

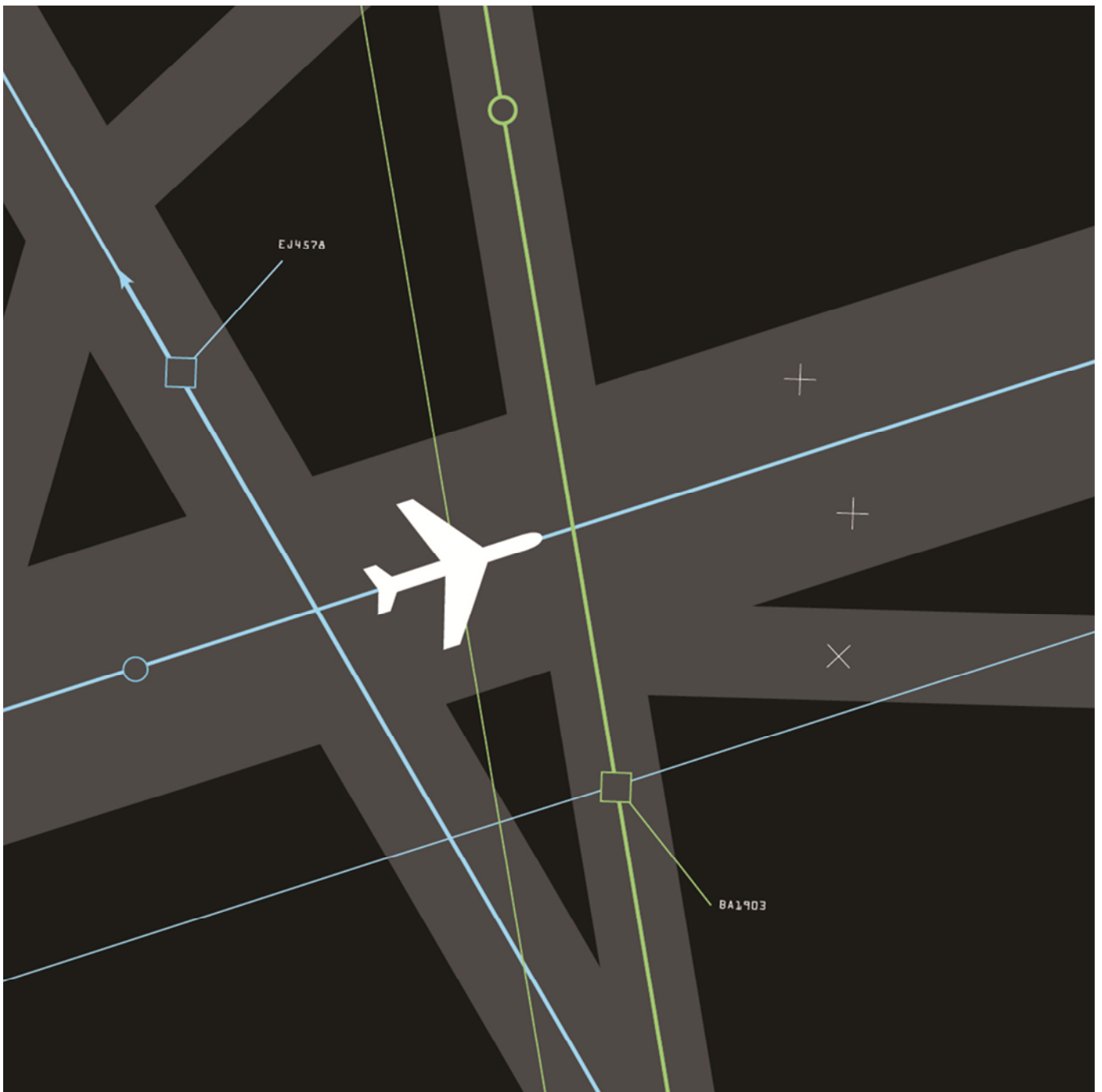


Review of the Single  
European Sky Network  
Manager

Final Report  
June 2016

European Commission

Our ref: 22873401  
Client ref: MOVE/E2/2015-596







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## Executive Summary

### Introduction

The Network Manager for the Single European Sky (SES) was established under Commission Regulation (EU) No 677/2011, as amended by Commission Implementing Regulation (EU) No 970/2014 (together referred to here as the Implementing Rules). Its role, which is defined in Article 3 of the Implementing Rules, includes design of the European aviation route network, the management of scarce resources (notably radio frequencies with frequency bands for general aviation and secondary surveillance radar (SSR) transponder codes) and air traffic flow management (ATFM). This role is supported by a number of tasks defined in Article 4.

The delivery of the Network Manager functions has made a positive contribution to the ongoing development of the SES, and the role can be expected to become increasingly important in supporting performance improvements and other aspects of SES policy, for example Single European Sky ATM Research (SESAR) deployment. However, the Network Management Board (NMB), the body responsible for oversight of the Network Manager under Article 16 of the Implementing Rules, has expressed a number of concerns about the associated governance and financial framework. These culminated in challenges to the draft budgets presented in 2014 and 2015, leading to revisions as well as amendments to the Implementing Rules.

Against this background and taking account of its duty to oversee the Network Manager, the Commission initiated a study to provide it with an independent assessment of the effectiveness of the Network Manager and an evaluation of the way in which it has been established. This included a review of its cost base, financial arrangements, cost effectiveness and governance framework. Steer Davies Gleave was commissioned to undertake the study and began work in December 2015.

### Overview of methodology

Our methodology was designed to ensure coverage of the four tasks described in the Terms of Reference, recognising the interrelationship between them. It included the following elements:

- a review of existing documentation, in particular the key legislation, Network Manager documentation, NMB minutes and previous audits carried out by the European Aviation Safety Agency (EASA);
- engagement with Head of Eurocontrol's Network Management Directorate (NMD) as well as other Network Manager staff, members of the NMB, members of the Single Sky Committee (SSC) and representatives of other key stakeholders;
- mapping of the activities and costs of the NMD to the functions and tasks defined in legislation to distinguish as far as possible between the cost base of the Network Manager and the costs of other activities performed within the NMD;
- a review of current financing arrangements, including an examination of how the financing of the Network Manager relates to the financing of Eurocontrol as a whole and of how the arrangements for budget approval operate in practice;
- benchmarking of the Network Manager's costs against those of air navigation service providers (ANSPs) employing staff with similar skills and undertaking comparable activities;

- a RACI analysis of decision making in relation to the Network Manager functions and tasks, identifying bodies that are Responsible, Accountable, Consulted and Informed in each area of decision making; and
- comparison of the Network Manager governance framework against the frameworks in place for organisations with a similar role in terms of the planning or coordination of activities at a pan-European level, in particular EASA, the Innovation and Networks Agency (INEA) and the European Rail Agency (ERA).

Based on the results of this work, we identified a number of key findings and developed recommendations to address specific issues and concerns, including actions to be taken over next 18 months and longer term measures for implementation through the next designation of the Network Manager in 2019. These findings and recommendations were shared at a workshop of NMB members held on 11 April 2016 and subsequently refined to reflect the comments received.

In the remainder of this summary we set out our findings and recommendations under each element of the study. Proposed recommendations should be implemented either swiftly (from the start of 2017) or should be considered as part of the preparation for the designation of the Network Manager to undertake the role after 2019.

### **Governance**

Article 3 of Commission Regulation (EU) No 677/2011 provides for “an impartial and competent body” to undertake the functions previously set out in Regulation (EC) No 551/2004. The same Article states that “the nomination of the Network Manager shall take the form of a Commission Decision after consultation of the Single Sky Committee”, and that the term of the nomination “shall coincide with the reference periods for the [SES] performance scheme”. Accordingly, under a Commission Decision of 7 July 2011 (the Nomination Decision), the Commission nominated Eurocontrol as the Network Manager until 31 December 2019. The effect of the decision was to designate Eurocontrol as a whole to carry out the role (much of which was already being undertaken by the organisation) rather than the creation of a body specifically designed for the purpose.

The Implementing Rules also define the governance framework for the Network Manager, which includes two principal bodies, the NMB and the SSC. Since the framework is defined independently of the organisation nominated to undertake the Network Manager role, it does not take account of potential interaction with any governance arrangements already in place for the organisation in question. Rather, Articles 16 and 17 set out extensive responsibilities for, respectively, the NMB and SSC, providing for a wide range of approval and monitoring activities.

The process for establishing the Network Manager differed significantly from that applied in the case of other pan-European organisations established to undertake a role under legislation such as EASA, INEA and ERA. These bodies have a distinct legal status and a substantial degree of management independence, allowing them to make decisions that support achievement of the objectives in their respective policy areas within the framework of bespoke governance arrangements. By contrast the Network Manager, operating as part of a unit within Eurocontrol, does not enjoy such autonomy, either in principle or in practice. More specifically, it cannot:

- recruit and dismiss staff on terms and conditions that differ from those in place for the rest of Eurocontrol’s organisation;

- make applications on its own account for support from the Connecting Europe Facility (CEF), a key source of funding for the development of trans-European infrastructure including the European route network;
- make investment and other proposals to the NMB without reference to Eurocontrol's internal approval procedures;
- conclude contractual agreements with third parties such as the SESAR Deployment Manager; or
- secure support services of various kinds (e.g. facilities and general IT services).

We consider that the Network Manager must have discretion to make decisions in all of these areas if it is to pursue the aims of the SES effectively and efficiently. In the absence of such independence, there is a clear risk that the organisation will be required to balance SES objectives with those of Eurocontrol, giving rise to tensions and ongoing disagreement with the NMB and stakeholders. Such tensions have already arisen, notably in respect of budget issues, applications for CEF funding or the treatment of third countries.

The NMB is comprised of all operational stakeholder representatives (including the military), and its role is therefore different from that of a conventional corporate board. Its specific responsibilities nevertheless reflect to some degree those typically allocated to supervisory boards of different kinds. These include endorsing or approving key plans (notably the Network Strategy Plan and the Network Operations Plan) as well as monitoring their implementation, approval of the annual report and assessing if the Network Manager has the appropriate competencies, resources and impartiality to carry out the tasks assigned to it. Key responsibilities normally allocated to a board that are not within the role of the NMB, as defined in the Implementing Rules, are as follows:

- selection and performance review of the senior management team (who report to Eurocontrol);
- ensuring long term financial stability;
- monitoring expenditure against the budget (although it could be argued that this role is implicit in a number of the tasks covered by Article 4 of the Implementing Rules, for example "monitoring activities related to the management of the network functions");
- influencing and approving changes in organisational structure;
- ensuring the adequacy of internal control procedures (with the Network Manager relying on Eurocontrol's procedures); and
- engaging external advisers.

We also note that the NMB's role in relation to budget approval is unusual and has been the subject of discussion and dispute.

Moreover, the NMB's responsibilities differ significantly from those of comparable boards charged with oversight of pan-European organisations such as those mentioned above. In addition to having independent legal status, these organisations are overseen by boards with powers to appoint their respective Directors and which are fully accountable for their budgets. In all cases, the supervisory bodies undertake extensive monitoring activities, including regular review of expenditure against the budget and KPIs.

In our view, the accountability of the NMB would be enhanced, and its role in overseeing the activities of the Network Manager considerably strengthened, if a governance model similar to that of the decentralised agencies were adopted. Subject to legal advice, we suggest that this would not necessarily require major changes to the relevant legislation, but would be

conditional on the Network Manager having a “legal personality” equivalent to that of the other organisations reviewed.

In the light of these findings, we make the following recommendations.

*Recommendation – to take effect from the start of 2017*

***Eurocontrol should define internal procedures providing the Network Manager with greater management autonomy, to be approved by the NMB. These should allow the Network Manager to seek approval for new initiatives from the NMB without first securing the approval of Eurocontrol management and be incorporate into the CDM document.***

*Recommendation – to be implemented as part of the preparation for the designation of the Network Manager in 2019*

***The Network Manager should be established as a separate legal entity, able to manage its activities and make decisions and agreements on its own behalf. It should prepare its own financial accounts, which should be subject to independent audit.***

***The NMB should have full powers to:***

- ***approve the appointment of the Director of the Network Manager;***
- ***approve the annual accounts as well as the budget and investment proposals and applications for CEF funding;***
- ***approve the Network Strategy Plan and Operations Plans (as now);***
- ***undertake ongoing monitoring of both operational and financial performance; and***
- ***ensure performance of the tasks as laid down in the Implementing Rules.***

*Recommendation – to take effect in 2016/2017*

***The Network Manager should prepare and make available to the NMB information to support its oversight role (as discussed further below in relation to financial arrangements).***

*Recommendation – to be implemented as part of the preparation for the designation of the Network Manager in 2019*

***Transparency and reporting requirements should be documented and be included as a requirement of the designation in 2019.***

In the course of our engagement with the Network Manager, it has raised concerns about the potential for members of the NMB to face conflicts of interest. In particular, it has indicated that members with access to detailed financial and other information would have an unfair advantage if they were to participate in any future consortium or other organisation bidding to undertake the role of Network Manager in competition with Eurocontrol. We recognise the general need to consider the potential for conflicts of interest when disseminating information, but note that bidding organisations are typically provided with extensive historical financial and other information as part of the procurement process in order to ensure a level playing field in the preparation of bids. Such historical information must be distinguished from the forward looking plans, initiatives and associated financial projections developed by individual bidders at the time of the procurement that are properly subject to confidentiality.

At the same time, we consider that the effective and transparent management of potential conflicts of interest is important in establishing trust and a productive working relationship between the Network Manager and the NMB. Further, we note that Article 13 of the NMB’s

rules of procedure require it to prepare a Data and Confidentiality Policy Statement and that this has not yet been produced. In our view, this could provide a mechanism for responding to the Network Manager's concerns and therefore make the following additional recommendation in relation to governance.

*Recommendation – to take effect in 2016/ 2017:*

***In accordance with Article 13 of its Rules of Procedure, the NMB should prepare a Data and Confidentiality Policy Statement. The statement should define the procedures to be followed in a range of potential conflict situations, including the participation of a member of the NMB in any organisation established to participate in a competitive procurement of the Network Manager functions and tasks. All members of the NMB and their alternates should be required to confirm that they understand and will abide by the terms of the Statement.***

### **Financial arrangements**

As part of a directorate within Eurocontrol, the Network Manager is currently funded through arrangements applying to the organisation as a whole. Hence, the Network Manager is initially financed through a combination of contributions from Member States, an internal tax levied on staff remuneration and contributions from other sources. Member State contributions are subsequently recovered through en-route service charges paid by airspace users, and the latter are therefore the ultimate primary funders of the Network Manager and of Eurocontrol's wider organisation.

Our Terms of Reference require us to identify options for alternative ways of funding the Network Manager, in particular a unit rate similar to that applied to recover other air navigation costs. The framework governing the calculation of the unit rates for ANSPs is set out in Regulation (EU) No 391/2013 (the Charging Regulation) and, in principle, this framework could be applied to the Network Manager. The Network Manager's cost base would then be recovered through a unit rate for en-route services calculated according to a formula analogous to the unit rate calculation described in Annex IV of the Charging Regulation. Based on the Network Manager's cost base for 2015, as set out in the Agency Business Plan 2015 – 2019, and the corresponding total number of service units for the SES in the same year, this would result in a unit rate of €1.96.

However, while the application of the calculation would be straightforward, further thought must be given to the treatment of the Network Manager Unit Rate for the purposes of the Charging Regulation. In particular, the Network Manager could be treated in the same way as Eurocontrol's Central Route Charges Office (CRCO), with the unit rate simply added to the determined unit cost for each charging zone set by individual Member States, or as a charging zone and subject to a separate unit rate. Under the second option, it would be required to submit detailed reporting tables, similar to those submitted by ANSPs in accordance with Annexes VI and VII of the Charging Regulation. This would have particular advantages in that it would provide stronger incentives to control costs and secure efficiencies while enabling greater scrutiny of the cost base by a range of stakeholders, but would also have significant legislative implications.

In the light of these considerations we make the following recommendation.

*Recommendation – to be implemented as part of the preparation for the designation of the Network Manager in 2019*

***In 2016/2017 the Commission should establish an approach to the application of a unit rate for Network Manager services. In particular it must decide:***

- ***An appropriate calculation methodology for the unit rate;***
- ***Whether it should be subject to cost risk-sharing under Regulation (EU) No 391/2013; and***
- ***Whether this should be charged as an administrative unit rate analogous to that covering the costs of the CRCO or through classification of the Network Manager as a Charging Zone with determined costs.***

***The Network Manager should calculate and publish this unit rate in parallel with the operation of current financial processes prior to its full introduction in 2019. The unit rate should be the financing mechanism for the Network Manager from the beginning of the new designation.***

We have also investigated whether the Network Manager's current financial arrangements, broadly defined, are sufficiently clear and transparent, and assessed the effectiveness the ring-fencing of the Network Manager's budget. This required an examination of the relationship between the Network Manager's budget and that of Eurocontrol as a whole, based primarily on a review of data for 2015.

The Network Manager's budget is presented separately as Part IX of the overall Eurocontrol budget, and represents some 33% of the total. The corresponding cost base charged to airspace users is shown in the table below.

