay cost, i.e. €81 per minute[Ref. vi].

3.6.28 Figure 3-10 shows the difference in delay costs<sup>14</sup> associated with the aggregated capacity targets and the EU-wide target<sup>15</sup> respectively. This calls for several observations:

- Thanks to efforts to progressively close the capacity gaps, the additional cost of delays are likely to reduce by some €200M between 2012 and 2014. This illustrates the value of efforts made by most States under the SES performance scheme.
- But the capacity gap remaining in 2014 is also worth some €200M, i.e. more than any of the annual savings on cost-efficiency mentioned in section 3.7 (see Figure 3-14 below). This underlines the importance of meeting the capacity target, the strong leverage of capacity management on operational and financial ANS efficiency, and the value of Network Manager action if the EU-wide target is achieved collectively.
- The cumulated cost of delays above the reference values is in the order of €920M over RP1, which is significantly higher than the cumulated margins for cost-efficiency shown in Figure 3-14. This confirms the need for the balanced approach to capacity and cost-effectiveness performance which was taken when establishing the EU-wide targets

	2012	2013	2014	Total
<b>Delays above reference values (thousands of minutes)</b>	4 805	4 164	2 413	11 382
<b>Cost of delays above reference values (M€) in nominal terms</b>	€389M	€337M	€195M	€922M

**Figure 3-10: Additional delay costs between the aggregated and EU capacity targets**

## INCENTIVES ON CAPACITY

3.6.29 While incentives on cost-effectiveness are included in the charging regime, incentives schemes for other KPAs are at States' discretion.

3.6.30 No State, other than Italy and the UK, included financial incentives for achieving the national capacity target in their Performance Plans. Such incentives should in principle be welcome, as they give more balanced signals to the ANSPs, who might otherwise be tempted to reduce spending on capacity in order to generate more benefit from the cost-risk sharing provisions of the charging regime. However, it is imperative that bonuses only reward tangible improvements<sup>16</sup>. Incentives are an area that needs further work for RP2.

## COMPLIANCE CHECKS

3.6.31 All States are required to adopt either a national or FAB capacity target; to provide a breakdown of that target to accountable entities, and to describe the associated incentive scheme.

3.6.32 The following observations are made:

- All Performance Plans provide a national or FAB target for capacity.

<sup>14</sup> Computed as the sum of additional minutes of delays above the reference values.

<sup>15</sup> Indicative values for 2012 and 2013.

<sup>16</sup> Italy's Performance Plan provides for a 1% bonus if delays are below the capacity target (0.12 min/flight), which has a high likelihood of being achieved given past performance (0.01 to 0.05 min/flight), and a penalty of 1% if it exceeds the EU-target (0.5 min/flight), a level very unlikely to be reached.

- States/FABs generally attributed accountability for meeting the capacity target to the designated en-route ANSP but some States did not attribute accountability explicitly.
- Neither FABEC nor the Danish-Swedish FAB allocate the FAB capacity target to national accountable entities. FABEC refers to a single accountable entity comprising all FABEC ANSPs whilst the Danish-Swedish FAB makes no explicit assignment of the capacity target to an accountable entity but does provide separate national targets.
- Austria and Switzerland comment that the effect of MET on delay is higher locally than the attribution allowed in setting the EU-wide target, and they ask that this should be taken into account when setting national targets. In both cases, the claimed local effects of MET are numerically less than the respective calculated reference values. Austria and Switzerland set national targets which include all causes, but these are less ambitious than the reference values. Switzerland lists additional specific uncontrollable delays. Neither the Swiss nor Austrian ANSPs are incentivised to meet their capacity target.
- In the UK, the target set on NERL excludes non-NERL causes including inter alia weather; airport operations; military activity; non-ATC equipment, and other ANSP industrial action. These are estimated to contribute 5.8 seconds per flight. NERL is financially incentivised to achieve its capacity target.
- It is acknowledged that some delay causes (e.g. weather) are beyond the control of ANSPs. However, ANSPs still have obligations to manage these situations to the best of their ability, and NSAs have to oversee the management of these situations by the ANSP. Whilst the ANSP itself cannot be held responsible for such delay causes, it can, and should, be held accountable for managing such situations<sup>17</sup>.

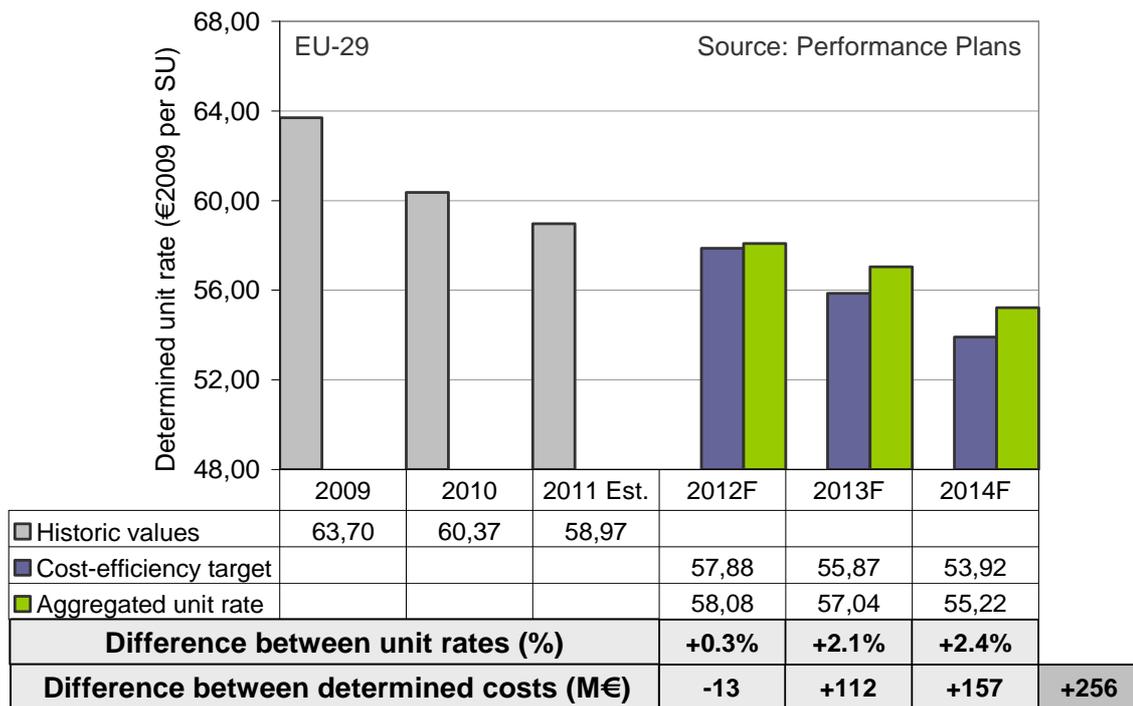
### **3.7 Cost-efficiency assessment**

#### **EU-LEVEL VIEW**

- 3.7.1 The methodology used for the consolidation of national/FAB targets is the following: the aggregated determined unit rate for a particular year is calculated as the sum of the individual determined costs of each Performance Plan divided by the sum of service units of each Performance Plan.
- 3.7.2 The EU-wide target for cost-effectiveness is a Determined Unit Rate (DUR) of €53.92 per service unit (SU) in 2014 (expressed in €2009). Intermediate values for 2012 and 2013 are €57.88 and €55.87 per SU respectively. Consistency check criteria are presented in Annex I.
- 3.7.3 All States adopted cost-efficiency targets as national targets, none as FAB targets.

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<sup>17</sup> Only en-route ATFM delays are subject to target setting in RP1. Work is needed to address the weather impact on terminal delays in RP2.



**Figure 3-11: EU-wide and aggregated cost-efficiency targets**

3.7.4 Figure 3-11 presents the EU-wide cost-efficiency targets, the aggregated DUR from the Performance Plans, and past performance indicators. The following initial observations can be made.

- The aggregated DUR from current plans for 2014 is 13.3% below the DUR for 2009. This does show a significant collective improvement in cost-efficiency over five years, which must be acknowledged.
- However, the aggregated DUR for 2014 is 2.4% above the EU-wide target. The Performance Plans collectively fall short of the EU-wide cost-effectiveness target by a significant, but not insurmountable margin (+2.4%).
- The aggregated DUR for 2012 is slightly above the intermediate value (+0.3%) and would be slightly below (-0.2%) if STATFOR forecasts were used. This is very encouraging, as Performance Plans are collectively very close to the EU-wide intermediate target for 2012. It constitutes a sound basis on which to start the reference period, and gives some time to adopt Performance Plans that meet the EU target for 2014.
- However, the consolidated DUR for 2013 and 2014 diverge from the corresponding EU value and target. A further improvement of 2.4% over 2 years, i.e. 1.2% per year, appears to be within reach, as most Performance Plans clearly show room for improvement.

3.7.5 Improvements in DURs result from a combination of the level of the determined cost bases (real terms) and traffic growths. It is therefore important to examine the planned service units and determined costs both at European and local levels.

### **CONSISTENCY CHECKS FOR COST-EFFICIENCY**

3.7.6 In order to assess the consistency of Performance Plans with the EU-wide cost-efficiency target, the PRB applied the criteria specified in Annex III of the performance scheme

Regulation. The PRB organised the assessment using the following order for these criteria:

- (a) Traffic forecast assumptions;
- (b) Economic assumptions (inflation);
- (c) Unit rate trend<sup>18</sup>;
- (d) Determined unit rate level in comparison with States having a similar operational and economic environment;
- (e) Return on equity.