**Eurocontrol's Part IX (Network Manager) cost base charged to airspace users**

Cost base item	€000, 2015	Description/Comments
Staff	91,194	Staff costs, net of staff receipts
Other Operating Costs	42,903	Other Operating Costs net of revenues under the user pays principle (UPP)
Depreciation	3,587	
Cost of Capital	251	
Indirect costs	41,864	Apportionment of Eurocontrol overheads, allocated as a proportion of direct costs
Costs of the Past	37,012	Allocated on basis of number of FTEs
<b>Total</b>	<b>216,811</b>	

Source: Agency Business Plan 2015 - 2019

The structure of the Network Manager budget is comparable to that of Eurocontrol as a whole in a number of ways, not least the fact that it is dominated by staff costs (including pension costs). In addition, some 35% of the cost base is represented by the allocation of indirect and pension costs from the general budget. As a result, the NMB cannot influence, and hence cannot challenge, a significant proportion of Network Manager costs. By way of example, we note that the overall reduction in full time equivalents (FTEs) over the period 2015 – 2019 projected in the 2015 Work Programme is expected to be offset by an increase in the cost per FTE, a cost determined by the terms of remuneration applied within Eurocontrol as a whole. Overall, the NMB estimates that some 70% of the Network Manager's costs are of this kind.

The NMB's role in relation to financial oversight is also constrained in other respects. In particular:

- its role in monitoring of investment expenditure, in particular as it relates to that of Eurocontrol's Expenditure Review Panel (ERP), is unclear, and it has not been provided with thorough business case analysis prior to reviewing specific proposals; and
- the Network Manager has not sought approval from the NMB on applications for CEF funding (under the first two calls) which, as already noted, currently cannot be made directly by the Network Manager on its own behalf.

More generally, the NMB does not receive regular financial reports of the kind required to track expenditure against expenditure through the year. The Network Manager has provided us with an example of a quarterly Network Manager Directorate Budget Checkpoint for the third quarter of 2015, which demonstrates that such information is readily available, although in our view it could usefully include more disaggregated information of the kind reported by European Commission Agencies such as ERA and EASA. The provision of such information would enable the NMB to discharge its responsibilities more effectively and help to build confidence in the effectiveness of the Network Manager's organisation and resourcing.

Accordingly, we make the following recommendation in relation to financial arrangements.

*Recommendation – to take effect in 2016/ 2017*

***The Network Manager should prepare and make available to the NMB on a quarterly basis:***

- ***management accounts providing information at the general ledger level; and***
- ***a comparison of actual and budgeted expenditure by quarter, disaggregated to the general ledger level, and a comparison of KPIs against targets.***

***Requests for approval of investment expenditure made to the NMB should be supported by a business case prepared according to a template and methodology agreed by the NMB.***

***Business cases should include:***

- ***an explanation of the strategic case for the investment;***
- ***an assessment of the financial impact based on discounted cash flow analysis;***
- ***a record of assumptions underpinning the analysis; and***
- ***qualitative and quantitative risk analysis.***

***The NMB's role in approving investment expenditure in relation to that of ERP should be defined and documented. The NMB should be consulted on all applications for CEF funding.***

#### **Cost base**

In responding to the Terms of Reference, we have sought to:

- map the activities of the Network Manager set out in the Work Programme to the functions and tasks defined in legislation; and
- map the same activities to specific units within the NMD's organisational structure and the resources allocated to those units.

In practice, both exercises proved challenging, notwithstanding extensive engagement with, and considerable assistance from, the Network Manager itself.

At an early stage in the study, we asked the Network Manager to explain the relationship between the functions and tasks in the legislation and the activities described in the Work

Programme. It provided us with a compliance matrix showing, for each function and task, the responsible NMD unit and a description of the work to be undertaken to ensure compliance. We used this, together with the Work Programme and a diagram of the organisational structure of the NMD to undertake our own mapping exercise. In addition, we sought to relate the staff numbers against each activity reported in the Work Programme to specific tasks defined in the legislation and to the various units within the NMD. We then shared the results with the Network Manager to test our understanding, and were provided with a response in the form of an amended mapping.

However, we have been unable to undertake a precise mapping and consequently we are not in a position to either validate the cost base reported above or propose adjustments to it. More specifically, while we are confident that the majority of the activity described in the Network Manager Work Programme is required to undertake the functions and tasks defined in the legislation, we have not been able to confirm that:

- all of the activity described is necessary;
- the work described is efficiently resourced; or
- that the distinction between the activities included in the Work Programme and those undertaken by Network Services, which is also located in the NMD, is sufficiently clear.

This suggests a need for a fuller description of the tasks and functions of the Network Manager set out in the legislation that is independent of the Work Programme itself. In principle, such a document would provide an objective benchmark against which the scope of activity in the Work Programme could be compared. In our view, this would allow a more thorough assessment of the cost base than we have been able to undertake, and support the NMB in testing and challenging the Network Manager's plans, investment projects and resourcing of activities. It would also give the Commission greater confidence that the functions and tasks were being undertaken efficiently.

Our recommendations in relation to the determination of the cost base are as follows.

*Recommendation – to take effect in 2016/ 2017*

***The European Commission should initiate the preparation of a more precise description of the required activities of Network Manager (a detailed specification), providing more precise information on the scope of work needed to deliver the functions and tasks defined in legislation. This should be completed during 2016/ 2017.***

***The preparation of the specification should draw on the expertise of the Network Manager as necessary, but should be led by the Commission with guidance from the NMB and stakeholders, as appropriate. The specification should also take account of the findings of the current study on the definition of the network.***

*Recommendation – to take effect in 2016/ 2017*

***Following completion of the specification, the Network Manager should prepare a bottom-up resource plan for delivering the activity defined in the specification for each remaining year of RP2. For each activity, the resources and associated costs should be identified, distinguishing between relevant staff grades and skills.***

***The specification should provide the basis for the preparation of all Network Manager documentation and the budget from 2018. The Work Programme and the budget should align with the elements of the specification.***



We began this element of the study by considering the impact on the Network Manager’s cost base of changes in traffic levels and the geographical scope of the its role. We have concluded that, overall, the cost base is relatively insensitive to traffic levels, a finding consistent with the assumption made by the Network Manager in preparing budget forecasts that the elasticity of its cost base to traffic is 0.25 (indicating that a 1% increase in traffic increases the cost base by 0.25%). Against this background, and given STATFOR forecasts of traffic growth during RP2, the planned reduction in the real value of the Network Manager’s budget indicates significant expected cost savings, although in itself this does not demonstrate that the organisation’s plans for improving cost efficiency are sufficiently challenging.

A number of stakeholders have expressed concern that the Network Manager is incurring significant costs in undertaking work in relation to third countries not required by the legislation. In practice, defining the geographical scope of the area for which the Network Manager is responsible is complex given the status of different countries in relation to the SES. This is illustrated in the table below.

#### Categories of country with an interest in the work of the Network Manager

Category	Member States	Rationale
Category 1	Countries committed to the SES: EU28 + 3 EFTA/EEA countries + 6 ECAA countries	These Member States have a binding agreement towards the achievement of the SES objectives. They must comply with European legislation including all legislation related to the Network Manager.
Category 2	Eurocontrol Member States not committed to the SES: Turkey, Georgia, Armenia and Ukraine	These countries are not committed to the SES and may not seek to benefit from all the tasks provided, and powers exercised, by the Network Manager. Their ANSPs are not part of the Performance Scheme and cannot be expected to comply with its performance targets, meaning that the impact of the Network Manager on their airspace is likely to be more limited than for Category 1 countries.
Category 3	Other countries outside Category 1: with whom cooperative arrangements at operational level (ANSPs) are needed.	As for Category 2 countries. Under investigation at NMB level.

Source: SDG assessment of the Implementing Rules

In our view, the definition of “third countries” in the legislation (Article 2 (21) of the Implementing Rules) would benefit from clarification, since it combines some Category 1 countries with those in Category 2. In any event, the Network Manager has not provided any analysis of the costs of providing services to third countries, however defined. We accept that the legislation provides for extensive cooperation with such countries where this improves the performance of the network, but consider that there would be benefit in demonstrating, on an incremental basis, the net benefit of undertaking network functions and tasks on behalf of countries in Categories 2 and 3 above.

Given the importance of this issue, and the associated concerns among a number of stakeholders, we make the following recommendations.

*Recommendation - to be implemented as part of the preparation for the designation of the Network Manager in 2019*

***The Commission should give consideration to clarifying the provisions of the Implementing Rules relating to the third countries, in particular to address the ambiguities highlighted in Chapter 7. It should also consider amending the legislation to require the Network Manager to demonstrate impacts on the network arising from cooperative arrangements with third countries.***

*Recommendation – to take effect in 2016/ 2017*

***Following completion of the current study on the definition of the network, the Network Manager should undertake a full cost benefit analysis of arrangements with those third countries that have not concluded agreements with the EU on the implementation of the SES.***

As required, we have also investigated the Network Manager's contribution to the achievement of SES objectives, defined by reference to various targets set for RP1. The Annual Network Operations Report for 2014 records a reduction of 1.23 million minutes of ATFM delay on 40,651 flights as a result of action taken by the NMOC. 74% of this delay was accounted for by savings in en-route delay. These represented 13.3% of en-route ATFM delays for the year as a whole, indicating that the Network Manager delivered better-than-target performance. Its contribution to reducing airport ATFM delay was equivalent to 7.3% of the total for the year. A number of stakeholders have also stated that the day-to-day performance of the Network Manager is good, although some have noted that its contribution to delay reduction must be seen against the background of the decline in traffic levels since 2008.

Finally, we have subjected the Network Manager's unit and staff costs to benchmarking, notwithstanding the difficulties of identifying suitable comparator organisations for the purposes of analysis. Echoing the results of recent analysis by the PRB, we note that the Network Manager's unit costs are expected to fall by 4.4% per year between 2012 and 2019, ahead of the best performing ANSP. However, a comparison of its unit staff costs for 2012 with unit costs for a number of ANSPs (the latter obtained from ATM Cost-effectiveness Reports for 2013 and expressed gross of tax and inclusive of benefits) indicates that:

- the average value of unit staff costs for the Network Manager exceeds the average across six ANSPs by some 56%; and
- the same value is higher than the average Air Traffic Controller (ATCO) cost for the same group of ANSPs (and comparable with the ATCO cost of the highest ranking ANSPs among the group).

In our view, this suggests significant scope for efficiency gains not captured by the anticipated fall in unit costs during RP2 reported above. Our recommendations reflect the need to test the efficiency of the Network Manager in the absence of any competitive market discipline on resourcing and costs.

*Recommendation - to be implemented as part of the preparation for the designation of the Network Manager in 2019*

***Regardless of whether the designation is subject to competitive tender, re-designation of Eurocontrol or nomination of another body should be subject to the organisation preparing and submitting a proposal to undertake the role in response to an invitation and accompanying contract.***

***The European Commission should lead the preparation of the contract requirements, drawing on the detailed specification of the Network Manager role prepared in 2016/ 2017 and relevant industry expertise. The requirements should include:***

- ***the detailed specification of functions and tasks over the next [two] RPs;***
- ***a service level agreement, defining a series of financial and operational KPIs; and***
- ***performance incentives linked to the KPIs, as appropriate.***

***In submitting a response, Eurocontrol or other bodies should be required to prepare:***

- ***a proposed unit rate sufficient to cover the expected costs of delivery;***
- ***a delivery plan, explaining how it intends to deliver the contract requirements efficiently and effectively for the unit rate indicated; and***
- ***a resource plan and financial model supporting the unit rate and delivery plan.***

***The NMB should have delegated authority to oversee the delivery of the contract on behalf of the Commission.***

Note that implementation of this recommendation is not conditional on the Commission introducing a competitive procurement process. Rather, its purpose is ensure that Eurocontrol is required to submit a costed proposal to undertake the role of Network Manager and agree to contractual terms even if it is the only candidate for designation in 2019. There may nevertheless be merit in a competitive procurement exercise, as this would subject any bid submitted by Eurocontrol to full competition. The practical implications of such an exercise would, however, require careful consideration given the need to ensure that potential bidders were capable of undertaking the role competently, impartially and in accordance with the other criteria applied under the terms of the current Nomination Decision. Our recommendation therefore reflects the need for further work on this issue.

*Recommendation - to be implemented as part of the preparation for the designation of the Network Manager in 2019*

***The European Commission should investigate further the requirements of a competitive procurement strategy covering the following issues:***

- ***market interest in providing the service;***
- ***the timescales required to prepare a credible bid;***
- ***key contractual requirements, for example relating to the handling of security and other sensitive information;***
- ***the mechanisms for ensuring that organisations other than Eurocontrol have access to the required skills and assets as well as operational data; and***
- ***the risks that potential bidders would be willing to accept.***

We also consider that improvements in cost efficiency in the short term are more likely to be achieved if the NMB is able to monitor financial as well as operational performance. This would require supplementing the operational performance measures that the Network

Manager already proposes to publish during RP2 with financial KPIs. Possible measures are indicated in our final recommendation below.

*Recommendation - to take effect in 2016/ 2017*

***The Network Manager should provide the NMB with quarterly reports comparing KPIs with targets. KPIs should include all the operational KPIs currently tracked internally as well as measures of cost efficiency, for example:***

- ***cost per service unit/flight;***
- ***indirect costs as a % of total costs;***
- ***average cost per FTE; and***
- ***flights per FTE.***

# 1 Introduction

## Background

- 1.1 The Network Manager for the Single European Sky (SES) was established under Commission Regulation (EU) No 677/2011, as amended by Commission Implementing Regulation (EU) No 970/2014 (together referred to here as the Implementing Rules). Its role, which is defined in Article 3 of the Implementing Rules, includes design of the European aviation route network, the management of scarce resources (notably radio frequencies with frequency bands for general aviation and secondary surveillance radar (SSR) transponder codes) and air traffic flow management (ATFM). In carrying out these functions, which are key to the improvement of network operations in line with SES objectives, the Network Manager must also undertake a number of specific tasks defined in Article 4 of the Implementing Rules, ranging from development and implementation of a Network Strategy Plan, through management and operation of the unit responsible for ATFM, to support for operational stakeholders and cooperation with other regions and third countries.
- 1.2 While the Network Manager functions had not previously been defined in legislation, they were already being performed to a certain extent by Eurocontrol at the time the Implementing Rules were introduced. Accordingly, under Commission Decision C(2011), the Commission designated Eurocontrol as the Network Manager until 31 December 2019. The Network Manager organisation therefore operates within Eurocontrol's broader organisation, which is responsible for a range of other planning, coordination, service provision and supporting regulatory activities. Hence, the overall costs of the Network Manager (some €217 million in 2015) form part of Eurocontrol's wider cost base, recovered from airspace users through an allocation of the unit rate for en-route air navigation services.
- 1.3 The delivery of the Network Manager functions has made a positive contribution to the ongoing development of the SES, and the role can be expected to become increasingly important in supporting performance improvements and other aspects of SES policy, for example Single European Sky ATM Research (SESAR) deployment. However, the Network Management Board (NMB), the body responsible for oversight of the Network Manager under Article 16 of the Implementing Rules, has expressed a number of concerns about the associated governance and financial framework. These culminated in challenges to the draft budgets presented in 2014 and 2015, leading to revisions as well as amendments to the Implementing Rules. In addition, the Performance Review Body's (PRB's) review of the Network Performance Plan for Reference Period 2 covering 2015 – 2019 (RP2) raised questions concerning how far the Network Manager is performing its functions cost efficiently, providing value for money, and making the most effective contribution to the delivery of Union-wide performance targets.

- 1.4 Against this background, the Commission initiated a study to provide it with an independent assessment of the effectiveness of the Network Manager and an evaluation of the way in which it has been established. This included a review of its costs, structure, governance, performance, legal framework and decision-making processes, taking account of its relationship with the wider Eurocontrol organisation. Steer Davies Gleave was commissioned to undertake the study and began work in December 2015.

### **Purpose of the report**

- 1.5 This Draft Final Report describes our approach to, and findings from, the study. More specifically, it sets out the methodology employed and results obtained under four tasks defined in our Terms of Reference, namely:
- Task 1, an examination of the Network Manager’s cost base involving a review of the activities currently undertaken against the functions and tasks defined in legislation, and of the associated budgetary requirements;
  - Task 2, an assessment of the financial arrangements for the Network Manager to determine whether they are sufficiently clear and transparent to ensure accountability for the budget and actual expenditure;
  - Task 3, an investigation of the cost effectiveness of the Network Manager, with cost effectiveness measured by reference to whether the Network Manager’s contribution to the achievement of SES objectives has been delivered at reasonable cost; and
  - Task 4, an assessment of the governance mechanisms and processes supporting Network Manager decision making, in particular the ability of the NMB to discharge its responsibilities under Article 16 of the Implementing Rules.
- 1.6 A full description of each individual task, drawn from the Terms of Reference, is provided at the beginning of the relevant chapter. In each case, the report provides a detailed discussion of the evidence reviewed. It also draws together a series of key findings and makes specific recommendations, covering both short and medium term measures, to address the issues identified.

### **Organisation of the report**

- 1.7 The remainder of the report is organised as follows:
- Chapter 2 describes the methodology used, outlining the main tools and techniques and setting out the stakeholders with whom we have engaged and the documents on which we have drawn;
  - Chapter 3 provides an overview of the role and organisation of the Network Manager, describing the legislative framework, the bodies involved in governance and the current structure and scope of work of the Network Manager Directorate (NMD) within Eurocontrol;
  - Chapter 4 discusses the governance arrangements in more detail and identifies a number of issues that need to be addressed in order to improve the existing governance framework;
  - Chapter 5 discusses weaknesses in the current financial arrangements, in particular issues relating to the method of financing the Network Manager and its implications for the clarity and transparency of financial information available to the NMB and stakeholders;
  - Chapter 6 sets out the results of our review of the Network Manager’s cost base, drawing on an exercise to map the activities of the Network Manager to functions and tasks described in the legislation;

- Chapter 7 presents evidence on the cost effectiveness of the Network Manager and describes options for improving the measurement and monitoring of cost effectiveness in the future; and
- Chapter 8 describes our key findings and sets out our recommendations for change, distinguishing between measures for implementation over the next 18 months and those implemented through the next designation of the Network Manager in 2019.

1.8 The report also includes the following appendices:

- Appendix A – a list of the documentation reviewed in the course of the study;
- Appendix B – a list of the stakeholders consulted in the course of the study
- Appendix C – the general stakeholder questionnaire used in the consultation;
- Appendix D – the results of an exercise to map the requirements of legislation to the Network Manager Work Programme;
- Appendix E - the results of an exercise to map the Work Programme to the structure of the Network Manager organisation;
- Appendix F – a list of organisations that provided comments on the draft findings and recommendations presented at the Network Management Board workshop on 11 April 2016;
- Appendix G – our response to comments received from the Network Manager on our draft findings and recommendations; and
- Appendix H – the Network Manager’s high level comments on our draft final report and our response.

## 2 Methodology

### Overview

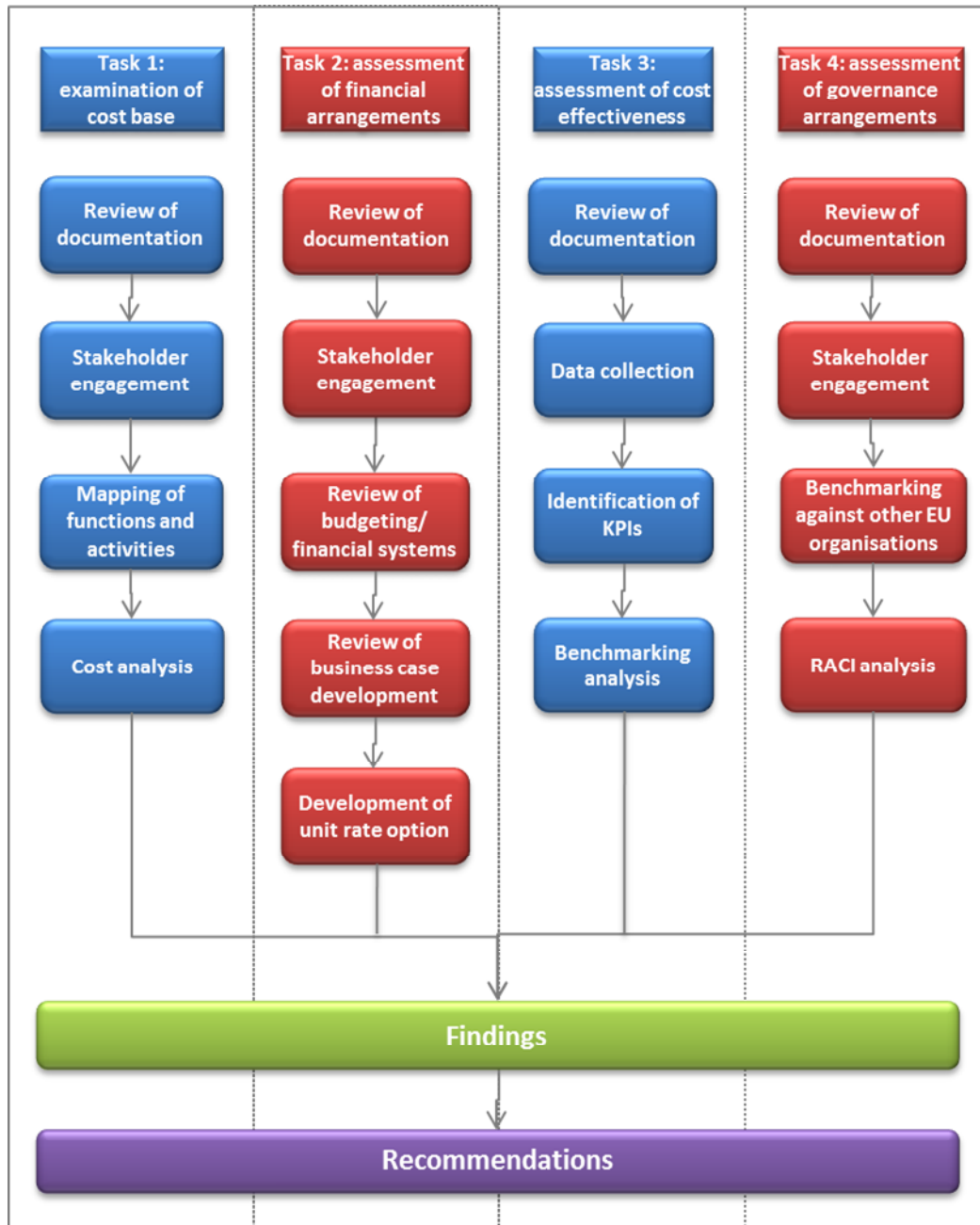
- 2.1 Our methodology was designed to ensure coverage of the four tasks described in the Terms of Reference, recognising the interrelationship between them. It included the following elements, as illustrated in Figure 2.1:
- a review of existing documentation, in particular the key legislation, Network Manager documentation, NMB minutes and previous audits carried out by the European Aviation Safety Agency (EASA);
  - engagement with Head of the NMD as well as other Network Manager staff, members of the NMB, members of the Single Sky Committee (SSC) and representatives of other key stakeholders;
  - mapping of the activities and costs of the NMD to the functions and tasks defined in legislation to distinguish as far as possible between the cost base of the Network Manager and the costs of other activities performed within the NMD;
  - a review of current financing arrangements, including an examination of how the financing of the Network Manager relates to the financing of Eurocontrol as a whole and of how the arrangements for budget approval operate in practice;
  - benchmarking of the Network Manager's costs against those of air navigation service providers (ANSPs) employing staff with similar skills and undertaking comparable activities;
  - a RACI analysis of decision making in relation to the Network Manager functions and tasks, identifying bodies that are Responsible, Accountable, Consulted and Informed in each area of decision making; and
  - comparison of the Network Manager governance framework against the frameworks in place for organisations with a similar role in terms of the planning or coordination of activities at a pan-European level, in particular EASA, the Innovation and Networks Agency (INEA) and the European Rail Agency (ERA).
- 2.2 Based on the results of this work, we identified a number of key findings and developed recommendations to address specific issues and concerns, including actions to be taken over next 18 months and longer term measures for implementation through the next designation of the Network Manager in 2019. These findings and recommendations were shared at a workshop of NMB members held on 11 April 2016 and subsequently refined to reflect the comments received.
- 2.3 Throughout the study, the application of the methodology has been overseen by a steering group, set up by the European Commission with the participation of EASA, the Network Management Board and the PRB. Four meetings of this committee were held on 2 December



2015, 9 February 2016, 21 March 2016 and 18 May 2016. In preparing this final report, we have taken account of comments received from both the steering group and the Network Manager.

2.4 In the remainder of this chapter, we describe key elements of the methodology in more detail in order to demonstrate the robustness of the evidence on which the findings and recommendations are based.

Figure 2.1: Overview of methodology



### Review of documentation

2.5 We have reviewed a wide range of documents to inform the stakeholder engagement as well as the subsequent analysis of costs and review of the governance and financial arrangements. The documentation examined included:

- the main legislation defining the Network Manager's role and governance;
- documents that the Network Manager is required to produce under legislation and/or prepares and publishes on a regular basis, for example its annual reports and Strategy Plan;
- internal documents prepared by the Network Manager, including records of budget tracking produced regularly and one-off papers setting out ideas for changes in the organisation's role and governance;
- other Eurocontrol documents providing information about the organisation's overall costs as well as budgeting and investment processes;
- minutes of NMB meetings highlighting issues and concerns raised by NMB members in recent years, and other documents commenting on various aspects the Network Manager's performance, for example the PRB's review of the Network Performance Plan for RP2, EASA's audit reports and reports prepared by the NMB's Budget Task Force; and
- documentation relating to other organisations used in the benchmarking of governance and financial arrangements, for example budget and expenditure reports prepared by EASA, INEA and ERA and the OECD Principles of Corporate Governance.

2.6 A full list of the documents and information sources used in the course of the study is provided in Appendix A.

2.7 In order to further inform our work, at an early stage in the study we sought access to the OneSky website, which includes documentation for Eurocontrol's Standing Committee on Finance. Eurocontrol was not prepared to provide access to this website, although the Network Manager did provide us with a copy of a number of useful documents, as indicated in Appendix A. Without access to the website, it is difficult to assess whether we have had access to all of the relevant information it contains.

## **Stakeholder engagement**

2.8 Similarly, we have sought to ensure that the programme of stakeholder engagement was as comprehensive as possible given the budget and time available for the study. In agreement with the Commission, we have engaged with the following organisations:

- the Head of the NMD and other Network Manager staff;
- members of the NMB, including the Chairman;
- officers within DG MOVE with responsibility for relevant aspects of SES policy;
- representatives of the ANSP community, including individual ANSPs as well as CANSO;
- representatives of airspace users;
- members of the SSC; and
- other stakeholders with an interest in the Network Manager, for example the Chairman of the PRB and representatives of EASA.

2.9 A full list of stakeholder organisations and contacts with whom we have engaged is provided in Appendix B.

2.10 In total, we held five meetings with the Network Manager, covering its role, organisation, staffing and cost base, governance and future development. In the case of other organisations, we used a questionnaire, submitted in advance, to undertake a structured interview covering a wide range of issues. The general questionnaire, which was tailored for some interviews, is included as Appendix C.

## Analytical methods

2.11 The study has been informed by the following key analytical exercises, the results of which are reported in the relevant sections later in this report.

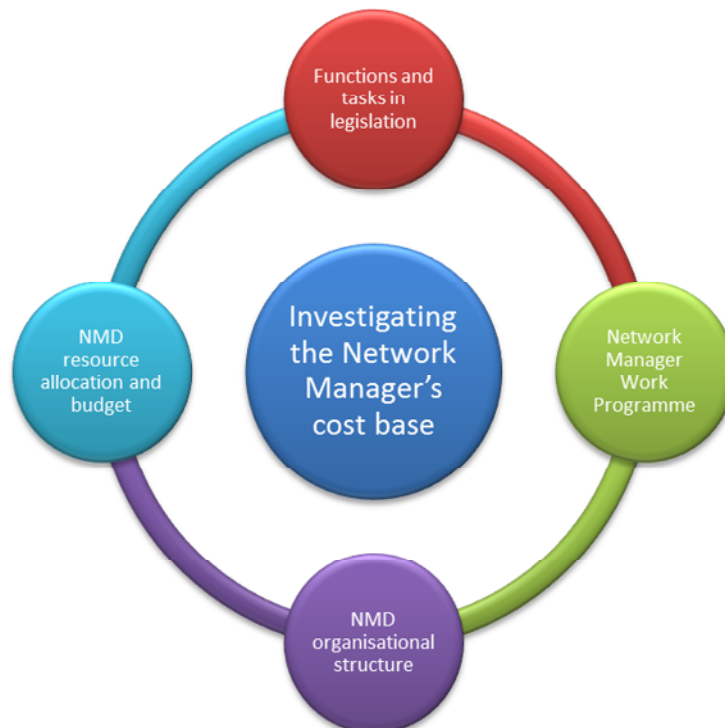
### Mapping of functions and tasks to activities

2.12 The cost base for the delivery of the Network Manager functions and tasks defined in legislation depends on the resources allocated to them. In order to identify and quantify these resources, we have sought to map the functions and tasks to both the specific activities required to perform them and the structure of the NMD. This exercise was based on a review of:

- the legislation, primarily the relevant sections of the Implementing Rules;
- the organisational structure of the NMD, focusing as far as possible on the units within the overall structure that are focused on the delivery of Network Manager functions and tasks;
- the Network Manager Work Programme and budget.

2.13 Our aim was to investigate the relationship between legislative requirements, activities and resource allocation and budget, as illustrated in the figure below. The preliminary results of our analysis were shared with the Network Manager in order to test our understanding of this relationship. However, notwithstanding further clarification received, we note that the nature of some activities and the extent to which they underpin the role defined by the legislation remain subject to uncertainty.

Figure 2.2: Investigating the relationship between Network Manager role in legislation and activities



### Cost benchmarking

2.14 The Network Manager is a unique entity undertaking a particular role within the European Union air navigation sector, and it is difficult to identify organisations suitable for

benchmarking. However, we note that European ANSPs employ staff with similar skills and carry out operational and planning work closely linked to the activities of the Network Manager. We therefore consider that ANSPs provide a useful comparison for the purposes of benchmarking costs, in particular benchmarking of trends in unit costs and comparisons of average staff costs.

2.15 We selected the following ANSPs for inclusion in the cost benchmarking exercise:

- Deutsche Flugsicherung GmbH (DFS);
- NATS En-route PLC (NERL);
- Direction des Services de la Navigation Aérienne (DSNA);
- ENAIRE;
- Ente Nazionale di Assistenza al Volo SpA (ENAV); and
- Belgocontrol.

2.16 These organisations include the five largest ANSPs (respectively the ANSPs for Germany, the UK, France, Spain and Italy), which are comparable in size to the Network Manager. We have also included Belgocontrol as it is based in the same Member State as the Network Manager and can be expected to face labour market conditions influenced by similar economic factors.

2.17 Given the difficulties of making comparisons with the Network Manager, and notwithstanding adjustments to take account of the different balance of skills and staff grades within the organisation as compared with ANSPs, the results of this analysis must necessarily be qualified. However, we consider that they are indicative of the potential for achieving greater cost efficiency in the delivery of the Network Manager role.

2.18 We also consider it appropriate to benchmark the Network Manager against other pan-European organisations with roles defined in Union legislation. We selected three agencies, namely INEA (an Executive Agency), EASA and ERA (both decentralised agencies), and reviewed published financial information on each in order to compare their unit staff costs.

### **Benchmarking of governance arrangements**

2.19 In addition, we have sought to test the adequacy of the Network Manager's governance arrangements by benchmarking against the same three pan-European organisations. These agencies carry out tasks that are not related to the work of the Network Manager but their governance arrangements nonetheless provide a useful point of comparison. In particular, we have compared the following elements of governance in each case:

- the nature, composition and responsibilities of the body responsible for the oversight of the agency;
- the process for budget approval; and
- reporting requirements and practice, particularly with regard to the reporting of financial data.

2.20 As part of the same benchmarking exercise, we have also reviewed the G20/OECD Principles of Corporate Governance, particularly those relating to board responsibilities and transparency. While these relate primarily to the governance role performed by corporate boards representing shareholders and other investors, they nevertheless serve to highlight how the effectiveness of the NMB might be improved.

## RACI analysis

- 2.21 In order to further test the adequacy of the governance arrangements for the Network Manager we have applied the RACI framework, identifying parties who are Responsible, Accountable, Consulted and Informed in different areas, and at different levels, of decision-making. For the purposes of this exercise, we have applied the following definitions:
- Responsible: party who performs an activity or does the work;
  - Accountable: party who is ultimately answerable and signs-off the correct completion of the activity or work that has been delegated to the responsible party;
  - Consulted: party whose opinions are sought and with whom there is a two-way communication process<sup>1</sup>; and
  - Informed: party who is advised of the outcome of activity or a decision-making process through one-way communication.
- 2.22 In applying the framework we have considered the requirements of the legislation as well as our understanding of actual practice.

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<sup>1</sup> Note that consultation is here taken to mean direct consultation with a stakeholder such as an ANSP or airspace user rather than consultation through representation on a body such as the NMB.

## 3 Role and organisation of the Network Manager

### Development of the Network Manager role

- 3.1 The Network Manager is a key enabler of the SES, working in collaboration with a wide range of operating organisations and other industry stakeholders. In performing its functions and tasks under the legislation, it has a substantial impact on the operational performance of the European route network, particularly in the Key Performance Areas of capacity, environment and safety. Notably, it establishes the Union-wide and Functional Airspace Block (FAB) reference values for en-route capacity and the environment, and plays an important role in regular performance monitoring.

#### Development before 2011

- 3.2 The need for effective coordination of ATFM at a European level had become apparent well before the most recent SES legislation, and this role was already being undertaken by Eurocontrol, the European Organisation for Safety of Air Navigation, prior to 2011. Eurocontrol is an inter-governmental, civil-military organisation with 41 Member States, governed by an international convention<sup>2</sup>. It consists of the following bodies:
- The Permanent Commission represents Member States at ministerial level, formulating general policy and discharging regulatory functions. It also approves Eurocontrol's annual budget and accounts, its five-year programme, contract regulations and financial and staff regulations as well as appointing the Director General and Directors.
  - The Provisional Council is responsible for implementing Eurocontrol's general policy, as established by the Permanent Commission, and for supervising Eurocontrol's work. Member States are represented in the Provisional Council at Director General of Civil Aviation level. There is an on-going debate regarding the role and involvement of the European Commission in the work of the Provisional Council of Eurocontrol.
  - The Agency, Eurocontrol's executive body, has responsibility for undertaking the tasks prescribed by the organisation's convention or entrusted to it by the Permanent Commission or the Provisional Council.
- 3.3 Under a revised convention agreed in 1997, Eurocontrol's Director General has considerable managerial independence covering, inter alia, the management of operational functions and tasks.