3.7.7 The PRB analysis was complemented by additional checks, as indicated in Annex I, and expert judgement for other relevant items such as uncontrollable costs.

### TRAFFIC FORECASTS

3.7.8 Figure 3-12 presents the difference between en-route service unit forecasts included in the Commission Decision on the EU-wide targets [Ref. i] and the aggregated service units from the Performance Plans. It is very encouraging to note that the SES and States' aggregated service unit forecasts are very close, within 0.1% in 2014.

En-route service units (in '000)	2012	2013	2014	2009-2014	
				Overall	Annual average
<b>Service units in Commission Decision</b>	108 776	111 605	114 610	17.1%	3.2%
<b>Aggregated service units from Plans</b>	108 174	111 244	114 731	17.2%	3.2%
<b>Difference (%)</b>	<b>-0.5%</b>	<b>-0.3%</b>	<b>0.1%</b>		

**Figure 3-12: Traffic forecasts in the EC decision and Performance Plans**

3.7.9 The situation is more contrasted at national level, as shown in Figure 3-13. The darker the colour, the more the traffic figure differs y from STATFOR May 2011, base-case scenario.

	2012	2013	2014		2012	2013	2014
Austria	3,0%	4,0%	6,0%	Lithuania	0,0%	-0,1%	0,0%
Belgium/Lux	0,0%	0,0%	0,0%	Malta	-2,5%	-4,1%	-5,7%
Bulgaria	-3,1%	-4,5%	-6,1%	Netherlands	-0,1%	0,0%	-0,1%
Cyprus	-2,1%	-4,3%	-6,5%	Norway	0,0%	0,9%	1,5%
Czech Republic	0,0%	0,0%	0,0%	Poland	0,0%	0,0%	0,0%
Denmark	0,0%	0,0%	0,0%	Portugal	0,0%	0,0%	0,0%
Estonia	-9,0%	-9,0%	-8,9%	Romania	0,0%	0,0%	0,0%
Finland	-4,2%	-2,5%	-0,7%	Slovak Republic	1,6%	1,7%	1,7%
France	-0,8%	0,1%	1,6%	Slovenia	0,0%	-0,1%	-0,1%
Germany	-0,6%	-0,6%	-0,8%	Spain Canarias	0,7%	0,7%	0,7%
Greece	0,0%	0,0%	0,0%	Spain Continental	-1,5%	-1,5%	-1,5%
Hungary	-1,4%	-2,6%	-4,0%	Sweden	-1,2%	-1,1%	-1,3%
Ireland	-1,5%	-0,5%	0,4%	Switzerland	0,4%	0,5%	0,4%
Italy	0,1%	0,1%	0,1%	United Kingdom	2,3%	3,7%	4,8%
Latvia	-2,6%	-2,7%	-2,5%				

**Figure 3-13: Traffic forecast differences vs. STATFOR base case scenario of May 2011**

<sup>18</sup> Unit rate trends were assessed versus both 2009-2014 and 2011-2014 (see rationale in § 3.7.19).

- 3.7.10 Checking the consistency of traffic hypotheses in Performance Plans is part of the compliance checks specified by SES legislation. EUROCONTROL's STATFOR publishes service unit forecasts for each State, which were used as a reference to assess traffic hypotheses in the Performance Plans. These differences are carefully analysed in the individual assessment reports (see Volume II).
- 3.7.11 States such as Austria and the UK plan for significantly higher traffic growth than the STATFOR base case scenario of May 2011. This introduces a risk on future revenues, as the traffic risk sharing in the SES charging regime is made with reference to the traffic forecast included in the final Performance Plan. Moreover, it results in an apparent improvement in DUR at the end of the period, which may not materialise.
- 3.7.12 In contrast, Estonia, Cyprus, Bulgaria, Malta, Hungary and Latvia plan for significantly lower traffic growth than STATFOR. This results in correspondingly higher DUR. We note that if the STATFOR traffic forecast materialises, the actual revenues retained by the ANSP will be higher than if the STATFOR forecast was used<sup>19</sup>.
- 3.7.13 States such as France and UK use forecasts with increasing difference from STATFOR. This results in an apparent improvement in DUR over RP1, which may not materialise.
- 3.7.14 Many States use low traffic estimates for 2011, which results in high unit rates in 2011 and apparent improvement in DUR over 2011-14. This is one of the reasons why the PRB also uses the 2009-2014 period to assess DUR trends (see §3.7.19 and following).

### COST FORECASTS

- 3.7.15 Figure 3-14 presents the difference between en-route determined costs included in the Commission Decision on the EU-wide targets [Ref. i] and the cumulative determined costs from the Performance Plans.

(M€ 2009)	2012	2013	2014	Total
<b>Determined costs in Commission Decision</b>	6 296	6 234	6 179	18 709
<b>Aggregated determined costs from Plans</b>	6 283	6 346	6 336	18 964
<b>Difference between plans and EU target</b>	<b>-13</b>	<b>+112</b>	<b>+157</b>	<b>+256</b>
<b>Difference between plans and EU target (%)</b>	<b>-0.2%</b>	<b>+1.8%</b>	<b>+2.5%</b>	<b>+1.4%</b>

**Figure 3-14: Determined costs in the EC Decision and Performance Plans**

- 3.7.16 Cumulated determined costs planned by States for 2012 are slightly lower than the corresponding value in the EC Decision (-0.2%). This is very encouraging, as it constitutes a solid basis on which to start the first reference period.
- 3.7.17 However, the cost gap progressively widens and reaches 2.5% in 2014. Over RP1, the cumulated determined costs in the Performance Plans are €256M higher than in the EC decision.

### SUMMARY OF DIFFERENCES BETWEEN EC DECISION AND PERF. PLANS

- 3.7.18 Figure 3-15 shows how service units (traffic) forecasts and determined costs plans differ from the EC Decision [Ref iii] and result in the KPI exceeding the EU-wide target (2014) and intermediate values (2012-13).

<sup>19</sup> The dead-band in the charging regime is 2%. The traffic risk sharing beyond 2% up to 10% is 70%.

	2012	2013	2014
<b>Service units difference</b>	<b>-0.5%</b>	<b>-0.3%</b>	<b>+0.1%</b>
<b>Determined costs difference</b>	<b>-0.2%</b>	<b>+1.8%</b>	<b>+2.5%</b>
<b>Determined unit rate (DUR) difference</b>	<b>+0.3%</b>	<b>+2.1%</b>	<b>+2.4%</b>

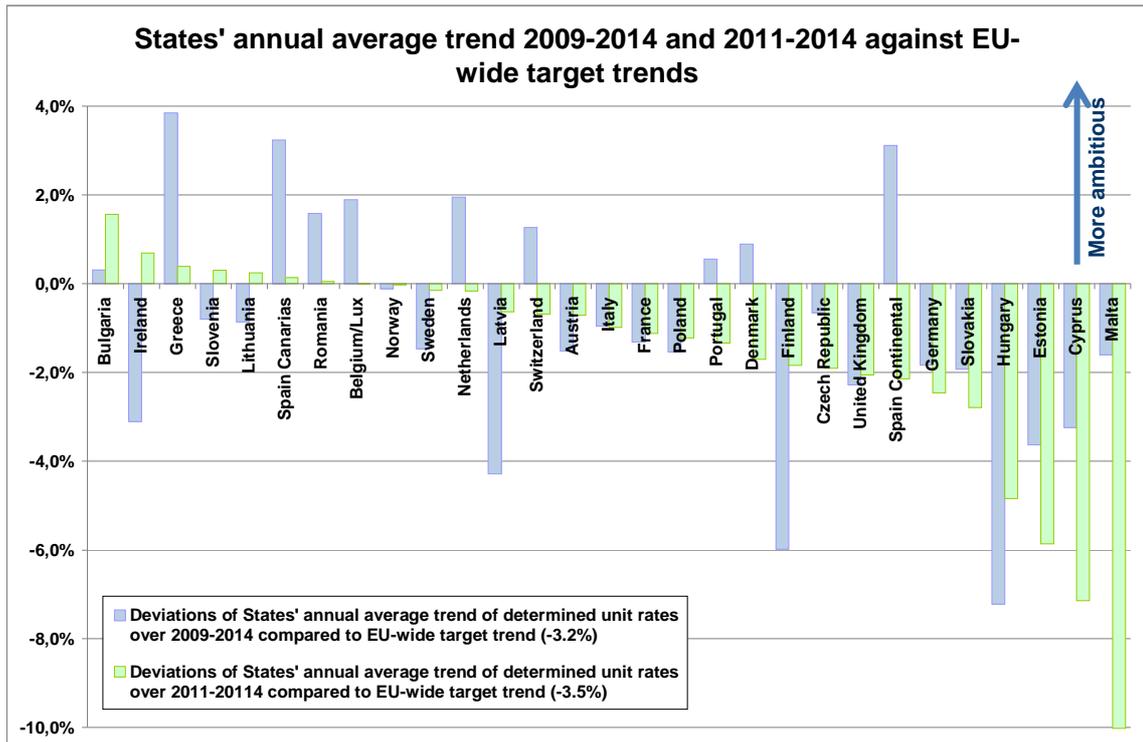
**Figure 3-15: Summary of differences between the EC Decision and Performance Plans**

### **TRENDS OF INDIVIDUAL DETERMINED UNIT RATES**

3.7.19 Comparing the trends of determined unit rates in Performance Plans with those used to set the EU-wide target is one of the consistency criteria defined by SES legislation. The PRB used two periods to assess trend consistency, namely 2009-2014 and 2011-14 for several reasons:

- 2011 data was used as a starting point for target setting, as there is no room to improve performance in the past.
- however, costs and traffic data for 2011 are still subject to variations at the time of writing. Data for 2011 constitute an uncertain basis on which to assess planned performance, while final data for 2009 are available.
- The regulation states that past efforts must be taken into account. Several States, such as Spain and Belgium, made significant efforts to contain costs in 2009 and 2010, which must be reflected in the analysis.
- Some large differences are observed between both periods, as can be seen in Figure 3-16. Taking just one period would biased the assessments and be unfair to some States.