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<sup>2</sup> Membership includes the 28 Member States of the European Union as well as countries such as the Balkan States, Switzerland, Turkey and Ukraine.

- 3.4 Before 2011, the coordination of ATFM was undertaken by two units within Eurocontrol, the Central Flow Management Unit (CFMU) responsible for the planning and management of traffic flow day-to-day, and a unit responsible for Cooperative Network Design (CND). The CFMU began operating in 1995 at Eurocontrol’s Brussels headquarters, and became responsible for the full range of ATFM services within a year. In the 2000s, a new strategy was implemented, involving moving from ATFM narrowly defined to air traffic flow and capacity management (ATFCM). This required modifying the established approach to traffic management, which was based mainly on regulating mechanisms for delivering flight plans, by introducing proactive management of capacity through close cooperation with key partners (the military, airspace users, airports and air traffic control centres) and application of collaborative decision-making techniques.
- 3.5 During this period, Eurocontrol’s ATFM activity was increasingly underpinned by an evolving legislative framework that subsequently provided the basis for its designation as the Network Manager in 2011. In particular:
- The recitals of Commission Regulation (EC) No 551/2004 observed that the route network and airspace structure could not realistically be developed “in isolation, as each individual Member State is an integral element of the European air traffic management network (EATMN), both inside and outside the Community”.
  - Article 6 of the same Regulation required a reinforcement of the effectiveness of ATFM to ensure more efficient flight operations. It introduced the concept of network functions with the aim of achieving “optimum use of airspace and ensuring that airspace users can operate preferred trajectories, while allowing maximum access to airspace and air navigation services”.
  - Article 6 also stated that “the Commission may, after consultation of the Single Sky Committee and in conformity with the implementing rules ..., entrust to Eurocontrol, or another impartial and competent body, the tasks necessary for the execution of the functions listed ...”. It went on to state that: “these tasks shall be executed in an impartial and cost-effective manner and performed on behalf of Member States and stakeholders. They shall be subject to appropriate governance, which recognises the separate accountabilities for service provision and regulation, taking into consideration the needs of the whole ATM network and with the full involvement of the airspace users and air navigation service providers”.
  - Commission Regulation (EU) 255/2010 set out the requirements for ATFM within the SES, providing a framework for governing the Eurocontrol’s ATFM function together with the activities of local ATFM units, airspace users, airports, slot coordinators and a number of other organisations. The Regulation also required that local air traffic service units inform and liaise with the central unit to ensure optimisation of the EATMN.

### **The 2011 designation**

- 3.6 The concept of Network Manager was formally established under the Implementing Rules, more specifically Article 3 of Commission Regulation (EU) No 677/2011, which provides for “an impartial and competent body” to undertake the functions previously set out in Regulation (EC) No 551/2004. The same Article states that “the nomination of the Network Manager shall take the form of a Commission Decision after consultation of the Single Sky Committee”, and that the term of the nomination “shall coincide with the reference periods for the [SES] performance scheme”. In introducing the new legislation, the Commission was responding to

requests from airspace users and other stakeholders for seamless European airspace, better managed at the EATMN level.

3.7 Accordingly, under a Commission Decision of 7 July 2011 (the Nomination Decision), the Commission nominated Eurocontrol as the Network Manager<sup>3</sup> until 31 December 2019. More specifically, the text of the decision required Eurocontrol to undertake the Network Manager functions and tasks defined in legislation and to:

- be impartial;
- maintain adequate competence;
- execute the tasks in a cost-effective manner enabling the provision of the functions at reduced or at least not higher financial and human resources requirements for the Member States compared to the situation before a Network Manager was designated (as required by Regulation 667/2011);
- establish the appropriate governance (as required by Article 6 of Regulation 551/2004);
- avoid conflicts of interest, in particular respect the separation of the regulatory tasks (including support to them) and service provision tasks (as required by Article 6 of Regulation 551/2004);
- comply with European Union legislation relevant for the execution of the functions; and
- promote the Network Manager concept outside Europe.

3.8 The Nomination Decision also required that: “the Network Manager shall finance the duties entrusted to it on its own budget, for which the Member States shall support the financing mechanism of network functions through the Eurocontrol budget”. Withdrawal of the nomination of Eurocontrol as the Network Manager may only occur in the event of failure to comply with the provisions of the Nomination Decision, subject to the positive opinion of the Single Sky Committee.

3.9 Prior to its nomination, Eurocontrol established the Network Manager Directorate by combining the CFMU and the CND. This brought both the planning and day-to-day operational functions within the same overall management responsibility with a view to ensuring more effective coordination of the two. In addition, certain other services were transferred to the new directorate in order to leverage synergies between activities and ensure effective deployment of key skills and capabilities. As the Network Manager has pointed out, the Nomination Decision did not require Eurocontrol to form a legally separate entity to undertake the Network Manager functions, and they therefore continue to be undertaken by a directorate within the wider organisation.

## **The current legislative framework**

### **The functions and tasks of the Network Manager**

3.10 The legislative framework governing the Network Manager is extensive, and we do not provide a comprehensive description of the various provisions here. However, the following paragraphs highlight the main requirements of the Implementing Rules as currently defined.

3.11 Under Article 3 of the Implementing Rules, the Network Manager performs three key functions that are critical to the development of, and efficient operation within, the SES:

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<sup>3</sup> Commission Decision of 7 July 2011 on the nomination of the Network Manager for the air traffic management (ATM) network functions of the single European sky.



- designing the European route network (undertaken in cooperation with ANSPs);
- coordinating scarce resources (radio frequencies within aviation frequency bands used by general air traffic and SSR transponder codes defined in an annex to the legislation); and
- ATFM, as defined in Regulation (EC) No 551/2004 and Regulation (EU) No 255/2010.

3.12 In performing these functions, it undertakes a large number of supporting tasks, initially defined in Regulation (EU) No 677/2011 and supplemented and amended in Regulation (EU) No 970/2014. These are summarised in the table below, together with the date from which the requirement applied.

**Table 3.1: Network Manager tasks defined in the Implementing Rules**

Tasks	Date
(a) Develop, maintain and implement a Network Strategy Plan	2011
(b) Detail the Network Strategy Plan through a Network Operations Plan	2011
(c) Develop an integrated European Route Network Design	2011
(d) Provide the central function for the coordination of radio frequencies	2011
(e) Coordinate the improvement of the SSR transponder code allocation process	2011
(f) Provide a consolidated and coordinated approach to all planning and operational activities of the network, including monitoring and improvement of its overall performance	2011
(g) Provide support for network crisis management	2011
(h) Support the different operational stakeholders in the execution of the obligations that are placed on them, in the deployment of air traffic management and/or air navigation services (ATM/ANS) systems and procedures in accordance with the ATM master plan, in particular the common projects specified in Article 15a(3) of Regulation (EC) No 550/2004 of the European Parliament and the Council	2011, amended in 2014
(i) Provide support to entities entrusted with the investigation of civil aviation accidents and incidents	2011
(j) Ensure coordination with other regions and third countries which do not participate in the work of the Network Manager	2011
(k) Develop and maintain a work programme and associated budget providing a multiannual dimension	2014
(l) Contribute to SESAR deployment in accordance with Commission Implementing Regulation (EU) No 409/2013(*), in particular Article 9(7)(a) thereof	2014
(m) Execute the work programme and annual budget;	2014
(n) Draw up a Network Performance Plan in accordance with Article 6 of Implementing Regulation (EU) No 390/2013	2014
(o) Identify operational safety hazards at network level and assess the associated network safety risk	2014
(p) Provide the Commission with an alerting or alarming system, based on the analysis of flight plans, in order to monitor compliance with operating bans imposed on air carriers under Regulation (EC) No 2111/2005	2014

3.13 In addition, the Network Manager is required to contribute to the implementation of the SES performance scheme in accordance with Regulation (EU) No 691/2010, and to comply with ad hoc requests for information, advice, analysis or other similar ancillary tasks linked to the various functions on request of the Commission or the Agency.

3.14 In performing these various tasks, the Network Manager is required to ensure:

- the availability, operations and sharing of tools, processes and consistent data to support the cooperative decision-making process at network level, including but not limited to, flight plan processing and data management systems;
- the facilitation and coordination between operational stakeholders and support to these stakeholders in the deployment and implementation of the plans and the related network measures following cooperative decision-making;
- the appropriate operational coordination, as well as optimisation, interoperability and interconnectivity within its area of responsibility;
- the coordination of proposals for amendments to the appropriate ICAO documents relating to the network functions;
- the reporting in accordance with Article 20 of all operational performance aspects, including scarce resources; and
- appropriate liaison with other transport sectors.

3.15 While the description of functions and tasks in the main body of the legislation is extensive, and supplemented by further information provided in annexes, we note that it is necessarily high level (in common with comparable provisions in much national and European legislation). Hence, in our view there is potential for considerable interpretation in specifying their precise scope and corresponding latitude in determining the resources needed to perform them.

#### **Governance of the Network Manager**

3.16 The Implementing Rules also define the governance framework for the Network Manager, which includes two principal bodies, the NMB and the SSC. Since the framework is defined independently of the organisation nominated to undertake the Network Manager role, it does not take account of potential interaction with any governance arrangements already in place for the organisation in question. Rather, Articles 16 and 17 set out extensive responsibilities for, respectively, the NMB and SSC, providing for a wide range of approval and monitoring activities.

#### *Responsibilities of the NMB*

3.17 As shown in Table 3.2, the NMB is comprised of both voting and non-voting members representing a range of industry stakeholders, and each member is required to have an alternate under Article 16. Voting members are nominated by their respective organisations and appointed after a positive opinion of the SSC and confirmation in the form of a Commission Decision. The legislation does not provide for observers, and countries from outside the European Union are represented by Eurocontrol. The NMB usually meets three times a year, in February/March, June and October/November.

**Table 3.2: Composition of NMB**

Membership type	Representation
Non-voting	Chairperson
	European Commission
	Eurocontrol
	Network Manager
Voting	An ANSP representative for each FAB (with ANSPs having a total of four votes)
	Four airspace user representatives
	Two airport representatives
	Two military representatives

Source: Implementing Rules

- 3.18 Under Article 13 of the Implementing Rules, the NMB is responsible for adopting “measures related to the governance of the network functions and to monitor their performance”. In addition, it is charged with resolving situations in which “the Network Manager finds its actions hindered by one or several parties”. Article 16 lists a series of specific NMB responsibilities, which are summarised in Table 3.3.

**Table 3.3: Responsibilities of the NMB**

Responsibility type	Specific activity
<b>Endorsement</b>	Draft Network Strategy Plan
	Annual budget (after a positive opinion of the SSC)
<b>Approval</b>	Annual Network Operations Plan
	Co-operative decision-making processes
	Rules of procedure of the European Aviation Crisis Coordination Cell
	Annual report (commenting on implementation of the Network Strategy and Operations Plans)
	Rules of procedure of the NMB (after a positive opinion of the SSC)
	Work Programme
	Network Performance Plan
	Cooperative arrangements with third countries
<b>Monitoring</b>	Progress in implementation of plans
	Consultation of operational stakeholders
	Activities related to management of network functions
	Activities related to network crises
<b>Other responsibilities</b>	Addressing issues not resolved at individual network function level
	Assessing whether the Network Manager has the appropriate competences, resources and impartiality to carry out independently the tasks assigned to it, including security, liability and contingency arrangements
	Addressing any additional issues identified as relevant
	Giving an opinion on possible additional functions that might be attributed to the Network Manager

Source: Implementing Rules

- 3.19 We note the distinction between “endorsing” and “approving” in the legislation, an issue to which we return in the context of a discussion of the budget approval process in the following chapter. Here, we observe that there is little or no material difference in the meaning of the two terms, although the use of “endorsing” is a reflection of the difficulties of applying the governance framework defined in legislation with the parallel arrangements in place for Eurocontrol as a whole.

#### *Responsibilities of the SSC*

- 3.20 The SSC is comprised of two representatives of each European Union Member State (one civil and one military) and observers from third countries as well as Eurocontrol. It is chaired by a representative from the Commission, which is also responsible for submitting to the SSC policy

and regulatory proposals relating to the SES. As regards the Network Manager, the SSC is required to give an opinion on:

- the nomination of the Network Manager;
- the appointment of the chairperson of the NMB;
- the appointment of the voting members of the NMB;
- the Rules of Procedure of the NMB;
- the Network Strategy Plan, in particular the objectives of the plan;
- the annual budget of the Network Manager;
- the Rules of Procedure of the European Aviation Crisis Coordination Cell; and
- the cooperative decision-making and consultation processes and the detailed working arrangements and processes for operations supporting the network functions.

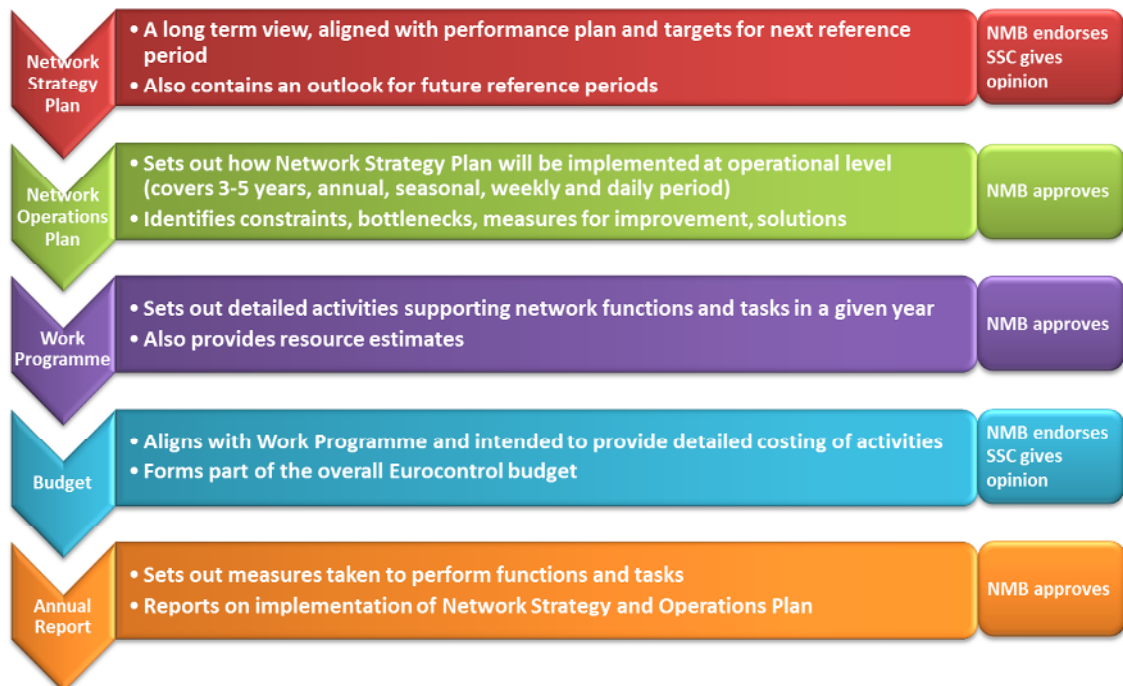
3.21 In the event that the SSC fails to give a positive opinion, the Commission must either appeal to an appeals committee or bring revised proposals at a later date. In the case of proposals relating to the Network Manager, it would need to request the Network Manager and/or the NMB, as appropriate, to consider changes before returning to the SSC for its opinion. We understand that, to date, the SSC has always given a positive opinion on the Network Manager budget.

## The role and organisation of the Network Manager in practice

### Strategic and operational planning

3.22 As outlined in Table 3.1, the Network Manager is required to develop a long term strategy for the European route network as well as a short term operational plan for implementing the strategy year-by-year. This, in turn, informs the development of an annual Work Programme, which sets out the specific activities to be undertaken in the year in question, and the associated annual budget detailing the costs of delivery. This process is illustrated below.

Figure 3.1: Network Manager strategic and operational planning



Source: SDG analysis

3.23 Therefore, in order to assess the cost base of the Network Manager, it is important to understand how the activities in the Work Programme align with the functions and tasks set out in legislation as well as how they drive the estimated costs set out in the budget. In addition, it is necessary to understand how actual expenditure in any given year compares with the budget and the treatment of any under- or over-spend. We return to these issues in Chapter 5 on financial arrangements and Chapter 6 on our review of the cost base.

#### **Overview of the day-to-day operational role**

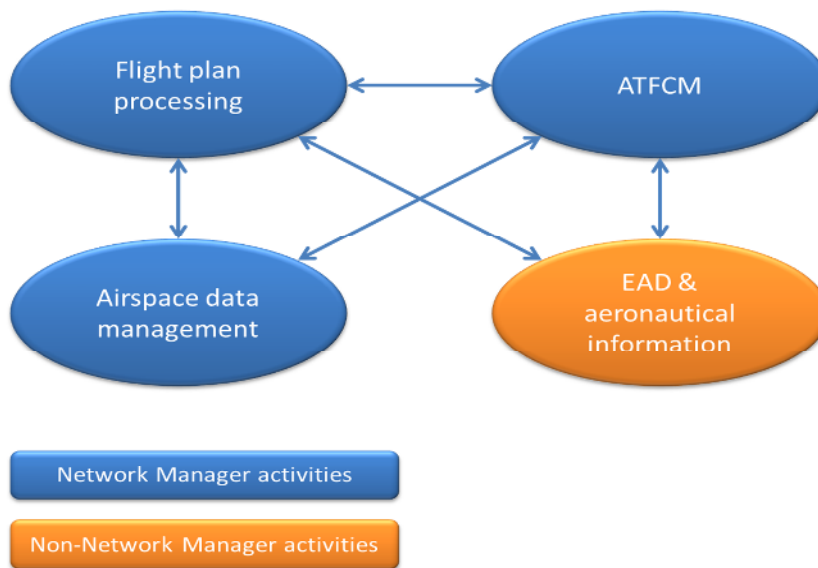
3.24 The Network Manager carries out a number of day-to-day activities through the work of the Network Manager Operations Centre (NMOC), which forms part of the NMD. The main activities are as follows:

- **Airspace data management:** this includes creating, verifying and updating the airspace data system using data provided to the NMOC by all Eurocontrol Member States. The system contains both static data, such as air traffic control (ATC) sector boundaries and air routes, and dynamic data such as default ATC capacities and air-route availability (taking account of military airspace usage).
- **Flight plan processing:** for every civilian flight in European skies made under Instrument Flight Rules (IFRs), a flight plan containing detailed routings and timings must be sent to the NMOC at least three hours before planned take-off. These flight plans, numbering up to 33,400 a day, are checked against the airspace structure in the Integrated Initial Flight Plan Processing System (IFPS). Any inconsistencies are resolved, normally through the manual intervention of NMOC staff, before the flight plan is accepted.
- **ATFCM:** this involves seeking to optimise, as far as possible, ATC capacity in order to meet air traffic demand while ensuring safety and meeting efficiency targets. It is divided into three phases: the strategic phase (avoiding imbalances between capacity and demand for events taking place in the future); the pre-tactical phase (producing the best possible ATFCM plan for operations for the following day); and the tactical phase (monitoring and updating the ATFCM plans made the day before based on the current day's situation).

3.25 As shown in the figure below, these activities interact with the management of the European Aeronautical Information Services Database (EAD), which is not covered by the network functions defined in the legislation. The EAD is managed by the Network Services unit, which is part of the NMD but not part of the Network Manager role defined in Article 4 of the Implementing Rules<sup>4</sup>.

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<sup>4</sup> The Network Manager stated that EAD was transferred out of the Network Manager organisation to Network Services in 2014, although it would prefer all of the activities currently undertaken by the NMD to be included in legislation.

**Figure 3.2: Day-to-day operational tasks of the NMD**

Source: Steer Davies Gleave representation of information provided by the Network Manager

### Organisation of the Network Manager Directorate

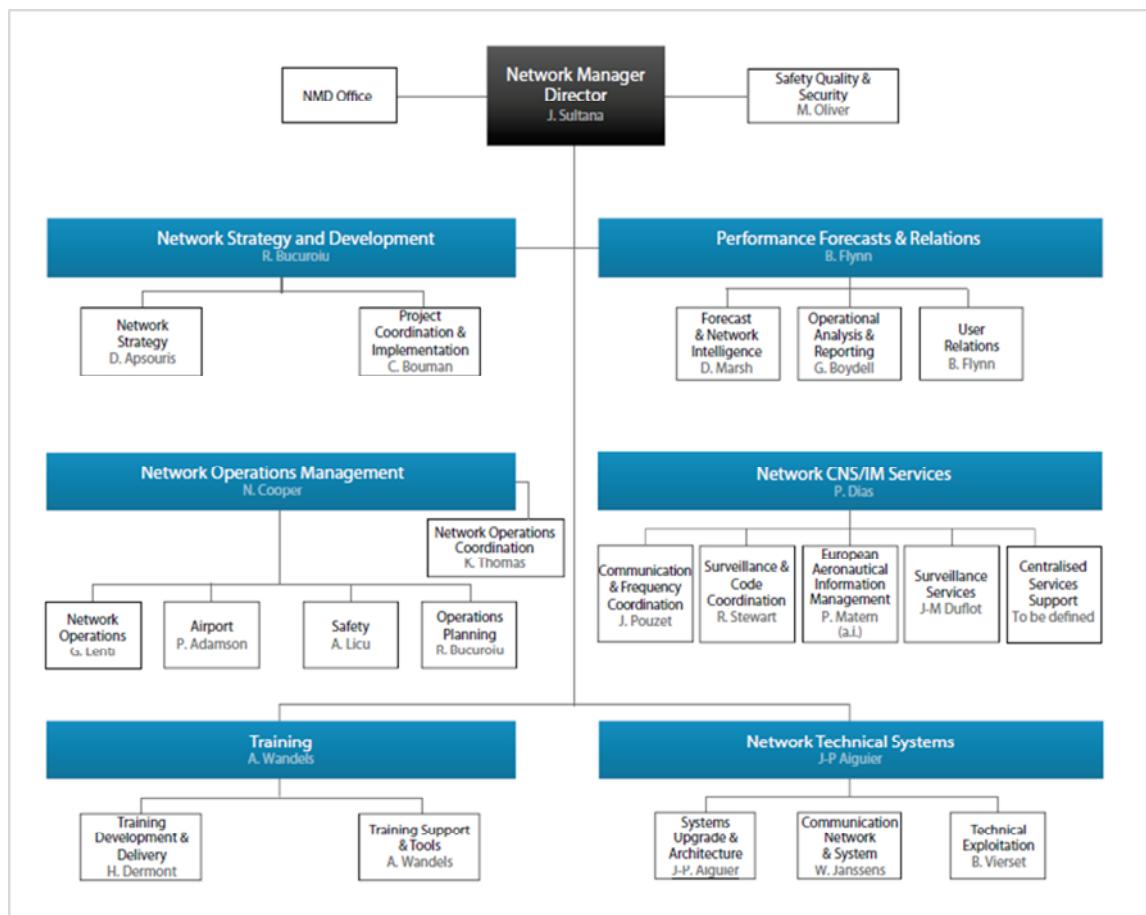
- 3.26 As already noted, in response to the Implementing Rules Eurocontrol formed the NMD through a process of internal reorganisation, part of a broader restructuring exercise resulting in the creation of five directorates. The organisation of the NMD, and the division of its work between the Network Manager functions defined in the legislation and other Network Services, is discussed in more detail in Chapter 6. Here, we note that the difficulty in distinguishing clearly between activities supporting Network Manager functions and those supporting the directorate's broader work has been a key focus of this study.
- 3.27 The NMD undertakes all network functions, covering network planning (airspace design) and operations (ATFCM and AIM) as well as supporting the coordinated, pan-European deployment of operational and technical improvements (including those related to SESAR). It also provides support to air navigation activity at airports, coordinates safety-related work across Member States, delivers support services to ANSPs and FABs when required, and monitors the network management contribution to the performance targets of the SES. Its responsibility for training and management of the EAD are not network functions defined by the legislation but both are critical for the ongoing strategic planning and operation of the network.
- 3.28 Figure 3.3 shows how the NMD is organised into units responsible for different activities. For the purposes of this review, the key units and their roles are as follows:
- The Network Operations Management unit is responsible for the overall operational management of the network, and focuses mainly on Network Manager functions and tasks. The NMOC, whose role is described in paragraph 3.24 above, forms part of this unit.
  - Technical support (in terms of IT, communications and systems) and facilities are provided by the Network Technical Systems unit. It is the responsibility of this unit to ensure that all technical systems are always operational and that there is sufficient redundancy in case of failure. Again, this unit focusses predominately on Network Manager functions and tasks.
  - The Network Strategy and Development unit is responsible for the short, medium and long-term planning covered by the network functions, and also coordinates and

implements projects. While it focuses primarily on Network Manager activities, it does undertake some other work.

- The Performance Forecasts and Relations unit manages relations with the users. It also develops short-term and longer term forecasts of airspace demand (STATFOR) as well as analysing and reporting on operations. This unit supports both Network Manager and other activities.
- The Network CNS/IM Services unit is focused on ensuring that the numerous communications, navigation and surveillance systems and sub-systems work together in a harmonized and safe manner. It coordinates the allocation of frequencies and SSR transponder codes. This unit focusses primarily on Network Services, but some of its activities are required to support Network Manager functions.
- The Training unit provides training to external stakeholders, an activity covered by Network Services.

3.29 The NMD is mainly located in the Eurocontrol’s premises in Brussels, with some staff and systems (providing redundancy for key network functions) located in additional facilities in Brétigny-sur-Orge in France. The Training unit delivers its training courses from Eurocontrol’s Institute of Air Navigation Services, which is located in Luxembourg.

Figure 3.3: NMD organisation



Source: Eurocontrol, September 2015

### Resourcing of the Network Manager Directorate

3.30 In 2014, the NMD employed 597 staff including the following:

- **Officials:** these staff are appointed to an established post at Eurocontrol. To some degree, staff grades mirror those of the European Commission (i.e. administrators (AD) and assistants (AST) grades are in use), although many of the NMD's staff are operational. As is the case for Eurocontrol as a whole, salaries are subject to an internal tax rather than Belgian (or other) national taxation, with revenues used to offset the financing for the organisation provided by Member States (an arrangement explained in more detail in Chapter 5).
- **Contract staff:** contract staff are employed to perform administrative or expert tasks. Their contract duration cannot exceed three years, and contracts cannot be renewed more than once. The numbers of contract staff should not exceed 20% of budgetary posts. Salaries of contract staff are subject to the same internal tax as officials.
- **Young graduates:** in 2012, Eurocontrol put in place a Graduate Programme with an annual intake of 12 graduates to help achieve a more balanced intake of junior and senior staff.

3.31 Table 3.4 shows the breakdown of NMD staff by grade in recent years. Table 3.5 shows forecasts of Full Time Equivalent (FTE) staff to 2020, broken down between Network Manager and Network Services.

**Table 3.4: Historical NMD staff resources by grade**

	2011	2012	2013	2014
Officials	613	599	583	570
Contract staff	Not stated	33	27	14
Young graduates	Not applicable	Not applicable	Not applicable	13
<b>Total</b>	<b>613 at least</b>	<b>632 at least</b>	<b>610 at least</b>	<b>597</b>

Source: Eurocontrol annual reports

**Table 3.5: Projected NMD staff resources by service area**

FTEs	2015	2016	2017	2018	2019	2020
Network Services	86	92	96	98	99	99
Network Manager	479	439	436	434	433	433
<b>Total NMD</b>	<b>565</b>	<b>532</b>	<b>532</b>	<b>532</b>	<b>532</b>	<b>532</b>
% Network Services	15.2%	17.4%	18.0%	18.4%	18.6%	18.6%
% Network Manager	84.8%	82.6%	82.0%	81.6%	81.4%	81.4%

Source: Agency Business Plan 2015 – 2019 and 2016 – 2020

3.32 We note that projected staffing levels within the NMD are expected to decline significantly, particularly during 2016, as a result of falling numbers of staff allocated to the Network Manager. However, the implications for cost efficiency will depend on the future path of unit staff costs, an issue to which we return in Chapter 7.



# 4 Governance

## Our Terms of Reference

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**Requirement:** perform an in-depth assessment of existing Network Manager governance mechanisms and processes for decision making, covering all duties of the NMB as listed in Article 16.1 of the Network Functions Implementing Rule (NF IR). This task will identify the extent to which the full powers contained in the current NF IR and the designation decision are applied as well as the barriers to effective governance. This task will assess in particular the relationship between the NMB and the Network Manager; the accountabilities and liabilities of the NMB and Network Manager; the independence, impartiality and separation of the Network Manager from other tasks performed by Eurocontrol. It will provide recommendations for any immediate improvement and also options for medium term evolution, including if required, amendments to the network functions regulatory framework.

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4.1 We begin our reporting of the issues identified in the course of this review with a discussion of the governance arrangements for the Network Manager (Task 4 of the Terms of Reference). In our view, weaknesses in the current governance arrangements underlie many of the issues identified through the other tasks discussed in later chapters.

4.2 In responding to the requirements of Task 4, we have investigated:

- the independence of the Network Manager;
- the responsibilities of the NMB and SSC;
- how the governance arrangements for the Network Manager compare with those for other pan-European bodies; and
- whether the arrangements are sufficiently clear and transparent, based on the RACI analysis described in 2.21.

4.3 The results of this investigation are described below as a precursor to our key findings and recommendations on governance reported in Chapter 8.

### Independence of the Network Manager

4.4 As already noted, while the Nomination Decision required Eurocontrol to meet a number of criteria in undertaking the role of Network Manager (see paragraph 3.7), there was no requirement to set up a separate legal entity to perform the functions and tasks defined in the legislation. The effect of the decision was therefore to designate Eurocontrol as a whole to carry out the role (much of which was already being undertaken by the organisation) rather than the creation of a body specifically designed for the purpose. Accordingly, the formation of the NMD was fully consistent with the requirements of both the Implementing Rules and the Nomination Decision, notwithstanding that the scope of its activities extends beyond the network functions and tasks.

4.5 This approach is different from that taken in the case of other pan-European organisations with responsibilities under European Union law. For example:

- ERA, the body responsible for the development of European rail interoperability and safety management, was established under Regulation (EC) No 881/2004, which explicitly defines the organisation as a body of the European Union having a “legal personality”. The legislation also provides for an Administrative Board and Executive Director as well as a detailed framework governing the preparation, implementation and control of the Agency’s budget.
- The SESAR Joint Undertaking was established under Council Regulation (EC) No 219/2007 to manage the development phase of the SESAR project. Again, the legislation confirms that the Joint Undertaking has a “legal personality” and states that it may “in particular, acquire or dispose of movable and immovable property and may be a party to legal proceedings”.
- INEA was created by Commission Decision 2013/801/EU to manage the financial and technical implementation of the TEN-T programme<sup>5</sup>. Its governance framework is defined by Council Regulation (EC) No 58/2003 laying down the statute for executive agencies, which sets out a number of generic provisions relating to this form of organisation. In particular, it includes similar wording in respect of the legal status of agencies and the preparation, implementation and monitoring of their budgets.

4.6 Our aim in identifying these examples is not to suggest that the Network Manager should take the form of an agency or joint undertaking, or that its form should necessarily be defined in legislation. Rather, we highlight them in order to demonstrate that pan-European organisations established to undertake a role under legislation normally have a distinct legal status and a substantial degree of management independence. Whether such status can only be satisfactorily established through legislation is a matter on which the Commission may wish to seek legal advice. Here we note that, in our view, there would be significant advantages in the Network Manager having a ‘legal personality’, since this would allow it to make decisions independently of Eurocontrol in a way that it cannot as part of a directorate operating within the management structure of the wider organisation.

4.7 In the course of our review, we have noted a number of areas of decision-making where the Network Manager cannot act independently, notwithstanding that it has some discretion to undertake aspects of its planning and operational role without reference to Eurocontrol’s approval processes. Key areas where, in our view, the Network Manager does not enjoy independence, either in principle or in practice, include:

- the recruitment and dismissal of staff on terms and conditions that differ from those in place for the rest of Eurocontrol’s organisation;
- making applications on its own account for support from the Connecting Europe Facility (CEF), a key source of funding for the development of trans-European infrastructure including the European route network;
- making investment and other proposals to the NMB without reference to Eurocontrol’s internal approval procedures;
- concluding contractual agreements with third parties such as the SESAR Deployment Manager; and
- securing support services of various kinds (e.g. facilities and general IT services).

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<sup>5</sup> Trans-European Transport Network programme.

- 4.8 We consider that the Network Manager must have discretion to make decisions in all of these areas if it is to pursue the aims of the SES effectively and efficiently. In the absence of such independence, there is a clear risk that the organisation will be required to balance SES objectives with those of Eurocontrol, giving rise to tensions and ongoing disagreement with the NMB and stakeholders. Such tensions have already arisen, notably in respect of budget issues, applications for CEF funding or the treatment of third countries, an issue to which we return in Chapter 7.
- 4.9 In responding to the draft findings and recommendations presented to the NMB workshop on 11 April, the Network Manager has stated that it already enjoys some independence from Eurocontrol and that the latter's objectives are anyway fully aligned with those of the SES. In discussion, it has also referred to an initiative within Eurocontrol to enable individual directorates to contract for support services from 2019. However, in our view the persistent disagreement over whether the Network Manager's activities are effectively focused on the development of the SES, and whether they have been unnecessarily extended beyond the SES geography, provides clear evidence of the potential for tension between different sets of objectives<sup>6</sup>. In addition, while we consider that moves to allow greater management discretion in specific areas (for example procurement of support services) should be welcomed, these are insufficient to establish the level of independence that we consider necessary.
- 4.10 At the same time, we stress that establishing separate legal status for the Network Manager need not preclude Eurocontrol from undertaking the role in the future. We consider the mechanisms by which such status could be established in Chapter 8. Here, we note that the Network Manager has itself stated that Eurocontrol has the ability to create separate legal entities within its organisation, and that this could be considered once the requirements for designation in 2019 have been determined.