3.7.20 Figure 3-16 presents the individual trends of en-route determined unit rates for both periods, compared to the respective trends of the EU-wide target, i.e. -3.2% and -3.5% respectively (positive contributions to meeting the EU-wide target are above the line).



**Figure 3-16: Deviations of States' annual average trends of determined unit rates over 2009-14 and 2011-14 compared to EU-wide target**

### DUR LEVEL VS. COMPARATORS

- 3.7.21 The next assessment criterion is to compare unit rates at the end of the period with peers in groups of comparators presenting similar operational and economic characteristics. The list of comparators was subject to consultation and can be found in Annex I.
- 3.7.22 Figure 3-17 shows the respective determined unit rates (DURs) in 2014 vs. comparators in the group (minimum, un-weighted average and maximum of the group). It must be noted that the detailed assessment (see Volume II) is done using the un-weighted average and excluding the State being assessed.

Group 1	DUR 2014	Min 2014	Avg 2014	Max 2014
Spain continental	68,16			
France	59,99			
Germany	67,81	59,99	65,68	68,16
Italy	65,96			
United kingdom	66,49			

Group 2	DUR 2014	Min 2014	Avg 2014	Max 2014
Czech republic	39,66			
Hungary	39,02			
Slovak republic	53,11	39,02	48,66	62,87
Slovenia	62,87			

Group 3	DUR 2014	Min 2014	Avg 2014	Max 2014
Austria	59,74			
Denmark	61,42	59,74	64,07	71,04
Switzerland	71,04			

Group 4	DUR 2014	Min 2014	Avg 2014	Max 2014
Belgium/Lux	63,21			
The Netherlands	56,84	56,84	60,03	63,21

Group 5	DUR 2014	Min 2014	Avg 2014	Max 2014
Norway	53,51			
Sweden	51,55			
Finland	47,37	31,62	46,01	53,51
Poland	31,62			

Group 6	DUR 2014	Min 2014	Avg 2014	Max 2014
Latvia	26,95			
Estonia	22,17			
Lithuania	44,23	22,17	31,12	44,23

Group 7	DUR 2014	Min 2014	Avg 2014	Max 2014
Ireland	29,40			
Portugal	40,67			
Spain canarias	57,73	29,40	42,60	57,73

Group 8	DUR 2014	Min 2014	Avg 2014	Max 2014
Cyprus	34,46			
Greece	30,03			
Malta	25,14			
Bulgaria	36,35	25,14	31,85	36,35
Romania	33,26			

**Figure 3-17: Determined unit rates in 2014 vs. comparators**

3.7.23 Figure 3-18 presents a summary of conclusions from all consistency checks applied to cost-efficiency plans.

		<b>Cost efficiency target</b>					
		<b>Performance Plans</b>					
<b>FABs</b>	<b>Performance Plan</b>	<b>Traffic Criteria</b>	<b>Inflation Criteria</b>	<b>DUR Trend Criteria</b>		<b>DUR Level Criteria</b>	<b>RoE Criteria</b>
		<b>2014 States vs. STATFOR</b>	<b>2014/2009 State vs. IMF</b>	<b>2009 -2014</b>	<b>2011 -2014</b>	<b>2014 level</b>	<b>Risk Premium</b>
FAB CE	Austria	6,0%	1,4%	-1,7%	-2,8%	Low	5,1%
	Czech republic	0,0%	1,3%	-2,5%	-1,6%	Low	3,4%
	Hungary	-4,0%	0,0%	4,0%	1,3%	Low	3,0%
	Slovak republic	1,7%	0,0%	-1,3%	-0,7%	Medium	4,3%
	Slovenia	-0,1%	0,0%	-2,4%	-3,8%	High	2,7%
	<b>FAB CE</b>						
UK - IR	Ireland	0,4%	2,2%	-0,1%	-4,2%	Low	0,0%
	United Kingdom	4,8%	-2,2%	-0,9%	-1,4%	Medium	7,9%
	<b>UK-IR</b>						
FAB EC	Belgium/Lux	0,0%	0,0%	-5,1%	-3,5%	High	1,4%
	France	1,6%	-0,8%	-1,9%	-2,4%	Low	4,6%
	Germany	-0,8%	0,7%	-1,4%	-1,0%	High	4,7%
	The Netherlands	-0,1%	-0,3%	-5,1%	-3,3%	Low	N/A
	Switzerland	0,4%	-1,4%	-4,5%	-2,8%	High	3,3%
	<b>FABEC</b>						
Baltic	Poland	0,0%	0,1%	-1,7%	-2,3%	Low	-3,7%
	Lithuania	0,0%	-1,9%	-2,3%	-3,7%	High	-2,1%
	<b>Baltic</b>						
Blue Med	Cyprus	-6,5%	-1,2%	0,0%	3,6%	High	N/A
	Greece	0,0%	0,0%	-7,0%	-3,9%	Medium	-8,1%
	Italy	0,1%	0,0%	-2,2%	-2,5%	Medium	-1,9%
	Malta	-5,7%	-1,6%	-1,6%	6,5%	Low	0,3%
	<b>Blue Med</b>						
Danube	Bulgaria	-6,1%	0,0%	-3,5%	-5,1%	High	1,5%
	Romania	0,0%	1,4%	-4,8%	-3,6%	Medium	0,9%
	<b>Danube</b>						
Danish / Swedish	Denmark	0,0%	-0,6%	-4,1%	-1,8%	Low	1,9%
	Sweden	-1,3%	1,7%	-1,7%	-3,4%	High	0,8%
	<b>DK-SE</b>						
NEFAB	Estonia	-8,9%	1,4%	0,4%	2,4%	Low	5,6%
	Finland	-0,7%	2,1%	2,8%	-1,7%	Medium	3,7%
	Latvia	-2,5%	0,0%	1,1%	-2,9%	Medium	-0,9%
	Norway	1,5%	-1,5%	-3,1%	-3,5%	High	6,2%
	<b>NEFAB</b>						
SW Portugal - Spain	Portugal	0,0%	-0,5%	-3,8%	-2,2%	Medium	0,1%
	Spain continental	-1,5%	0,0%	-6,3%	-1,4%	High	4,0%
	Spain canarias	0,7%	0,0%	-6,4%	-3,6%	High	4,0%
	<b>SW Port. - Spain</b>						

**Figure 3-18: Summary of Consistency checks**

## RETURN ON EQUITY AND COST OF CAPITAL

- 3.7.24 The return on equity was checked by considering the risk premium applied by States on top of the long term government bond yields<sup>20</sup>. Therefore as a first step the national bond rate has been used as a guide for assessing the return on equity.
- 3.7.25 The PRB has found that the average EU-wide risk premium applied throughout RP1 is 2.6 percentage points above the long term government bond yield.
- 3.7.26 The PRB has also noted significant variances across States in the implied risk premium used to set the return on equity for their ANSPs.
- 3.7.27 The PRB recognises that several factors impact on the return on equity required by the ANSPs, such as the actual business risks incurred, the financial risk (linked to the capital structure), and the fact that the European average return on equity reflects the combination of differences in these factors across States/ANSPs.
- 3.7.28 Nevertheless, while recognising all the complexity associated with the calculation of a “fair” return on equity, the PRB has found that in several States Performance Plans the risk premiums were too high in view of risks borne by ANSPs.
- 3.7.29 The PRB notices that the return on equity planned over RP1 (2012-2014) is often significantly higher than values recently used. In most cases, the increase is disproportionate to additional risks incurred under the SES performance scheme and the increases are not duly justified.
- 3.7.30 First, the PRB considers that the business risks faced by ANSPs should be considered in the light of the SES charging scheme which limits the downside traffic risks through a risk sharing arrangement and therefore provides a high certainty of revenues for the ANSPs. Furthermore, although the cost risk is borne by the ANSP, the SES charging regime also provides for “uncontrollable cost factors” to be passed on to airspace users (e.g. by limiting the interest rate risk) (see also §3.7.35 below). In addition, according to the charging scheme the inflation risk is borne by airspace users (through an annual adjustment of the chargeable unit rate).
- 3.7.31 Second, the PRB also considers that an additional specificity must be taken into account for the ANS sector: en-route: ANSPs are statutory monopolies with a long term service provision horizon. In this context, the remuneration of the financial risk incurred by the State as the “investor” should be carefully considered.
- 3.7.32 Moreover, the consistency check specified in the legislation only refers to the return on equity. However, the cost of capital also depends on the size of the asset base (capital employed). The PRB conducted additional checks and pointed out a number of cases where the share of net current assets was very large (with the potential that interest generating assets be included in the asset base, which itself generates a return).
- 3.7.33 Overall, the PRB considers that there should be scope for cost-efficiency performance improvement through the use of lower costs of capital. It should be noted that although these costs “only” represent some 5.6% of the total en-route determined costs during RP1, compared to the 2009-2011 period they are planned to increase from an annual average of €310M to €360M during 2012-2014. The PRB considers that adopting more acceptable costs of capital would close a part of the DUR gap in 2014 (+2.4%) without negatively affecting the adequate provision of ATC capacity.