## Review of NMB and SSC responsibilities

### The role of the NMB

- 4.11 As noted in paragraph 3.17, the NMB is comprised of all operational stakeholder representatives (including the military), and its role is therefore different from that of a conventional corporate board. Its specific responsibilities, as summarised in Table 3.3, nevertheless reflect to some degree those typically allocated to supervisory boards of different kinds. These include endorsing or approving key plans (notably the Network Strategy Plan and the Network Operations Plan) as well as monitoring their implementation, approval of the annual report and assessing if the Network Manager has the appropriate competencies, resources and impartiality to carry out the tasks assigned to it.
- 4.12 Key responsibilities normally allocated to a board that are not within the role of the NMB, as defined in the Implementing Rules, are as follows:
- selection and performance review of the senior management team (who report to Eurocontrol);

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<sup>6</sup> As discussed in Chapter 7, the SES geography currently includes the 28 Member States of the European Union, the EFTA and EEA countries (Norway, Switzerland and Iceland), and the six European Civil Aviation Area (ECAA) countries (Albania, Bosnia and Herzegovina, Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Kosovo). Ukraine has also signed a comprehensive aviation agreement with the Union. Eurocontrol has 41 Member States and carries out the Network Manager functions and tasks on behalf of them all.

- ensuring long term financial stability;
- monitoring expenditure against the budget (although it could be argued that this role is implicit in a number of the tasks covered by Article 4 of the Implementing Rules, for example “monitoring activities related to the management of the network functions”);
- influencing and approving changes in organisational structure;
- ensuring the adequacy of internal control procedures (with the Network Manager relying on Eurocontrol’s procedures); and
- engaging external advisers.

4.13 We also note that the NMB’s role in relation to budget approval is unusual and has been the subject of discussion and dispute, as discussed further below.

4.14 It is clear that a number these limitations on the NMB’s role are the result of the Network Manager being subject to parallel governance arrangements administered by Eurocontrol. This is reflected in the description of the Network Manager and its governance arrangements on Eurocontrol’s website, which:

- uses the terms “Network Manager” and “Network Management Directorate” interchangeably (although it does refer to the nomination of the Network Manager by the Commission); and
- does not fully explain the NMB’s role, make reference to its involvement in the approval of the budget and Work Programme or provide information on its priorities and decisions.

4.15 At the same time, we recognise that the Network Manager’s role and status are unique, and that the responsibilities of the NMB must be defined accordingly. In this context, the Network Manager has responded to our draft findings and recommendations by noting that a number of the responsibilities identified in paragraph 4.12 are not currently exercised [by a board] in respect of “any European network entity”. We have therefore undertaken a comparison of the role of the NMB with that of the analogous supervisory bodies for the pan-European agencies identified in paragraph 2.18, each of which is responsible for a similarly unique set of functions under legislation. The results of this exercise are reported in paragraphs 4.29 to 4.44.

4.16 In the course of our engagement with the Network Manager, it has also raised concerns about the potential for members of the NMB to face conflicts of interest. In particular, it has indicated that:

- members with access to detailed financial and other information would have an unfair advantage if they were to participate in any future consortium or other organisation bidding to undertake the role of Network Manager in competition with Eurocontrol, providing a justification for withholding information from the NMB in certain circumstances; and
- members representing groups of stakeholders but drawn from particular organisations often take a defensive position when reviewing reports and plans submitted by the Network Manager that are critical of the organisation in question (for example, in terms of its contribution to the level of delay observed in a particular year).

4.17 We recognise the general need to consider the potential for conflicts of interest when disseminating information, although we have seen no evidence of a conflict arising in practice. However, we are not persuaded that such conflicts provide a justification for withholding the detailed information that the NMB requires in order to undertake its role effectively. We have undertaken work for both bidders and awarding authorities in a large number of competitive tendering exercises in the transport sector, and note that bidding organisations are typically

provided with extensive historical financial and other information as part of the procurement process in order to ensure a level playing field in the preparation of bids. Such historical information must be distinguished from the forward looking plans, initiatives and associated financial projections developed by individual bidders at the time of the procurement that are properly subject to confidentiality.

- 4.18 As regards the potential for stakeholders to challenge the Network Manager when they are subjected to criticism, we suggest that such challenge is largely unavoidable in the case of a board representing specific groups of stakeholders. At the same time, we would expect all members of the NMB to respect the Network Manager's objectivity in presenting its analysis of network performance, and that members would challenge each other in responding to observations in reports and plans presented for approval.
- 4.19 Notwithstanding these observations, we consider that the effective and transparent management of potential conflicts of interest is important in establishing trust and a productive working relationship between the Network Manager and the NMB. Further, we note that Article 13 of the NMB's rules of procedure require it to prepare a Data and Confidentiality Policy Statement and that this has not yet been produced. In our view, this could provide a mechanism for responding to the Network Manager's concerns, and we return to a discussion of its scope in Chapter 8.

#### **The role of the SSC**

- 4.20 As already noted, the SSC is required to offer a positive opinion prior to NMB endorsement or approval in a number of areas, not least the Network Strategy Plan and the Network Manager's budget. It also offers an opinion on the appointment of the chairperson of the NMB and its rules of procedure. This provides the Member States, who are represented through the SSC, with some assurance over key decisions relating to the activities of the Network Manager.
- 4.21 During the review, we have held discussions with two members of the SSC in order to better understand its role and ways of working in relation to the governance of the Network Manager. We understand that each Member State is represented by two members, drawn from the relevant transport and defence ministries, and that decisions are made using established European voting arrangements applied in various different forums in the aviation as well as other sectors (with certain Member States receiving a higher weighting in any vote than others). Meetings are chaired by the Commission, which is responsible for formulating and presenting proposals for an opinion.
- 4.22 Both of the representatives with whom we engaged considered that the procedures governing the SSC's involvement in the governance of the Network Manager operated effectively. For example, if the SSC did not provide a positive opinion on the budget, it would be for the Commission to request the Network Manager to prepare an alternative proposal, which would then be tabled by the Commission (acting as chair of the SSC) for consideration. However, one representative noted that there was potential for tension between the process for endorsing the budget provided for in legislation and Eurocontrol's own budget approval process.

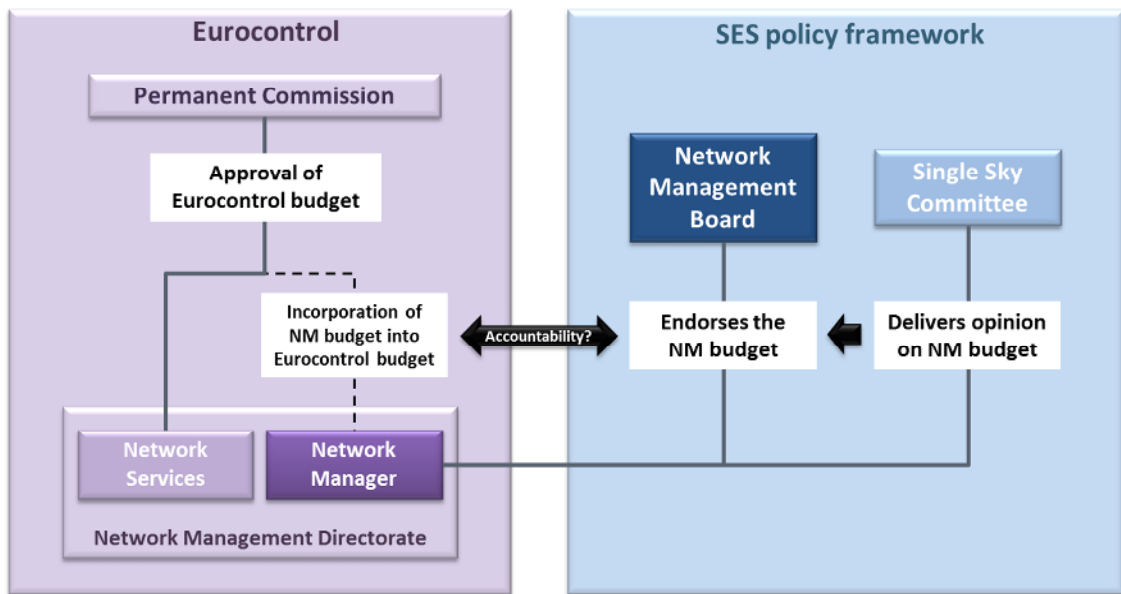
#### **Budget approval – an illustration of governance weaknesses**

- 4.23 The arrangements for approving the Network Manager's budget have proved particularly contentious and, while some of the concerns expressed by the NMB have been partially addressed through a Cooperative Decision Making (CDM) document prepared by the Network Manager, they serve to illustrate weaknesses in the current governance arrangements. These

weaknesses led to serious questions about the status of the budget in 2014, and the debate about the implications for accountability continue notwithstanding the NMB’s approval of the CDM document.

- 4.24 In our view, the difficulty in establishing clear accountability for the budget arises directly from the fact that the Network Manager is part of a directorate within Eurocontrol and has no independent legal status. This means that, in principle, the Network Manager’s budget is part of Eurocontrol’s wider budget and is subject to approval by the Permanent Commission. At the same time, the Implementing Rules make no mention of Eurocontrol in relation to budget approval, with only the NMB and SSC having defined roles as already described. The resulting tensions and lack of accountability are illustrated in the figure below.

Figure 4.1: Illustration of difficulties in establishing budget accountability



Source: SDG analysis

- 4.25 As a result, endorsement of the 2014 budget proved problematic, with the NMB continuing to challenge the Network Manager’s proposal even after it had been incorporated into Eurocontrol’s budget following approval by the Permanent Commission. By June 2014, the budget had still not been endorsed, and neither had the positive opinion of the SSC been sought. Hence the Network Manager, in continuing to perform its functions and tasks, was obliged to operate under contingency arrangements for the first half of the year.
- 4.26 Resolution of the issue was protracted, with Eurocontrol opposing a proposed change in the wording of the legislation (involving a replacement of the word “endorsing” with “approving”)<sup>7</sup> and stating its position as follows:

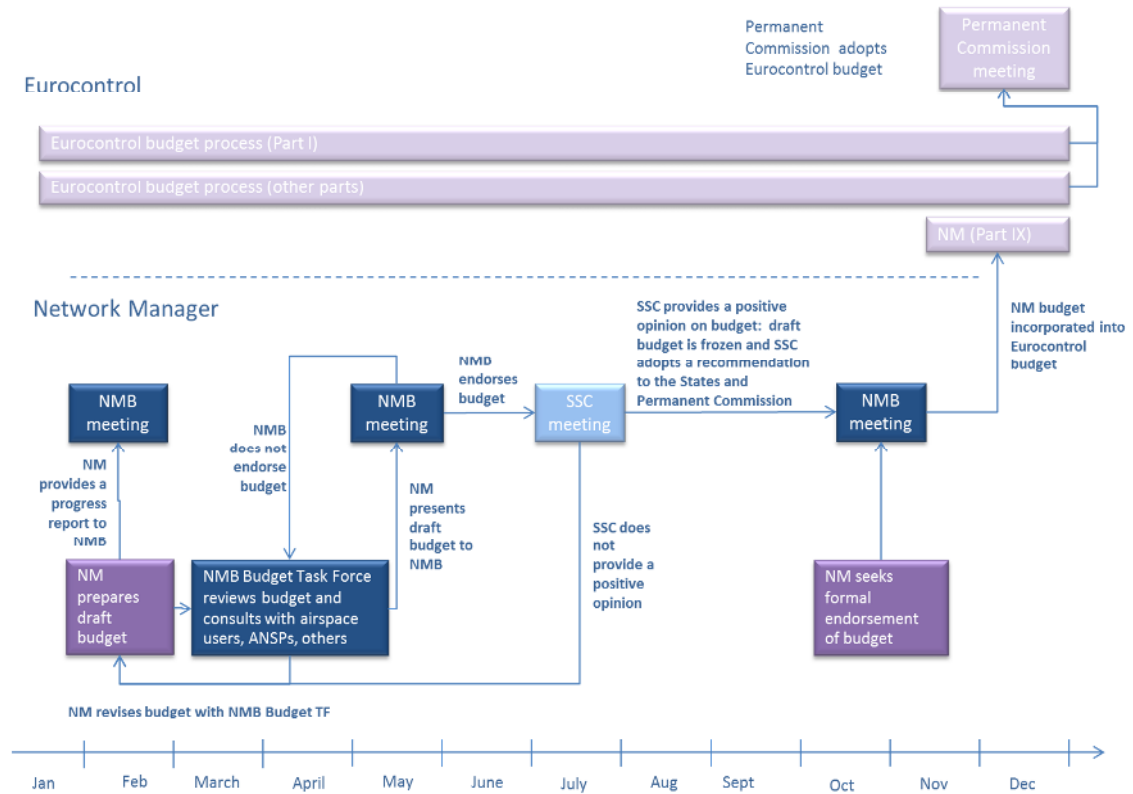
*“There is only one budgetary authority approving the Eurocontrol budget, which is the Eurocontrol Permanent Commission, therefore Eurocontrol cannot make the approval of part of its own budget dependent on prior approval of a body belonging to another organisation*

<sup>7</sup> In practice, the significance of the distinction between the two terms is not immediately obvious: the Oxford Dictionary defines the verb “to endorse” as “to declare public approval”, which implies that the difference between “endorse” and “approve” relates to the level of transparency rather than the effect of the action itself.

(viz. the European Union), even more if the other organisation does not even contribute to the part of the Eurocontrol budget (Network Manager budget) to be approved”.<sup>8</sup>

- 4.27 A draft of the CDM document prepared in June 2014 nevertheless provided at least a temporary resolution, stating that “the NM will ensure the wider Eurocontrol budget, including the NM budget, is adopted by the Eurocontrol PC without amendment to the NM part thereof”. The current budget approval process is illustrated in the figure below.

Figure 4.2: Current budget approval process



Source: SDG analysis based on review of CDM

- 4.28 We understand that the Director General of Eurocontrol has confirmed this position. However, our discussions with members of the NMB indicate that a number do not consider that the issue has been satisfactorily resolved and that the body still cannot be considered accountable for the Network Manager’s budget. Moreover, while the Network Manager considers that the budget process operated reasonably well in 2015, the NMB Budget Task Force has raised a number of major concerns<sup>9</sup>.

## Comparison with other pan-European organisations

### Overview

- 4.29 The table below provides an overview of the results of our comparison of the NMB with the equivalent bodies responsible for overseeing the pan-European organisations selected for the purposes of benchmarking. By way of context, we note that in 2012 the Commission put

<sup>8</sup> Working paper, SCF 14/23/3 of 29.9.14, item 5.

<sup>9</sup> ‘NMB Budget Task Force - Comments to ABP 2016-2020- 28May 2015 Draft.docx’.

forward a range of improvements for decentralised agencies (i.e. applying to ERA and EASA), including five-yearly evaluations, the introduction of sunset or review clauses providing for merging or closing down agencies, ex ante and ex post evaluations of their programmes and activities, the development of key performance indicators, multi-annual programming to be linked with resource planning, a stronger link between activities and human and financial resources and a streamlined governance structure.

**Table 4.1: Comparison of NMB with boards of other pan-European organisations**

	Network Manager	INEA	ERA	EASA
Organisation type	Not defined in legislation	Executive Agency	Decentralised agency	Decentralised agency
Board name	Network Management Board	Steering Committee	Administrative Board	Management Board
Appointment of Chair of the Board	Proposed by voting members (after positive opinion of SSC)	Chosen from among members	Elected from among members	Elected from among members
Role in appointment of the Director	The NMB is not consulted	Director is directly appointed by the Commission	Board appoints the Director	Board appoints the Director
Role in overseeing performance of the Executive Director and Heads of Units	None	None - the Director is responsible for all staff management	Yes	Yes, in agreement with the Executive Director
Role in approving the annual general report	Approves the annual report	Approves the annual report no later than 31 March each year	Approves the annual report by 30 April each year	Approves the annual report
Role in approving programme of work for the coming year	Approves the Work Programme	Approves the work programme	Approves the work programme by 31 October	Approves the work programme by 30 September
Role in approving the budget	The NMB endorses the budget (after positive opinion of SSC)	Approves the budget	Approves the budget	Approves the budget
Delivers an opinion on the final accounts?	No	No, opinion is provided by the Commission and the European Court of Auditors	Yes	Yes
Role in establishing the Rules of Procedure	Approves the Rules of Procedure (after positive opinion of the SSC)	Establishes the Rules of Procedure	Establishes the Rules of Procedure	Establishes the Rules of Procedure
Role in establishing the organisational structure and adopt the staffing policy	None	Approves the organisational structure and staffing policy	None	Approves the organisational structure and staffing policy

Source: SDG analysis

4.30 As shown, while the NMB's responsibilities are comparable with those of the other bodies in some respects, they differ materially in a number of areas. In particular, it has no role in the



appointment of the Director of the organisation that it oversees (in contrast to the bodies overseeing ERA and EASA) and is not required to offer a formal opinion on the final accounts (although it does receive a copy of the cash flow statement and balance sheet). Its role in relation to budget approval has already been discussed at some length in the previous section.

### **Benchmark organisations - key elements of governance**

4.31 We have sought to further illustrate the differences between the Network Manager and the analogous organisations through more detailed investigation of their respective governance arrangements. Key features of the governance of INEA, ERA and EASA are summarised below.