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<sup>20</sup> The 10 year government bond rate on average over 6 months November 2010-April 2011, as published by the ECB (by OECD for Switzerland and Norway), was used. It should be noted that the European Financial Stability Facility (EFSF) 10-year bond yield has been used for Greece, Portugal and Ireland. This yield should provide a better representation of a risk free rate for States severely affected by the sovereign debt crisis.

3.7.34 The PRB suggests that States consider this aspect with great attention. In view of RP2, the European Commission should provide further guidelines and consistency criteria to assess the level of the cost of capital, rather than just the return on equity.

### **UNCONTROLLABLE COSTS AND RISK PREMIUM**

3.7.35 According to Article 11a 8(c) of the revised charging scheme Regulation [Ref.vii], States may recover the unforeseen difference between actual and determined costs of “uncontrollable costs” through a carryover to the following reference period provided the NSAs have:

- provided a list of uncontrollable cost factors *ex ante* in their Performance Plans, in line with the charging scheme regulation;
- ascertained that the difference between actual costs and determined costs are actually the result of developments that are beyond the influence of the ANSPs/States and that the variation in costs is specifically identified and categorised.

3.7.36 The PRB noted that the majority of States plan to make use of the five generic cost factors identified in the Regulation. It is likely that the most significant one (in monetary terms) is the “unforeseen changes in national pension regulations and pension accounting regulations”. Most States did not provide any details on estimate costs or underlying rationale.

3.7.37 The PRB notes that Greece did not identify any cost factors that it would wish to exclude from the costs risk-sharing mechanism. It is not clear whether this is a voluntary omission.

3.7.38 The PRB is aware that these uncontrollable costs have the potential to significantly change the profile of en-route unit rates actually recovered at the end of the reference period given that in a number of cases a large proportion of ANS costs are considered as uncontrollable. This defeats the purpose of the performance scheme and target setting.

3.7.39 The provisions for uncontrollable costs reduce the business and financial risks for ANSPs/States. All else equal, the PRB would expect that this is also effectively reflected in a lower risk premium and lower return on equity.

3.7.40 In a number of cases (Bulgaria, France, The Netherlands, Spain, Switzerland and the United Kingdom), the Commission should consider and give a view on whether some proposed uncontrollable factors are consistent with the meaning of Article 11a(8)(c) of the charging scheme Regulation.

3.7.41 The European Commission should consider providing more detailed guidance on the content of “uncontrollable costs”, and restricting the uncontrollable costs categories from RP2 onwards to prevent abuse.

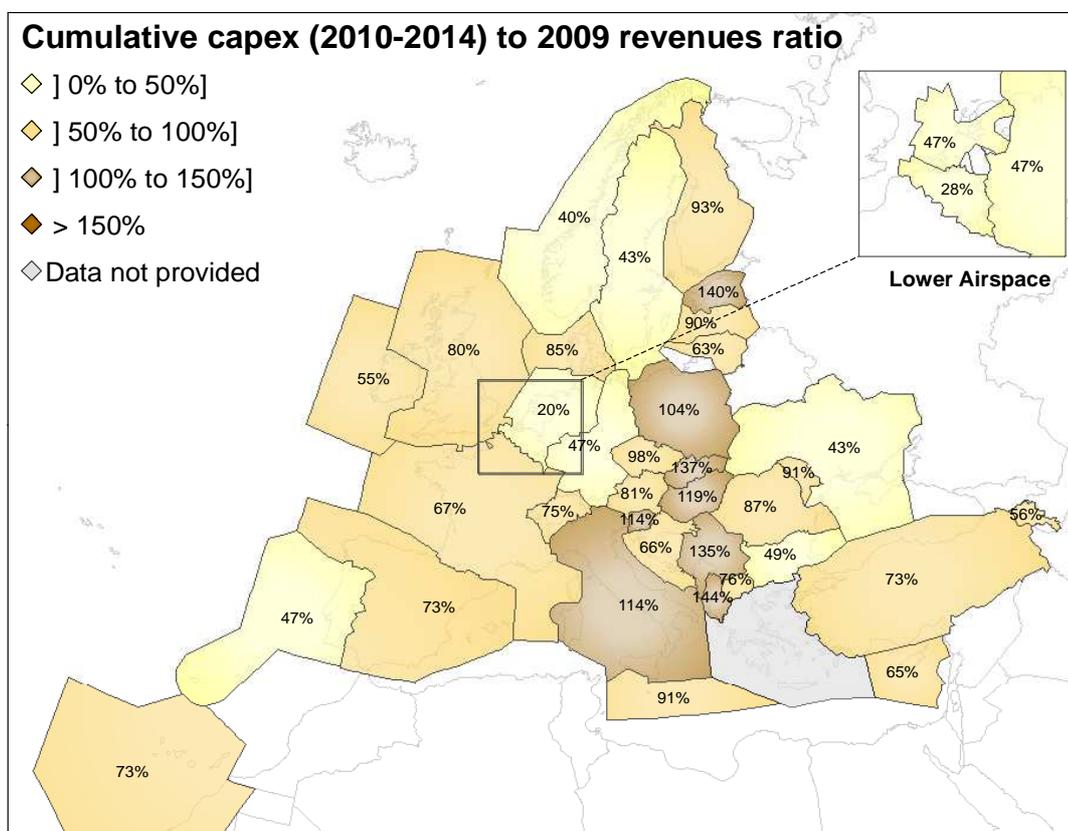
### **INVESTMENTS**

3.7.42 Performance Plans generally provide very little explanations about cost drivers for changes in cost levels. In the past, such explanations were found as part of the support to en-route charging reporting tables. Although some of this still exists, it is more limited than before.

3.7.43 In general, contrary to the requirements of the performance scheme Regulation as well as EC letter [Ref. viii], only limited information was provided on capital investments and on their contribution toward meeting the targets. No Performance Plan presents references to business cases or cost-benefit analyses in support for the major investments.

3.7.44 In all Performance Plans, there is only limited discussion of the interaction between investment costs, staffing and capacity plans.

3.7.45 The PRC analyses capital expenditure and investment plans in ACE reports. Figure 3-19 shows a map of capital expenditure (Capex) ratios over Europe. Capex ratios<sup>21</sup> are very high (>95%) in Czech Republic, Estonia, Hungary, Italy, Slovak Republic, Slovenia and Poland.



**Figure 3-19: Ratio of ANSPs cumulative Capex (2010-2014) vs. 2009 revenues**

- 3.7.46 Four of these States are part of FAB CE. All of them are planning, or have recently put into operation, significant investments, in particular new control centres, major upgrades and/or replacement of ATM systems<sup>22</sup> within a few hundreds of kilometres.
- 3.7.47 Uncoordinated investment and procurement of bespoke systems increase costs, make cooperation more difficult, and perpetuate fragmentation.
- 3.7.48 The EU-wide performance targets for RP1 were set at a somewhat more challenging level than the aggregated national plans available at the time (Nov 2010) in order to drive performance improvements, including investment efficiency.
- 3.7.49 Depreciation for investments is 15% of ANS costs on average. The Commission should encourage States and FABs to review the investment part of their Plans. More efficient investments would close a significant part of the DUR gap in 2014 (2.4%).
- 3.7.50 The PRB observes that a number of investments supported by the EU through TEN-T or EIB loans correspond to investments that are not necessarily as one would expect from a network performance point of view. EU tools, including TEN-T and EIB loans, the SES performance scheme, FABs and Network management, should foster more efficient

<sup>21</sup> The ratio of cumulative planned Capex over 2010-2014 vs. actual 2009 revenues (62% in average) represents a measure of the magnitude of planned investments.

<sup>22</sup> Further information on FAB CE ANSPs planned Capex is available on p.92 of the ACE 2008 Benchmarking Report.

investment behaviours. The European Commission should consider more joined-up application of EU tools.

### **INVESTMENTS FOR IP1 IMPLEMENTATION**

- 3.7.51 The European Commission requested States to provide detailed information on their investments planned for the period 2012-2014 [Ref. viii] in their Performance Plans, in particular those associated with the 29 IP1 OI Steps recognised as critical by the Single Sky Committee. The PRB acknowledges that this request was sent relatively late in the process of preparation of Performance Plans.
- 3.7.52 In general, States provided information on major capital projects, typically the top 5 to 10 projects. The information is principally provided to support the cost-efficiency target and include total capital expenditure and the time period over which the investment will take place. Most States attempt some form of traceability to the ATM Master Plan, although this is often through Line of Change, or Technical Enabler rather than the OI-Steps<sup>23</sup>.
- 3.7.53 In most cases, insufficient information was provided to enable a future assessment of States readiness for IP1.
- 3.7.54 The European Commission should seek additional clarity from States on the relationship between investments and IP1 implementation.

### **EUROCONTROL COSTS**

- 3.7.55 EUROCONTROL Agency costs (excluding MUAC) have been treated in very different way in the various Performance Plans: Some States have considered EUROCONTROL as an accountable entity and have set specific cost-efficiency targets while most of them have treated these costs as uncontrollable costs.
- 3.7.56 Moreover, some underlying assumptions for the EUROCONTROL costs were not detailed in the Performance Plans (in particular which exchange rates or scenario has been used) because this information was not always available at the time of adoption of each individual Performance Plan. This matter should be resolved for RP2.

### **MET COSTS**

- 3.7.57 MET costs have been treated differently in the various Performance Plans: Most States have considered MET providers as accountable entities and have set specific cost-efficiency targets (determined costs), some have just reported the costs as a breakdown of the total determined costs.
- 3.7.58 Clearly, more detailed information on MET cost allocation mechanisms, MET drivers, operational MET data, MET output and planned investments that are likely to affect the level of aeronautical MET charges is needed for continuous aeronautical MET performance benchmarking at European level. Separate reporting and consultation requirements for MET and the implementation of transparent accounting systems which allocate the costs in accordance with operational boundaries and product categories would be an important step forward.

### **INFLATION HYPOTHESES**

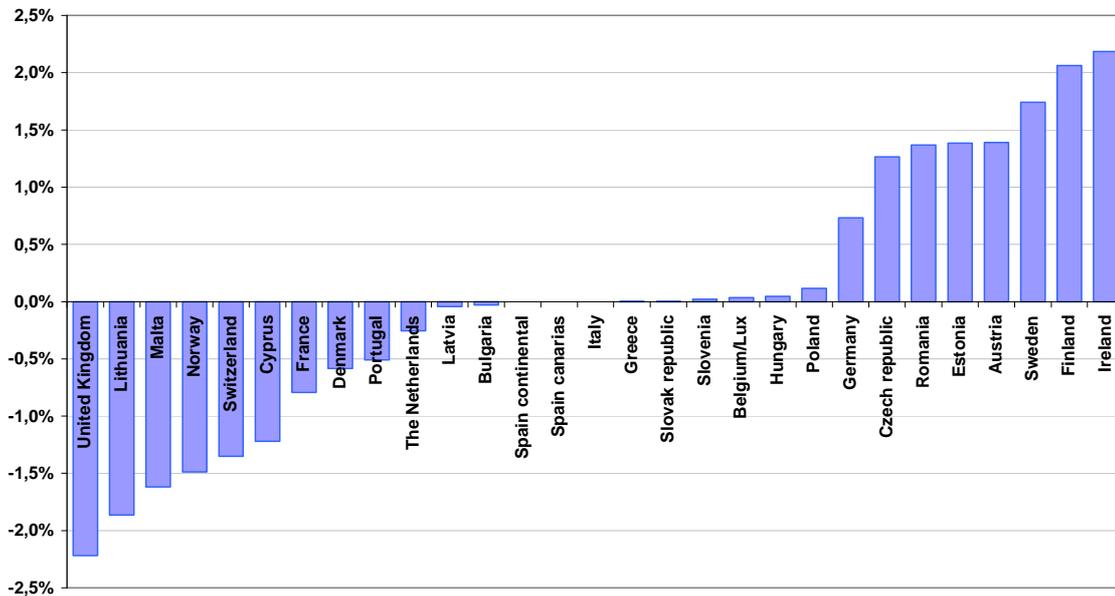
- 3.7.59 The national cost-efficiency targets are expressed in real terms and in national currency. It means that inflation hypotheses were an important element for the calculation of the annual targets during RP1.

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<sup>23</sup> The links between investment projects and IP1 OIs, when they exist, are limited to the use of a reference.

- 3.7.60 In accordance with the performance scheme implementing rule, the PRB compared the inflation hypotheses in Performance Plans with the latest IMF forecasts (April 2011). Details can be found in each assessment report (see Volume II).
- 3.7.61 Figure 3-20 shows the difference between the inflation indices for 2014 of the State and of IMF in percentage points, using year 2009 as a reference. Variations observed range from -2% and +2%.
- 3.7.62 It must be recalled that a higher inflation forecast will result in an apparent better trend of the determined unit rate in real terms. It must be noted that, according to the charging scheme Regulation, the risk of inflation is borne by the airspace users through an annual adjustment of the actual inflation. Therefore, in cases where the actual inflation is lower than forecast, States/ANSPs will have to return the difference to airspace users.

**2014-2009 State vs. IMF inflation forecasts**



**Figure 3-20: States' inflation vs. IMF forecasts**

## **3.8 General observations**

### **CONTENTS OF PERFORMANCE PLANS**

- 3.8.1 The level of detail presented in the Performance Plans varies considerably between States. None are assessed as containing all the required information.
- 3.8.2 The majority of States did largely follow the PRB Guidance Material [Ref. ix] for the preparation of Performance Plans. However a number of States used their own format, which led to additional validation work to reconcile figures and find relevant information.

### **FAB PERFORMANCE PLANS**

- 3.8.3 Two Performance Plans were submitted at FAB level: Denmark and Sweden submitted one DK-SE FAB plan while FABEC submitted one plan covering safety, capacity, environment and military issues with each FABEC State submitting a separate annex covering cost efficiency.
- 3.8.4 Although submitted as FAB Performance Plans, the details contained in the FAB plans tend to demonstrate that only limited decision making is taking place at FAB level:
- The DK-SE FAB Performance Plan contains separate determined unit rates for both Denmark and Sweden, whilst there is common capacity and safety targets. Accountability for achieving the FAB capacity target is not clearly allocated to the States or the newly-established NUAC company, which is not mentioned in the plan.
  - The FABEC Performance Plan contains individual cost-effectiveness targets for each State and a FABEC capacity target. There is neither a clear FABEC entity accountable for the capacity target, nor allocation of the capacity target to States or ANSPs. This makes it impossible to determine the consistency of the cost-effectiveness and capacity targets within FABEC.
  - The national parts of the FABEC plan are very different in contents: some contain their own national capacity targets, while others do not.
- 3.8.5 Mixed FAB and national plans were allowed by the Commission for RP1 as a transitional step. The PRB would encourage States to provide Performance Plans at FAB level in RP2, so that the balance between costs and capacity can be assessed even if there are different cost-efficiency targets within the FAB.
- 3.8.6 In case of FAB plans, accountability for achievement of targets should be clearly allocated.
- 3.8.7 The two FAB plans and the 26 individual State plans highlight a lack of coordination of investment plans at FAB level. For example, all FAB CE States have heavy investment programmes, often including the building of a new Control Centre.
- 3.8.8 The synergies from FABs are not presented in explanations of how accountable entities will reach their performance targets. Moreover, the potential benefits of FABs do not appear to be factored into the capacity and cost efficiency targets submitted by FABs and States.
- 3.8.9 Finally, it must be noted that only a limited number of States have provided aggregated performance targets at FAB level highlighting the consistency at FAB level with the EU-wide targets, as required by Article 5(3) of the performance scheme Regulation. Only UK and Ireland have provided a common specific document.

## **COMPLIANCE CHECKS**

- 3.8.10 In general, the PRB welcomes the efforts made by States and NSAs to produce their Performance Plans. However, there is a significant variation in the level of detail provided, particularly regarding the justification for not meeting the required targets.
- 3.8.11 The individual assessment reports (see Volume II) provide detailed observations on the completeness of each Performance Plan.
- 3.8.12 The performance scheme requires a number of elements to be included in the Performance Plans. Details can be found in the respective annexes. Here is a summary of compliance checks and related PRB's observations.
- States do not always provide a breakdown of the national targets to accountable entities.
  - A number of States do not report Determined Terminal costs for each year.
  - Most States do not identify the airports that are therefore required to provide airport related data during RP1.
  - Where the airspace controlled by the main designated ANSP does not match the national FIR boundary, cross-border issues are generally not addressed, and consistency between national targets cannot be assessed. A typical case is airspace controlled by Skyguide within the French FIR.
  - The information provided on the interrelationships between targets is generally poor. This issue is addressed further below.
  - Some States do not perform an analysis of sensitivity to external assumptions.
  - A description of the outcome of the consultation with stakeholders, including issues raised by the participants as well as actions agreed (Art 10.3(j) of the performance scheme Regulation), and evidence that information was submitted on time (Art 10.2b) are often missing or very limited. This issue is addressed further below.
  - Beyond target setting, it is important to ensure that targets are met. The performance scheme (Art 17) includes requirements for performance monitoring and corrective actions by States. Information on monitoring and corrective actions is generally very poor. This issue is addressed further below.

## **MONITORING DURING RP1**

- 3.8.13 States are required to describe their approach to the implementation of the Performance Plan in terms of performance monitoring and corrective measures.
- 3.8.14 In terms of performance monitoring, NSAs are required to monitor performance during the reference period and provide a report to the European Commission “at least annually and when performance targets risk not being achieved” (Article 17 of the Performance Scheme Regulation).
- 3.8.15 In general, NSAs provide a brief description of their intended process - in most cases this involves receiving reports on performance from the ANSPs at fixed intervals rather than the continuous monitoring of performance by the NSA. The periodicity of the ANSP reports clearly impacts on the ability of NSAs to monitor the risk of achieving the performance targets. The information contained in the Performance Plans is often limited, particularly in terms of safety monitoring.
- 3.8.16 Only a minority of States provide information on the sources of data that will be used to monitor performance.
- 3.8.17 In terms of corrective measures, most Performance Plans recognise the need for NSAs to define corrective actions when performance targets are not met. However, no

Performance Plan provides details of actual corrective measures - it is therefore not possible to assess their credibility. Taken together with the lack of incentive schemes for safety, environment and capacity targets this is a cause for concern.

- 3.8.18 It is a PRB priority to address this issue, as soon as Performance Plans are adopted. The PRB, together with NSAs and the Commission will develop Guidance material on monitoring (what has to be monitored, content of States' reports, timing for submission, etc...) and credible corrective actions during RP1.