#### *The governance of INEA*

4.32 As already noted, INEA is an executive agency established under Regulation (EC) No 58/2003. It is responsible for implementing a number of European Union programmes<sup>10</sup>, replacing the former TEN-T Agency, and commenced work in 2014 with 174 staff (with plans to expand to 292 by 2020). As an executive agency, it has its own legal identity and operating budget while remaining under the control of the Commission and subject to a rigorous legal framework established by the European Council. Its senior management is appointed by the Commission.

4.33 INEA's governance arrangements are based on the following elements:

- Steering Committee – the Steering Committee meets four times per year and votes on all issues affecting INEA's operations, including its annual work programme, staffing budget, Annual Activity Report and accounts. It is comprised of staff from the Commission Directorates General (DGs) that are most concerned with the Agency's work (DG MOVE, DG ENER, DG CNECT and DG RTD). The Director of the Agency and representatives of other relevant organisations may attend as observers.
- Liaison officers – the Steering Committee is supported by liaison officers drawn from the Agency's parent DGs, who coordinate monitoring activity and keep senior staff within the DGs informed of relevant issues. Liaison officers also ensure that the Agency complies with its legal framework.
- Mandatory reporting – INEA is required to provide regular reports to its parent DGs, including monthly reports on actual expenditure against budget and half-yearly reports on progress in implementing the work programme. In addition, an evaluation of the Agency's work is undertaken every three years.
- Availability of information – the Agency's accounting system is based on the Commission's standard system, and the Commission may review and challenge financial and other information as required.
- On-site visits – parent DG's are entitled to carry out audits and other checks in order to ensure that appropriate internal control systems are in place and operating correctly and that the Agency is complying with relevant legal requirements.

4.34 This governance framework is supplemented by a number of general financial requirements for executive agencies set out in Regulation (EC) No 1653/2004<sup>11</sup>. These include:

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<sup>10</sup> CEF, parts of the Horizon 2020 programme and the legacy TEN-T and Marco Polo programmes.

<sup>11</sup> Commission Regulation No 1653/2004 of 21 September 2004 on a standard financial regulation for the executive agencies pursuant to Council Regulation (EC) No 58/2003 laying down the statute for executive agencies to be entrusted with certain tasks in the management of Community programmes.

- a requirement for sound financial management, effective and efficient internal control and budget transparency (including presentation of expenditure against budget and sharing of the budget with the Commission and the Court of Auditors);
- a requirement that the annual work programme includes detailed objectives and performance indicators; and
- a prohibition on raising loans, and a requirement that any positive balance of revenue over expenditure must be returned to the Commission at the end of the year.

4.35 In addition, the legal framework governing CEF itself provides for monthly, bi-monthly, half yearly, annual and other periodic assessments of the programme, and it is also subject to audit by the Court of Auditors.

#### *The governance of ERA*

4.36 ERA is a decentralised agency established under Regulation (EC) No 881/2004 (subsequently amended by Regulation (EC) No 1335/2008), responsible for supporting the development of interoperability and safety management in the European rail sector. It also acts as the system authority for the European Rail Traffic Management System (ERTMS) project, which is intended to establish common signalling standards throughout Europe. It employs some 140 staff and its budget in 2015 was €26 million.

4.37 ERA is supervised by an Administrative Board comprised of 38 members, including one member representing each of the Member States, four representing the Commission and six representing stakeholders such as infrastructure managers, railway undertakings, worker representative bodies, passengers and freight customers (with stakeholder representatives having no voting rights). Members are appointed on the basis of their expertise for a term of five years, which may be renewed once.

4.38 The responsibilities of the Administrative Board are described in the legislation and include appointment of the Agency's Executive Director, adoption of the budget (after overseeing its preparation) and delivery of an opinion on the financial accounts (following a review by the Court of Auditors). It meets between three or four times a year, although the legislation requires only two meetings a year. In 2009, it established a Sub-Committee on financial, budgetary and staff-related issues to provide advice and facilitate decision making. Committee members are drawn from the Administrative Board and operates through consensus rather than formal voting.

#### *The governance of EASA*

4.39 EASA is also a decentralised agency, originally established by Council Regulation (EC) No 1592/2002 (subsequently replaced by Regulation (EC) No 216/2008) and responsible for aviation safety in Europe. Its activities include the development of safety management strategies, the certification of aviation projects and oversight of approved organisations within the aviation industry, and it employs some 700 aviation experts and administrators. Its budget in 2014 was €162 million, financed by a combination of Commission contributions, fees for certificates issued and charges for publications and training provided.

4.40 EASA's governance framework includes the following elements:

- Management Board – the Management Board is responsible for defining the Agency's priorities, appointing its Executive Director and adopting the work programme, the budget and the annual report. It is comprised of one representative for each Member

State and one representative of the Commission, with the chair person elected from among the members.

- Advisory Board – the Advisory Board assists the Management Board in its work, and is comprised of representatives of various stakeholders including manufacturers, operators of general aviation services, maintenance suppliers and aviation workers’ organisations.
- Board of Appeal – the Executive Director has wide powers under the legislation, for example to undertake inspections and investigations in support of EASA’s regulatory functions, and the Regulation therefore provides for a Board of Appeal to ensure that decisions comply with the legal framework.

4.41 As a decentralised agency, EASA is subject to financial regulations similar to those of ERA, with the Management Board adopting the budget and delivering an opinion on the financial accounts following their review by the Court of Auditors.

#### **Implications for governance of the Network Manager**

4.42 We recognise that, as agencies, the organisations discussed above are different from the Network Manager, particularly in terms of their relationship with the Commission. We also note that the Network Manager is primarily an operational entity rather than a regulatory or project focused one. Nevertheless, the agencies have a number of common characteristics making them useful comparators for the purposes of assessing the Network Manager’s governance framework:

- They have been established under European Union law for the purposes of meeting specific objectives underpinning the further integration of key markets, in particular transport markets.
- They are responsible for quasi-regulatory activities and/or services that cannot be provided by competitive markets.
- They are concerned, in whole or in part, with network-based industries, in particular transport industries that rely on cross-border cooperation and coordination in delivering pan-European services.
- They employ highly skilled staff with particular expertise, acquired only through extensive experience and training and hence not always readily available in the marketplace.
- In each case, there is a need for governance mechanisms that ensure resources are deployed efficiently and effectively in support of achieving European Union objectives.

4.43 Against this background, we consider that a number of elements of the governance arrangements reviewed should inform any further development of the corresponding arrangements for the Network Manager. In particular:

- All of the agencies have independent legal status, enabling them to hire staff, enter in legal contracts and undertake other activities on their own behalf (notwithstanding that their freedom of action is constrained in a number of ways). As already noted, we suggest that such status would enable the Network Manager to operate more effectively while providing for greater financial transparency and accountability. More specifically, it would remove the potential for conflict between parallel governance arrangements place primary responsibility for governance with the NMB.
- In the case of the two decentralised agencies, the relevant supervisory body appoints the Director of the organisation as well as other senior management staff, although other organisations (including the Commission) are involved in the selection process.

- Similarly, the bodies responsible for supervising the decentralised agencies are unequivocally accountable for their budgets, overseeing the preparation of estimates of revenue and expenditure for each coming year and formally adopting the budget as well as delivering an opinion on the final accounts.
- All of the supervisory bodies undertake extensive monitoring activities, including regular review of expenditure against the budget and KPIs.

4.44 We conclude that the role of the NMB is more limited than that of comparable bodies responsible for overseeing other pan-European organisations established under European Union law. Further, these limitations result in part from the fact that the Network Manager has no separate legal status and that the corresponding supervisory responsibilities are currently discharged by Eurocontrol itself. In our view, the accountability of the NMB would be enhanced, and its role in overseeing the activities of the Network Manager considerably strengthened, if a governance model similar to that of the decentralised agencies were adopted. Subject to legal advice, we suggest that this would not necessarily require major changes to the relevant legislation, but would be conditional on the Network Manager having a “legal personality” equivalent to that of the other organisations reviewed.

### **RACI analysis**

4.45 The RACI framework, outlined in paragraph 2.21, provides a further means of assessing the integrity of the Network Manager’s governance. In applying the framework we have undertaken two separate exercises, one based on consideration of the legislation alone and the other taking account of our understanding of actual practice derived from the document review and stakeholder engagement. The results therefore serve to highlight how far the governance arrangements are defined in the legislation and how far they rely on working arrangements developed following implementation.

4.46 The results of this analysis are shown in Table 4.2. For reference, the cells in the table are populated as follows:

- “R” indicates that the organisation has primary responsibility for an output;
- “A” indicates that the organisation is accountable for the output, usually because it gives final approval;
- “CC” indicates that an organisation is consulted and that its views determine whether a document or other output can proceed to the next stage of the approval process;
- “C” indicates that the organisation is consulted (i.e. its views are sought after information, such as a draft document, has been circulated to it);
- “I” indicates that the organisation is simply informed (i.e. it is simply notified or provided with a copy of the final document);
- “-” indicates that the organisation’s role, if any, is not mentioned in the legislation; and
- “?” indicates that there is some uncertainty about an organisation’s role in relation to a particular document or output.

4.47 Note that ANSPs, airports and airspace users are included in the analysis in their own right and not by virtue of their representation on the NMB.

**Table 4.2: Results of RACI analysis**

Organisation	Basis of application of RACI	Network Manager document/output						
		Network Strategy Plan	Network Operations Plan	Network Performance Plan	Annual report	Co-operative decision-making processes	Rules of procedure of the EACCC <sup>12</sup>	Annual work programme and budget
Network Manager	Legislation	R	R	R	R	R	R	R
	Practice	R	R	R	R	R	R	R
NMB	Legislation	A	A	A	A	A	A	?
	Practice	A	A	A	A	A	A	?
SSC	Legislation	CC	-	- <sup>13</sup>	-	CC	CC	CC
	Practice	CC	I?	I?	I?	CC	CC	CC
Eurocontrol	Legislation	-	-	-	-	-	-	-
	Practice	C?	C?	C?	C?	C?	C?	A?
ANSPs / airports	Legislation	C	C	C	-	-	-	-
	Practice	C	C	C	I	I	I	I
Airspace users	Legislation	C	C	C	-	-	-	-
	Practice	C	C	C	I	I	I	I

Source: SDG analysis based on review of legislation and other documents as well as stakeholder engagement

#### 4.48 On the basis of this analysis, we conclude that:

- responsibility for the documents and outputs identified is clearly allocated to the Network Manager, both under the legislation and in practice;
- in most cases, the NMB's accountability is clear, but there is considerable uncertainty surrounding its accountability for the budget and work programme for the reasons discussed above, the CDM document notwithstanding;
- the SSC's role in relation to key documents is clear, having been clarified through stakeholder engagement (although we suggest that the position in the event of the SSC not providing a positive opinion would benefit from written clarification);
- mention of Eurocontrol is restricted to the Nomination Decision given the need to define the Network Manager functions and tasks independently of the organisation charged with undertaking them at any point in time, but its role in relation to the budget remains an issue of contention and its contribution to other outputs is unclear to us; and
- other key stakeholders are consulted and informed, as appropriate, in practice although their participation is not always explicitly provided for in legislation (other than through representation on the NMB).

#### 4.49 Overall, we consider that there is considerable scope for improving the clarity and effectiveness of the governance arrangements in order to address the weaknesses identified above. While in principle the existing arrangements could be made to operate more effectively

<sup>12</sup> European Aviation Crisis Coordination Cell

<sup>13</sup> However, we note that the Network Strategy Plan must include the performance plan and targets for the next reference period.

through pragmatic agreements and more collaborative behaviour, for example of the kind leading to the adoption of the CDM document, in our view this is not a viable long term solution. To be effective, governance arrangements should not need to rely on ad hoc changes to procedures and the collaborative behaviour of the parties involved. We also note that while much could be achieved through modification of the governance framework, effective oversight will also depend on the transparency of the financial arrangements in place for the Network Manager, an issue to which we turn in the following section.

## Summary of findings

- As part of a directorate within Eurocontrol and considering existing internal rules and procedures, the Network Manager cannot act independently of Eurocontrol's management and governance structure. This has the potential to create tension in the event that the objectives of the SES and those of Eurocontrol conflict.
- In addition, the Network Manager does not enjoy the level of management autonomy that we would expect of a body with responsibilities under EU legislation, since it does not have full delegated authority from Eurocontrol in a number of areas:
  - it cannot recruit staff or employ them on terms and conditions that differ from those set by Eurocontrol;
  - it cannot apply for CEF funding on its own behalf;
  - it cannot make legal agreements with third parties;
  - it cannot put investment and other proposals to the NMB without the approval of Eurocontrol; and
  - it relies on Eurocontrol for central services (although this is expected to change from 2019).
- This lack of management autonomy arises from the fact that the Network Manager does not have an independent legal status analogous to that of European agencies.
- The NMB lacks accountability for the resourcing and efficiency of the Network Manager because of the tension between the governance arrangements defined in legislation and those already in place for Eurocontrol.
- The NMB must be provided with more financial and other information if it is to undertake its role effectively (specific information requirements are considered further in the following chapter).
- As is the case with any supervisory board, there is the potential for conflicts of interest to arise within the NMB. While this does not justify withholding information from the NMB, mechanisms for addressing conflicts of interest must be put in place if an effective working relationship between the Network Manager and its Board is to be established.

# 5 Financial arrangements

## Our Terms of Reference

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**Requirement:** assess the Network Manager financial arrangements (including Network Manager transactions) and determine whether they are sufficiently clear, transparent and specific to ensure identification of accountability for the budget and actual spend, as well as clear identification of surpluses generated. This task will address both the cost allocation and investment planning processes; clarify whether investment planning relies on determined business case processes and makes use of recognised best practices; it should assess any ring-fencing of the Network Manager budget and the traceability of the Network Manager induced savings and also identify options for the future, namely establishment of a specific Network Manager unit rate by breaking costs down into cost items in accordance with Article 7 of Commission Implementing Regulation (EU) No 391/2013. As a result of this assessment the contractor will produce a perspective of the most adequate financial arrangements to be put in place to meet the requirements of the network functions.

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5.1 In responding to the requirements of Task 2 of our Terms of Reference, we have:

- reviewed the current arrangements for funding the Network Manager, which are equivalent to the arrangements for funding Eurocontrol as a whole;
- assessed other possible funding mechanisms, in particular one based on the concept of a unit rate;
- reviewed the process for development of the annual budget as well as investment planning and approval processes;
- considered a number of specific issues relating to the provision of CEF funding; and
- identified improvements to the financial monitoring and control processes currently in place.

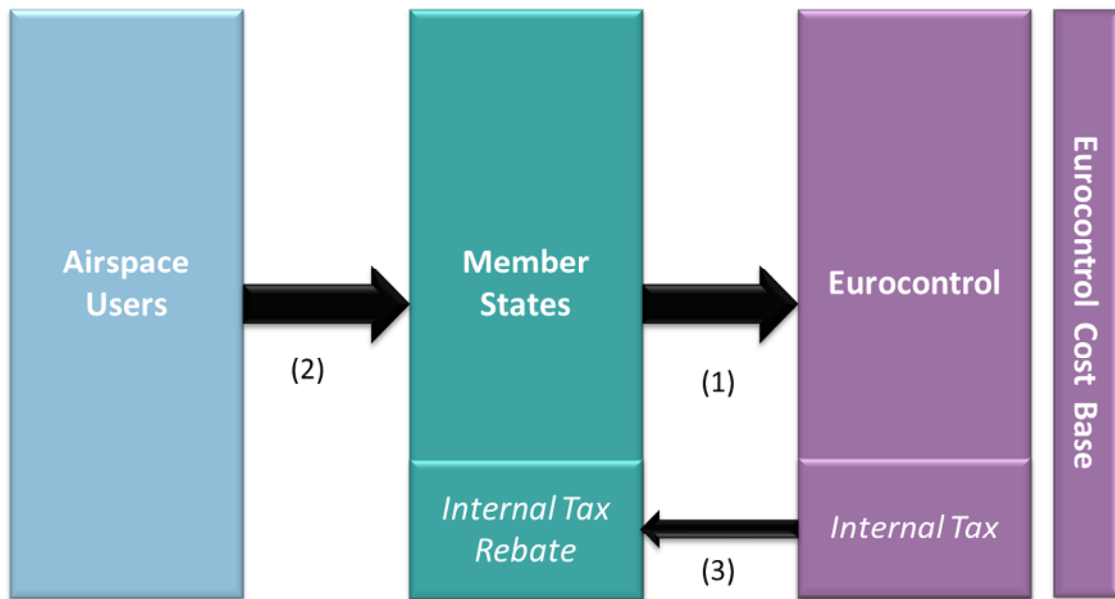
5.2 The results of each of these activities are reported in this chapter.

## Funding of the Network Manager

### Current funding arrangements

5.3 As part of a directorate within Eurocontrol, the Network Manager is currently funded through arrangements applying to the organisation as a whole. Hence, the Network Manager is initially financed through a combination of contributions from Member States, an internal tax levied on staff remuneration and contributions from other sources (for example, CEF). Member State contributions are subsequently recovered through en-route service charges paid by airspace users, and the latter are therefore the ultimate primary funders of the Network Manager and of Eurocontrol's wider organisation. These funding arrangements are illustrated in the figure below. Note that the funding of the Network Manager through the same arrangements is fully in line with the requirements of the Nomination Decision, as described in paragraph 3.8.