### **MILITARY DIMENSION**

- 3.8.19 Most Performance Plans provide a completed section on the military dimension of the Performance Plan. In most cases, this is a status report on the application of Flexible Use of Airspace (FUA) within the State. However, a number of States explicitly mention actions to correct shortcomings previously identified in the LSSIP 2011-2015.
- 3.8.20 Only a minority of plans include performance monitoring for FUA. States have pointed out that clarification is needed by the PRB before effective performance monitoring can take place before RP2. The PRB will include this in the preparation of RP2.
- 3.8.21 The FABEC Performance Plan includes three 'KPIs' and four PIs to measure "Military Mission effectiveness (MME)" and targets will only be set for RP2. The PRB considers that the well developed civil/military AMC could provide national MIL KPIs. The PRB encourages the use of such KPIs in RP1.
- 3.8.22 The PRB encourages States, especially those that have implemented advanced FUA, to develop and adopt national PIs to monitor civil military performance during RP1.

### **NSA STAKEHOLDER CONSULTATION**

- 3.8.23 All Performance Plans were subject to some form of public consultation – in most cases this took the form of a consultation meeting with a draft of the Performance Plan as input material. In a small number of cases (for example Slovenia) the meeting was cancelled due to the absence of participants. However in all cases, airspace users provided NSAs with written comments.
- 3.8.24 In general, States and stakeholders, should be commended for the positive attitude to the consultation process. However, there is a wide variation in:
- The level of detail on the consultation presented in the Performance Plan, as many States do not provide consultation material or minutes of the meetings;
  - The extent to which Performance Plans were updated to address stakeholder concerns, as many States do not describe, either how they amended their plan, or the reasons why they chose not to.
- 3.8.25 Belgium/Luxembourg provide an example where feedback from the consultation meetings led to the States addressing and changing the Performance Plan. In contrast, the airspace users stated their belief that the United Kingdom did not undertake a genuine consultation process for UK Performance Plan, with regards to its cost-efficiency target, as it states the CP3 decision remains, despite the adoption, in the meantime, of the independent EU-wide targets.

## 4 Summary of National/ FAB Performance Plans assessments

- 4.1.1 This chapter presents a summary of assessment reports for individual States or FABs. Individual assessment reports can be found in Volume II, as well as some details on the reasoning behind these conclusions.
- 4.1.2 Figure 4-1 summarises the results of the primary checks on the consistency of the capacity and cost-efficiency targets, along with the PRB assessment on whether the proposed targets provide an adequate contribution to the achievement of EU-wide targets (see last two columns).

Performance Plans	Primary Checks						Contribution	
	Delay Level	Traffic Forecast	Economic Assumptions	Unit Rate Trend	Unit Rate Level	Return on Equity	Capacity	Cost-Efficiency
Austria	x	x	x	x	✓	x	x	x
Czech Republic	✓	✓	✓	x	✓	x	✓	x
Hungary	✓	✓	✓	x	✓	✓	✓	x
Slovak Republic	✓	x	✓	x	x	x	✓	x
Slovenia	✓	✓	✓	x	x	✓	✓	x
Ireland	✓	x	x	x	✓	x	✓	x
United Kingdom	x	x	x	x	✓	x	x	x
Belgium/Lux	✓	✓	✓	✓	x	✓	✓	✓
France	N/A	x	✓	x	✓	x	N/A	x
Germany	N/A	x	✓	x	✓	x	N/A	x
The Netherlands	✓	✓	✓	✓	✓	✓	✓	✓
Switzerland	x	✓	x	✓	x	✓	x	✓
<b>FABEC</b>	<b>x</b>						<b>x</b>	
Poland	x	✓	✓	✓	✓	✓	x	✓
Lithuania	✓	✓	x	✓	x	✓	✓	✓
Cyprus	✓	x	✓	x	~	~	✓	x
Greece	x	✓	✓	✓	✓	✓	x	✓
Italy	✓	✓	✓	x	✓	✓	✓	x
Malta	✓	x	x	x	✓	x	✓	x
Bulgaria	✓	x	✓	✓	x	✓	✓	x
Romania	✓	✓	x	✓	x	✓	✓	x
Denmark		✓	✓	✓	✓	✓		✓
Sweden		x	x	x	~	~		x
<b>DK-SE</b>	<b>✓</b>						<b>✓</b>	
Estonia	✓	*	x	x	✓	x	✓	x
Finland	✓	x	x	✓	✓	x	✓	x
Latvia	✓	x	✓	x	✓	✓	✓	x
Norway	✓	x	x	~	x	x	✓	x
Portugal	✓	✓	x	~	~	~	✓	x
Spain continental	x	x	✓	✓	x	x	x	x
Spain canarias		✓	✓	✓	x	x	x	~

✓	Consistent
x	Not consistent
~	Consistent with reservations

\* Estonia is not part of EUROCONTROL. Therefore the comparison with STATFOR data is not relevant.

**Figure 4-1: Summary of Primary Checks**

## 5 Conclusions and Recommendations

### 5.1 Key Conclusions

- 5.1.1 The PRB is pleased to acknowledge major progress and efforts made towards adoption of national/FAB Performance Plans for RP1. It is the first time that 26 national and 2 FAB Performance Plans were prepared in a harmonised way, consulted with airspace users and submitted on-time.
- 5.1.2 Taken collectively, these Performance Plans are close to the EU-wide targets for RP1. Merely some fine-tuning of plans is required in general. This constitutes a very solid base on which to adopt Performance Plans meeting the EU-wide targets. The submission of revised plans by end 2011 gives a formal opportunity to close the remaining gaps and collectively agree on Performance Plans aiming at meeting the EU targets in 2014.
- 5.1.3 The detailed assessment reports contained in Volume II show that there is sufficient opportunity to deliver the targets and to improve further the Performance Plans. Overall, EU-wide performance targets for RP1 are clearly within reach with reasonable efforts from all States/FABs.
- 5.1.4 Everyone concerned has made considerable efforts to set up a harmonised Performance Planning system. A learning exercise will be necessary to reveal opportunities for further refinement of the performance programme.
- 5.1.5 The remainder of this chapter presents general PRB recommendations and advice resulting from a compilation of all assessments. Specific recommendations and advice concerning individual national/FAB Performance Plans are included in the respective assessment reports in Volume II. Readers are invited to refer to these assessment reports for details.
- 5.1.6 The PRB recalls the paramount importance of safety, and thereby requests States/FABs to ensure that any measures and operational changes that are taken in order to improve performance as a result of this review in the areas of cost-efficiency, capacity and environment, must be in accordance with safety requirements / legislation.

### 5.2 PRB General Recommendations for RP1

R1-GEN	The PRB recommends that the European Commission requests all States to: <ul style="list-style-type: none"><li>a. examine carefully the individual assessment reports (Volume II), and in particular the results of the primary checks on the consistency of the capacity and cost-efficiency targets;</li><li>b. provide clarifications where a need has been identified in the individual assessment reports (Volume II §1.10);</li><li>c. take opportunities identified in the individual assessment reports (Volume II) to further improve their targets.</li></ul>
R2-GEN	The PRB considers that performance monitoring requires further work and accordingly recommends that the European Commission facilitates a harmonised programme to ensure that all States have sufficient guidance and tools to provide adequate monitoring and reporting.
R3-GEN	The PRB recommends that the European Commission gives favourable consideration to asking States to pool NSA resources via FAB mechanisms to reduce the regulatory burden on each individual State.

<p>R4-GEN The European Commission should ensure that the financial tools of the European Union (including TEN-T and EIB loans) foster more efficient investment behaviours and are used in such a way as to meet the Single European Sky objectives.</p>
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### 5.3 PRB Recommendations for RP1 - Safety

5.3.1 The performance scheme Regulation does not require EU-wide targets to be set for safety during RP1. Nevertheless, Member States were encouraged to set and include in the National/FAB Performance Plans, their own national safety targets or at least the safety indicators for monitoring safety performance. The PRB welcomes that the vast majority of Member States included a safety part in their Performance Plan, as it applies the total performance approach within the field of ATM/ANS, which seeks to find a balance across different performance areas (safety, capacity, environment, cost-efficiency, military dimension) whilst respecting the overriding safety requirements.

<p>R1-SAF The PRB recommends that the European Commission encourages States that have not already done so, to increase their efforts for the timely implementation of SSP, as it is PRB's opinion that this is a fundamental basis for safety improvements.</p>
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<p>R2-SAF The PRB recommends that the European Commission requests States that have not already done so, to use the opportunity of application of the RAT methodology (during ATM safety occurrence analysis and investigation) to develop safety performance indicators for monitoring purposes as early as possible during RP1 in the context of the performance scheme. The PRB recommends to the European Commission that Member States receive adequate support in implementing the RAT methodology.</p>
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<p>R3-SAF The PRB recommends that the European Commission, with due regard to the independence of the AIB, invites States to apply the same methodology for analyzing and investigating ATM safety occurrences in all entities (not just the ones mentioned in 691/2010).</p>
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<p>R4-SAF The PRB recommends that the European Commission encourages all States to implement and prepare for the measurement of Just Culture at three levels (ANSPs, NSA/CAA, and State particularly with regard to MoT and Justice Department).</p>
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<p>R5-SAF The PRB recommends that the European Commission requests States to include an update on the status of recommendations made by the PRB on safety in their next national Annual Report, as required by Commission Regulation (EC) No 691/2010.</p>
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## 5.4 PRB Recommendations for RP1 - Capacity

- 5.4.1 The majority of Performance Plans meet the reference values, which were provided by EUROCONTROL and used to assess consistency with the EU-wide capacity target in accordance with the Performance regulation.
- 5.4.2 However, one FAB and five national Performance Plans do not meet the reference values. This would generate significant operational and economic penalties to airspace users, estimated in the order of €920M over RP1, and negate efforts made on cost-efficiency if not resolved.

R1-CAP	The PRB recommends that the European Commission supervises actions at all levels to address ANS-related institutional issues in Greece, in view of local circumstances, as the delay contribution above the reference value is anticipated to increase over time and to be the highest of all States in 2014. This presents a high risk to the performance of the European network and requires urgent resolution.
R2-CAP	The PRB recommends that the European Commission (i) notes that although FABEC only misses its reference value for 2014 by a relatively small margin (0.5 vs. 0.4 min/flight), it is anticipated to generate the second highest additional delays in 2014 due to the high amount of flights handled and (ii) invites FABEC to contribute the additional effort needed to reach its reference value for 2014.
R3-CAP	The PRB recommends that the European Commission requests FAB CE States, the FAB co-ordinator and Network Manager to expedite resolution of the capacity issue in Austria. This is because, in FAB CE, there is both a significant capacity shortfall in Austria and spare capacity in the neighbouring States. This generates significant penalties for airspace users, who would have to bear both additional delay costs from Austria and extra costs associated with spare capacity elsewhere. The PRB recommends also that a similar approach is taken for the SW Portugal – Spain FAB as well as for Blue-Med.
R4-CAP	The PRB recommends that the European Commission: <ol style="list-style-type: none"><li>gives the Network Manager sufficient time to develop the strategic and operational plans at EU wide level;</li><li>asks the Network Manager to present for assessment by the PRB a Performance Plan by March 2012 including a precise description of its plan and objectives to assisting ANSPs in meeting the EU-wide capacity target. As required by the revised Performance Scheme Regulation, the PRB will assess this plan by end June 2012 and will report to the European Commission.</li></ol>

R5-CAP	In order to ensure that the EU-wide en-route capacity target for 2014 is met, the PRB recommends that the European Commission: <ul style="list-style-type: none"> <li>a. requests Spain, Poland and the UK to improve their capacity plans so as to reach the respective reference values for 2014, in conjunction with the Network Manager;</li> <li>b. invites those States whose adopted capacity targets are well above delays typically achieved (Bulgaria, Estonia, Ireland, Italy, Latvia, Lithuania, Malta, Portugal) to adopt a capacity target closer to historic performance;</li> <li>c. requests the Network Manager to monitor the delivery of all capacity plans closely, and to take prompt action with ANSPs concerned if negative deviations from plans are observed.</li> </ul>
R6-CAP	The PRB recommends that the European Commission requests Italy to review its incentive mechanism, so that a bonus is only granted when delay per flight performance is better than the historic values.

## 5.5 PRB Recommendations for RP1 - Environment

- 5.5.1 The first Reference Period focuses on horizontal flight-efficiency. This is a performance area that needs to be addressed at European level. Although States were required to provide any quantified targets, most Performance Plans include elements on environmental performance, but only FABEC and the Netherlands include performance targets. The Network Manager will have a fundamental role in ensuring delivery of the EU-wide target for environment. Corresponding performance objectives should be included in the Network Strategic Plan.

R1-ENV	The PRB recommends that the European Commission asks the Network Manager to include in its Performance Plan a precise description of its plan and objectives to meeting the EU-wide environment target, for adoption as part of the Network Strategic Plan by March 2012.
R2-ENV	The PRB recommends that the European Commission asks the Network Manager to include in its Performance Plan an assessment of the overall performance implications of Free route airspace.

## 5.6 PRB Recommendations for RP1 - Cost-efficiency

- 5.6.1 Performance Plans collectively fit within the total en-route determined costs for 2012 specified in the EC Decision on EU-wide targets for RP1, and are close to the intermediate DUR value for 2012 (€58.08 versus €5788, or +0.3%). This constitutes a solid basis on which to start the reference period.
- 5.6.2 However, the Performance Plans collectively fall short of the EU-wide cost-efficiency target for 2014 by a relatively small margin (€55.22 instead of €53.92, or +2.4%). As a result, the planned cumulative determined costs (€18 900M) would need to be reduced by an amount of €256M to meet the EU-wide target and intermediate values over RP1.
- 5.6.3 PRB's detailed analysis (Volume II, paragraph 1.10) shows that there are sufficient opportunities to close this gap in most Performance Plans. In most cases, only minor improvements are needed to provide an adequate contribution to the EU-wide cost-efficiency target.

R1-CEF	<p>The PRB recommends that the European Commission:</p> <ol style="list-style-type: none"> <li>a. requests the States listed below to revise their Performance Plans to improve their contribution to the EU-wide cost-efficiency target, with a view to closing the gap in 2014;</li> <li>b. only accepts revised Performance Plans which actually improve the 2011-2014 determined unit rates trend;</li> <li>c. requires adequate justifications where the traffic forecast is revised downwards over RP1, compared to the initial Performance Plan, and requests States to revise downwards their planned en-route determined costs accordingly.</li> </ol>
R2-CEF	<p>The PRB recommends that the European Commission requests the States listed below to:</p> <ol style="list-style-type: none"> <li>a. carefully reassess the assumptions underlying the high risk premiums, and hence higher return on equity for RP1;</li> <li>b. provide adequate justifications for the significant increases in the cost of capital for RP1.</li> </ol>
R3-CEF	<p>The PRB recommends that the European Commission requests the States identified as having scope for improvement in terms of support costs and productivity (see list below) to carefully address those areas when revising their target (for States listed in R1-CEF) or taking opportunities for further improvements during RP1 (for the other States).</p>
R4-CEF	<p>The PRB recommends that the European Commission requests:</p> <ol style="list-style-type: none"> <li>a. the States identified as having proportionally high capital expenditure programmes (see list below) to carefully assess the magnitude and priorities of the investments over RP1, taking full account of opportunities for rationalisation in investment plans within FABs or other associations (e.g. COOPANS);</li> <li>b. all States to specify the contribution of the main investments to, and impact on the performance targets by providing references to specific business cases and or cost benefit analysis and description of their relevance in relation to the European ATM Master Plan, and in particular IP1 implementation.</li> </ol>
R5-CEF	<p>The PRB recommends that the European Commission:</p> <ol style="list-style-type: none"> <li>a. considers and gives a view on whether the cost items/types identified in the Performance Plans of the States listed below as uncontrollable cost factors are compatible with the EC Regulation 1794/2006;</li> <li>b. for those costs deemed uncontrollable in the Performance Plan, invites all States to provide the assumptions and rationale for establishing these costs with a view to facilitating the necessary adjustments at the end of the period;</li> <li>c. considers providing more detailed guidance on the content of “uncontrollable costs”, and restricting the uncontrollable costs categories to prevent abuse in future reference periods.</li> </ol>

Recommendation	Applicable to
R1- CEF (a)	Austria, Bulgaria, Cyprus, Czech Republic, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Malta, Norway, Portugal, Romania, Slovak Republic, Slovenia, Spain Continental, Sweden, United Kingdom.
R2- CEF	Austria, Czech Republic, Estonia, Finland, France, Germany, Ireland, Malta, Norway, Slovak Republic, Spain (Continental + Canarias), United Kingdom.
R3- CEF	Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Hungary, Italy, Latvia, Lithuania, Malta, The Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland.
R4- CEF (a)	Bulgaria, Czech Republic, Estonia, Finland, France, Hungary, Italy, Latvia, Malta, The Netherlands, Norway, Portugal, Romania, Slovak Republic, Slovenia, United Kingdom.
R5- CEF (a)	Bulgaria, France, The Netherlands, Spain, Switzerland, United Kingdom.

**Figure 5-1: Applicability of recommendations on cost-efficiency**

## 5.7 PRB recommendations in preparation of RP2

5.7.1 The experience gained by the PRB from assessing these Performance Plans, and the knowledge gained of best practices in the States/FABs, will constitute a solid foundation for performance monitoring and target setting in RP2. In particular, the PRB has learned a number of lessons from the process for the development and assessment of the National/FAB Performance Plans during RP1. Initial recommendations are set out in the following table.

RP2 - 1	The PRB recommends that the European Commission encourages States to develop Performance Plans at FAB level for RP2.  In each FAB plan, the clear accountability for the achievement of targets should be allocated.
RP2 - 2	The PRB recommends that the European Commission requires investment plans to be better coordinated at least within FABs. Consultation and publication of FAB investment plans could be incorporated in FAB requirements, in the new governance structure for deployment and/or amendments to the performance scheme or charging scheme.
RP2 - 3	The PRB recommends that the European Commission:  a. requests the PRB, to undertake research in consultation with competent parties, with a view to harmonising incentive schemes;  b. to provide further guidelines and consistency criteria to assess the level of the cost of capital, rather than just the return on equity.
RP2 - 4	The PRB recommends that the European Commission publishes guidelines to Member States / FABs for the presentation and handling of the EUROCONTROL costs in their performance plans to, in particular, describe which exchange rates or scenario has been used for the establishment of these costs.
RP2 - 5	The PRB considers that a common and harmonised European methodology for development of safety performance indicators and corresponding targets on State level (taking into account EU-wide performance targets) is needed. Accordingly, the PRB recommends that the European Commission invites EASA to develop, with the support of EUROCONTROL as appropriate, an acceptable means of compliance for this programme to be deployed prior to the second reference period..

## 5.8 Link with States outside the SES

5.8.1 The PRB recognises the importance of extending the Performance Scheme to neighbouring countries. The PRB in its capacity as the Performance Review Commission intends to pass this report to EUROCONTROL in conjunction with the European Commission through a PRC report to the Provisional Council, for States to note and support at a Pan-European level.

## Annex I: Assessment methodology

The PRB has developed a common approach for assessing the adequacy of the contribution of national/FAB Performance Plans, and their consistency with the EU-wide capacity and cost-efficiency targets. This approach has been designed to be fair, standardised, robust and transparent.

Annex III of the Commission Regulation (EU) No 691/2010 (the performance scheme Regulation) defines several assessment criteria which can be grouped into three main categories for RP1: General criteria, Capacity criteria and Cost-efficiency criteria.

For each assessment criterion, the PRB has developed one or two corresponding primary check(s) as well as several additional supporting checks which have been designed to inform the PRB whether the Performance Plan is consistent with, and makes adequate contribution to, the EU-wide capacity or cost-efficiency target.

It must be noted that failing one or several primary checks does not necessarily mean that the national/FAB contribution to the EU-wide capacity or cost-efficiency target is assessed as not adequate, given that:

- some checks are more important (the delay level for capacity; the unit rate trend and the unit rate level for the cost-efficiency); and
- local conditions and exceptional circumstances must also be considered.

The purpose of this annex is to present the various checks that have been considered by the PRB during the assessment.

### 1. Safety review

For RP1, Regulation 691/2010 requires specified performance indicators to be defined prior to RP1 and monitored during RP1. States may adopt national/FAB Safety targets for RP1. Accordingly, the PRB, in coordination with EASA, has reviewed, commented upon and included in each assessment report the following elements related to safety included in the Performance Plan:

- Safety performance monitoring capabilities;
- Safety KPIs / PIs, Targets, alert threshold (if any);
- Safety observations;
- Safety interdependencies;
- Recommendations (optional).

### 2. Environment review

For RP1, in the absence of environment assessment criteria as well as of any obligations for States to include national/FAB environment targets in their Performance Plans, the PRB has reviewed, commented upon and included in each assessment report the information related to environment included in the Performance Plan.

### 3. Capacity assessment

The PRB applied the assessment criteria described in Annex III of the performance scheme Regulation:

- **Delay level:** Comparison of the expected level of en route ATFM delay with the reference value provided by the capacity planning process of EUROCONTROL.

To this criterion, the PRB has applied the following primary check:

- *Is the national/FAB capacity target equal or below the reference value provided by the capacity planning of EUROCONTROL?*

This analysis has been complemented by additional checks to verify whether the ANSP capacity plan (LSSIP 2011-2015) was in line with the reference value provided by EUROCONTROL as well as with the capacity target of the Performance Plan.

The military dimension of the plan was also reviewed and commented.

#### 4. Cost-efficiency assessment

The PRB applied the five assessment criteria described in Annex III of the performance scheme Regulation in the following order:

- **Traffic forecast assumptions:** comparison of local service unit forecasts used in the Performance Plan with a reference forecast such as EUROCONTROL Statistics and Forecast Service (STATFOR) traffic forecasts.

To this criterion, the PRB has applied the following primary check:

- *Are forecast total service units equivalent to STATFOR forecasts published in May 2011, for every year until 2014?*

This analysis has been complemented by additional checks to evaluate whether there was an appropriate rationale for use of a different traffic forecast and whether this impacted the assessment of consistency with the EU-wide target

- **Economic assumptions:** Check that the inflation assumptions used in the Performance Plan are in line with a reference forecast such as IMF (International Monetary Fund) and EUROSTAT forecasts.

To this criterion, the PRB has applied the following primary check:

- *Are inflation forecasts equivalent to IMF average inflation rate forecast published in April 2011, for every year until 2014?*

This analysis has been complemented by additional checks to evaluate whether there was an appropriate rationale for using a forecast other than annual average from IMF.

- **Unit rate trend:** assessment whether the submitted Determined Unit Rates (DURs) are planned to evolve consistently with the European Union-wide cost-efficiency target and whether they contribute in an adequate manner to the achievement of the aforementioned target during the entire reference period as well as for each year individually.

To this criterion the PRB has applied the following primary checks:

- *Is the average annual improvement in determined unit rate equal to, or better than, the improvement corresponding to the EU target for the period 2011-2014 (-3.5%)?*
- *Is the average annual improvement in determined unit rate equal to, or better than, the improvement corresponding to the EU target over the period 2009-2014 (-3.2%)?*

This analysis has been complemented by additional checks to evaluate the potential changes in determined costs and forecast traffic compared to the November 2010 and June 2011 submissions to the Enlarged Committee, the appropriate justifications, the potential changes in cost categories or by different accountable entities as well as the impact of the one-off adjustment to EUROCONTROL costs in 2011.

These additional checks also evaluated the level of capital expenditure, whether the investment programme addresses delay problems and whether the corresponding FAB was making sufficient contribution to the EU-wide target.

- **Determined unit rate level:** comparison of the submitted local unit rates with the average unit rate of Member States or FABs having a similar operational and economic environment.

To this criterion the PRB has applied the following primary check:

- *Is determined unit rate in 2014 equivalent to or below the average of the determined unit rates of the comparator group States as identified in the latest ACE 2009 Benchmarking Report (June 2011) and PRB's final report proposing EU-wide targets for RPI (September 2010) (see Figure I-1)*

<b>Group 1</b>	<b>Group 3</b>	<b>Group 5</b>	<b>Group 7</b>
Spain continental	Austria	Norway	Ireland
France	Denmark	Sweden	Portugal
Germany	Switzerland	Finland	Spain canarias
Italy		Poland	
United kingdom			
	<b>Group 4</b>	<b>Group 6</b>	<b>Group 8</b>
<b>Group 2</b>	Belgium/Lux	Latvia	Cyprus
Czech republic	The Netherlands	Estonia	Greece
Hungary		Lithuania	Malta
Slovak republic			Bulgaria
Slovenia			Romania

**Figure I-1: Comparator groups for the assessment of the cost-efficiency target**

It was complemented by additional checks to compare the trend with peer group States, to evaluate the impact of exchange rates/cost of living (PPP), the proportion of gate-to-gate costs allocated to en-route, the proportion of MET costs, as well as the ATCO employment costs, ATCO productivity, and support costs per composite flight-hour compared to peer group States in 2009

- **Return on equity:** assessment of the return on equity of the air navigation service providers in relation with the actual risk incurred.

To this criterion the PRB has applied the following primary check:

- *Is risk premium equivalent to or below the EU-wide average risk premium?*

It was complemented by additional checks to evaluate whether the pre-tax weighted average cost of capital (WACC) or the asset base per service unit was significantly higher than the EU and comparator group average as well as the value of the equity beta ( $\beta$ ) if the Capital Asset Pricing Model (CAPM) methodology was used to compute the return on equity.

## 5. General criteria

Finally, the PRB has considered the general criteria listed in Annex III of the performance scheme Regulation:

- Compliance with the requirements and assessment of the justifications;
- Factual analysis taking into account the overall situation;
- Interrelations between all performance targets;
- Standards of performance at the start of the reference period and scope for further improvement.

## Volume II: Assessment reports for each national or FAB Performance Plan

FABs	Performance Plans
FAB CE	Austria
	Czech republic
	Hungary
	Slovak republic
	Slovenia
UK - IR	Ireland
	United Kingdom
FAB EC	Belgium / Luxembourg
	France
	Germany
	The Netherlands
	Switzerland
	FABEC
Baltic	Poland
	Lithuania
Blue Med	Cyprus
	Greece
	Italy
	Malta
Danube	Bulgaria
	Romania
Danish / Swedish	Denmark-Sweden FAB
NEFAB	Estonia
	Finland
	Latvia
	Norway
SW Portugal - Spain	Portugal
	Spain

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## References

- i Commission Decision C(2010)5134 final of 29 July 2010 on the designation of the Performance Review Body of the Single European Sky and EUROCONTROL Permanent Commission Directive N°10/74 of 15 September 2010
- ii Commission Regulation (EU) No 691/2010 of 29 July 2010 laying down a performance scheme for air navigation services and network functions.
- iii Commission decision of 21 February 2011 setting the European Union-wide performance targets and alert thresholds for the provision of air navigation services for the years 2012 to 2014 (OJ L 48, 23.2.2011, p.16).
- iv PRB report to the European Commission “Proposed EU-wide targets for the period 2012-2014”, dated 27 September 2011
- v PRB’s letter to EUROCONTROL dated 15 December 2010 asking EUROCONTROL to calculate individual capacity reference values and proposing indicative values of the EU-wide capacity targets for 2012 and 2013.
- vi European airline delay cost reference values, Final Report (Version 3.2), 31 March 2011, EUROCONTROL PRU,  
[http://www.eurocontrol.int/prc/gallery/content/public/Docs/European%20airline%20delay%20cost%20reference%20values%20\(Final%20Report.%20V3.2\).pdf](http://www.eurocontrol.int/prc/gallery/content/public/Docs/European%20airline%20delay%20cost%20reference%20values%20(Final%20Report.%20V3.2).pdf)
- vii Commission Regulation (EC) N°1794/2006, as amended by EU Regulation 1191/2010 laying down a common charging scheme for air navigation services.
- viii European Commission letter dated 15 April 2011, from the Air Transport Director, inviting States to provide in their Performance Plans detailed information on their investments planned for the period 2012-2014, in particular those associated with the 29 IP1 OIs steps recognised as critical by the Single Sky Committee.
- ix PRB Guidance material for national/FAB performance plans:  
[http://www.eurocontrol.int/prc/gallery/content/public/Docs/Guidance\\_material.pdf](http://www.eurocontrol.int/prc/gallery/content/public/Docs/Guidance_material.pdf)