Figure 5.1: Funding of Eurocontrol



Start of year:

(1) Eurocontrol prefunded by Member States for full cost base

During year:

(2) Eurocontrol’s full cost base is added to airspace user’s monthly en-route charges invoices and charged to airspace users by the Central Route Charges Office.

(3) Rebate of internal tax paid by Eurocontrol to Member States to reduce contributions

5.4 We have confirmed in discussion with the Network Manager that the proceeds of the internal tax are used to decrease the contributions of the Member States although the latter charge out the full cost base to airspace users. As the net remuneration for staff is fixed at the European Union level, any increase in the internal tax would need to be compensated by a rise in gross remuneration and would therefore result in an overall increase in the cost base.

5.5 The internal tax is part of Eurocontrol’s overall financing arrangements, a full review of which is beyond the scope of this study. We have therefore not considered the tax further, other than to note that it cannot be influenced by the NMB and is therefore an additional factor making it difficult for the latter to accept full accountability for the Network Manager’s budget and expenditure.

**Options for alternative funding arrangements**

5.6 Our Terms of Reference require us to identify options for alternative ways of funding the Network Manager, in particular a unit rate similar to that applied to recover other air navigation costs. The framework governing the calculation of the unit rates for ANSPs is set out in Regulation (EU) No 391/2013 (the Charging Regulation) and, in principle, this framework could be applied to the Network Manager. The Network Manager’s cost base would then be recovered through a unit rate for en-route services calculated according to the following formula (analogous to the unit rate calculation described in Annex IV of the Charging Regulation):

$$Network\ Manager\ Unit\ Rate = \frac{Network\ Manager\ Cost\ Base}{Forecast\ Number\ of\ Service\ Units}.$$



- 5.7 Based on the Network Manager's cost base for 2015, as set out in the Agency Business Plan 2015 – 2019 (discussed further below), and the corresponding total number of service units for the SES in the same year, this would result in a unit rate of €1.96<sup>14</sup>.
- 5.8 However, while the application of the calculation would be straightforward, further thought must be given to the treatment of the Network Manager Unit Rate for the purposes of the Charging Regulation. We have considered two options, each of which has important implications for transparency in reporting:
- The Network Manager could be treated in the same way as Eurocontrol's Central Route Charges Office (CRCO), with the unit rate simply added to the determined unit cost for each charging zone set by individual Member States.
  - Alternatively, the Network Manager could be treated as a charging zone and subject to a separate unit rate.
- 5.9 Under both options, the Network Manager would be required to submit a cost base for the purposes of the unit rate calculation. However, under the second option, it would be required to submit detailed reporting tables, similar to those submitted by ANSPs in accordance with Annexes VI and VII of the Charging Regulation. These include, inter alia, extensive information on different categories of cost, albeit at a relatively high level of disaggregation. Moreover, its costs would be regarded as "determined" within the meaning of the legislation, and it would be required to manage its activities within the resulting constraints over the course of a Reference Period.
- 5.10 Hence, while either option would improve transparency by translating Network Manager costs into a unit rate paid by airspace users, the second option would have particular advantages in that it would provide stronger incentives to control costs and secure efficiencies while enabling greater scrutiny of the cost base by a range of stakeholders. In addition, we suggest that the key planning and operational role undertaken by the Network Manager is more comparable to that of an ANSP than the largely administrative activities undertaken by the CRCO. At the same time, it is likely that treating the Network Manager in the same way as a charging zone would have significant legislative implications, and that the first option would be simpler to implement.
- 5.11 We also note that the following issues would need to be considered before moving towards the introduction of a Network Manager Unit Rate:
- The calculation of unit rates under the current framework is based on service units within the SES. However, to the extent that the Network Manager's activities cover a broader geographical area, its cost base is likely to include some costs related to work with third countries. We consider this issue further in Chapter 7, but here we note that using only SES service units as the denominator in the equation in paragraph 5.6 would result in cross subsidy between users of the SES and others benefitting from activity relating to third countries.
  - Under current legislation, the Network Manager is not subject to the traffic risk sharing arrangements set out in Article 13 of the Charging Regulation, presumably on the grounds that it is not in a position to materially influence traffic levels. In any event, given its role

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<sup>14</sup> This is an illustrative calculation based on the number of service units for the RP2 Region (the EU 28 together with Norway and Switzerland). An extension of the relevant geographical scope would clearly result in a lower unit rate.

in relation to strategic planning as well as day-to-day operations, introducing incentives for the Network Manager to change the level of resourcing in response to relatively short term changes in the volume of traffic would seem appropriate. However, it would be helpful to rehearse the arguments surrounding the current exemption from traffic risk sharing in preparing for any implementation of a unit rate based on the treatment of the Network manager as a charging zone.

- Similarly, the application of the cost risk sharing arrangements described in Article 14 of the Charging Regulation would need to be considered. As already noted, there would be advantages in the Network Manager managing its activities against a determined cost base over the course of a Reference Period, but some cost categories would continue to be beyond its ability to control even if it were a legally separate organisation capable of making management decisions independently of Eurocontrol. Such costs would need to be excluded from any risk sharing arrangements.

5.12 We have not considered these issues further given the scope of this study, but consider that none represents a significant barrier to the introduction of a Network Manager Unit Rate similar to the rates currently applied in SES charging zones. Any decision on which of the two options in paragraph 5.8 to adopt should therefore be based on consideration of the trade-off between the desirable level of transparency and efficiency incentives on the one hand, and ease of implementation (without the need for significant changes to legislation) on the other.

## Budget development and reporting

### Overview of the Eurocontrol and Network Manager budgets

5.13 Our Terms of Reference also require us to determine whether the Network Manager’s current financial arrangements, broadly defined, are sufficiently clear and transparent, and to assess the effectiveness of any ring-fencing of the Network Manager’s budget. We have therefore investigated the relationship between the Network Manager’s budget and that of Eurocontrol as a whole, based primarily on a review of data for 2015. Our review included examination of the following key documents:

- the Network Manager Work Programme for 2015 - 2019;
- the Network Manager Performance Plan for 2015 - 2019; and
- the Agency Business Plan for 2015 – 2019 and for 2016 - 2020.

5.14 We have also had a number of discussions with the Network Manager about the basis on which its budget is prepared and how this relates to Eurocontrol’s overall budgeting process.

#### *The Eurocontrol budget*

5.15 Before 2015, the Network Manager budget was not presented separately from the rest of the Agency budget<sup>15</sup>. This has changed since the amending Regulation (EU) No 970/2014 came into force, and Eurocontrol’s budget is now broken down as follows:

- Part I: General budget;
- Part II: Central Route Charges Office (CRCO) budget;
- Part III: Maastricht Upper Area Control (MUAC) budget;
- Part IV: Special annexes;
- Part V: Sickness benefit scheme;

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<sup>15</sup> <https://www.eurocontrol.int/speeches/address-ecac-dgcas-eurocontrols-vision-strategy>

- Part VII: Unemployment benefit scheme; and
- Part IX: Network Manager.

5.16 The high level disaggregation of Eurocontrol's budget, as presented in Table 1 of Chapter 7 in the Agency Business Plan 2015 - 2019, is reproduced below.

**Table 5.1: Eurocontrol budget overview**

M€	2015	2016	2017	2018	2019
Part I General Budget	281.77	312.80	331.90	336.90	339.98
Part IX Network Manager	225.41	227.26	229.47	232.82	236.32
<b>Total Parts I &amp; IX</b>	<b>507.18</b>	<b>540.06</b>	<b>561.37</b>	<b>569.72</b>	<b>576.30</b>
Part II CRCO	21.51	20.94	20.71	20.48	20.47
Part III Maastricht UAC	161.00	167.02	168.87	173.27	176.87
<b>Total Agency Budget Expenditure</b>	<b>689.69</b>	<b>728.02</b>	<b>750.94</b>	<b>763.46</b>	<b>773.64</b>

Source: Agency Business Plan 2015 – 2019

5.17 Chapter 7 of the Agency Business Plan 2015 - 2019 provides a further breakdown of the Part I and Part IX budgets, disaggregated across 16 lines of revenues and costs. The document also presents a seven line "cost base" alongside budgeted revenue and expenditure, which combines various additional income streams with the corresponding costs to give the remaining cost base charged out to airspace users. This remaining cost base is financed in the short term through a combination of Member State contributions and the internal tax.

5.18 Table 5.2 summarises the breakdown of the Part I budget, based on information presented in the Agency Business Plan 2015-2019.

**Table 5.2: Breakdown of Eurocontrol's Part I budget**

Budget item	€000, 2015	Description/Comments
<b>Expenditure</b>		
Staff Remuneration	132,408	Gross staff remuneration
Operating Expenditure	93,060	
Investments	15,830	Reflects capital expenditure, financed by loans
ETS	20,985	Reflects the cost of staff benefitting from the Early Termination Scheme (ETS) retirement plan until the date of their pension
Depreciation	10,942	
Cost of Capital	1,897	Capital expenditure is 100% financed by debt
Pensions paid from the Budget	85,523	Reflects pensions for pensioners before 2005 and fiscal adjustment of all pensioners
Indirect Costs Part IX	(41,864)	Allocation of corporate functions to Part IX
Allocation of Past Part IX	(37,012)	Allocation of pensions obligations to Part IX
<b>Total Expenditure</b>	<b>281,769</b>	
<b>Receipts</b>		
Internal Taxes	37,220	Internal tax levied on gross staff remuneration in lieu of Member States' tax regimes, used to reduce Member States contributions
Internal Taxes ETS	5,899	Internal tax as levied on ETS payments
Internal Taxes CRCO	3,911	Internal tax received from CRCO
Other Staff Receipts (Acc.Ins + Special Levy)	1,400	Deductions from salaries including Accident Insurance and the Special Levy

Budget item	€000, 2015	Description/Comments
CRCO receipts (Rent, Int. Audit, Ind.)	1,318	CRCO contribution to Eurocontrol overheads above the level of CRCO internal tax
Interest on Deposits	300	We are unclear as to the meaning of this line item
DNM Services Signed Agreements	1,513	We assume that these are DNM revenues from third-party agreements
DSS EU Receipts	6,336	We are unclear as to the meaning of this line item
DSS Others Receipts	1,398	We are unclear as to the meaning of this line item
TEN-T	1,091	We assume that these are revenues from TEN-T/CEF funds that were not returned but kept to the general Eurocontrol budget.
Loans Capital Expenditure	15,830	Finance for capital expenditure
<b>Total Receipts</b>	<b>76,216</b>	
Reprioritisation due to less TEN-T funding	8,909	We are unclear as to the meaning of this line item
<b>Total Member State contributions (exc PBO)</b>	<b>196,644</b>	
PBO	39,378	Special contribution to pension fund
<b>Total Member State contributions (inc PBO)</b>	<b>236,022</b>	

Source: Agency Business Plan 2015 - 2019

5.19 Since the separate identification of the Network Manager budget as Part IX of the overall budget, the Part I budget has included an allocation of overheads and pension costs to the Network Manager. This appears as the two reversing lines (shown in red in the table), namely “Indirect Costs Part IX” and “Allocation of Past Part IX”. The basis of the allocation is discussed further below.

5.20 As already noted, the cost base charged out to airspace users is higher than the Member State contributions by an amount equivalent to the proceeds of the internal tax. The composition of the Part I element of this cost base is shown in Table 5.3.

**Table 5.3: Eurocontrol Part I cost base charged to airspace users**

Cost base item	€000, 2015	Description/Comments
Staff	131,008	Staff remuneration net of staff revenues
Pensions	85,523	
ETS	20,985	
PBO	39,378	
Operating Expenditure	72,194	Other Operating Costs net of all other receipts excluding Loans Capital Expenditure and Internal Tax
Depreciation	10,942	
Cost of Capital	1,897	
Indirect Costs Part IX	(41,864)	
Allocation of Past Part IX	(37,012)	
<b>Total</b>	<b>283,051</b>	

Source: Agency Business Plan 2015 - 2019

- 5.21 Staff costs are the largest part of the general Eurocontrol cost base, with staff remuneration and pension-related costs totalling over 75% of the general budget (after reallocation of some costs to the Part IX budget). The internal tax recovers some 30% of the gross remuneration shown in the table above. Pension costs amount to almost 30% of the overall Eurocontrol cost base (with the pensions budget comprised of three separate items reflecting the differences between current and historic pension arrangements).
- 5.22 The Agency Business Plan 2015-2019 includes a further breakdown of Part I general budget expenditure (including capital expenditure) according to business area, as shown in the table below. This identifies expenditure by Network Services which, as discussed above, is within the NMD but not part of the Network Manager itself.

**Table 5.4: Eurocontrol Part I expenditure by business area**

Part I - Expenditure	€000, 2015	Description/Comments
1CF Corporate Functions	82,499	Costs reapportioned through Indirect Costs
1NS Network Services	44,692	Separate budget line for Network Services
1DS Pan-European Single Sky	24,024	
1SR Directorate Air Traffic Management	86,815	
1 CS Centralised Services	15,594	
Resources for activities under discussion with the States	0,513	
ETS	20,985	
Pensions paid from the Budget	85,523	
Indirect Costs Part IX	(41,864)	
Allocation of Past Part IX	(37,012)	
<b>Total</b>	<b>281,769</b>	

Source: Agency Business Plan 2015 - 2019

- 5.23 The plan also includes a breakdown of the Corporate Functions line above, as shown in Table 5.5. As already noted, some of these costs are allocated to the Network Manager.

**Table 5.5: Eurocontrol Part I corporate functions expenditure**

Corporate Functions Expenditure DR M€	€000, 2015	Description/Comments
Business Partnering	811	Develops and maintains business partner relationships
Agency Planning and Resourcing	1,005	Manages Agency Business Planning, Budgeting, Resource Planning and Performance Management processes
Agency Business Execution	3,234	Monitors execution of the Agency Work Programme; provides strategic procurement and marketing development activities
Process, Portfolio and Project	3,750	Responsible for designing the corporate and internal processes, monitoring, and continuous improvement. Rises to c.€20M by 2019 in ABP.
People and Organisation Development	3,786	Develops organisation structures, management capability and people

Corporate Functions Expenditure	€000, 2015	Description/Comments
DR M€		
People and Finance Operations	9,207	Responsible for executing HR and Financial processes
Agency Facility Operations	39,067	Facility management, logistics and IT services
DR Office Management	4,457	Provides the resource strategy and policies, and manages human, financial and technological resources
Indirect Costs + Internal Tax CRCO	(1,618)	Income from CRCO budget for services provided
<b>DR Total</b>	<b>63,699</b>	
DG M€		
DG Office Management	2,008	Director General and his supporting Private Office
Central Secretariat	2,563	Provides secretariat to Eurocontrol's governing bodies
Legal Services	1,755	Provides legal support to the rest of the Agency
Internal Audit	0,972	'Objective and independent appraisal and consultancy function'
Corporate Communications	3,885	Responsible for Agency's external and internal communications to stakeholders
Language Services	1,822	Responsible for translation, proofreading, and interpretation and assisting internal and external stakeholders with specific terminological queries
<b>DG Total</b>	<b>13,005</b>	
<b>Grand Total CF</b>	<b>76,704</b>	
Investments	3,762	
<b>Total Expenditure CF</b>	<b>80,466</b>	

Source: Agency Business Plan 2015 - 2019

- 5.24 Overall, we note that the level of aggregation of Eurocontrol cost information in the documentation we have reviewed is relatively high, with a total budget of some €500 million, representing the activities of more than 400 staff, set out in only 16 lines. In addition, there is no supporting information explaining items such as “operating expenditure” and “external effort” (for example, identifying the costs of items such as maintenance, rental and leasing, telecommunications and travel). We have not identified any other public documentation providing more disaggregated information. Similar observations may be made about the Network Manager’s budget, to which we now turn.

#### *The Network Manager budget*

- 5.25 The table below shows the Eurocontrol’s Part IX budget, as presented in the Agency Business Plan 2015 – 2019. The Part IX budget represents 33% of Eurocontrol’s total budget (including the CRCO and MUAC budgets). The corresponding cost base charged to airspace users is shown in Table 5.7

**Table 5.6: Eurocontrol’s Part IX (Network Manager) budget**

Budget item	€000, 2015	Description/Comments
<b>Expenditure</b>		
Staff Remuneration	92,166	Gross staff remuneration

Budget item	€000, 2015	Description/Comments
Operating Expenditure	45,657	
Investments	4,876	
Depreciation	3,587	
Cost of Capital	0,251	
Indirect Costs Part IX	41,864	Allocation of indirect costs from Part I
Allocation of Past Part IX	37,012	Allocation of pension costs from Part I
<b>Total Expenditure</b>	<b>225,413</b>	
Revenues		
Internal Taxes	25,908	Internal tax levied on gross staff remuneration in lieu of Member States' tax regimes, used to reduce Member States' contributions
Other Staff Receipts (Acc.Ins + Special Levy)	0,972	
Others receipts (signed agreements)	1,140	
UPP + Ops Room Reorg Savings	1,614	Costs off-charged under the User Pays Principle
Loans Capital Expenditure	4,876	Costs off-charged under the User Pays Principle
<b>Total Revenues</b>	<b>34,510</b>	
<b>Total Member State Contributions</b>	<b>190,903</b>	

Source: Agency Business Plan 2015 - 2019

**Table 5.7: Eurocontrol's Part IX (Network Manager) cost base charged to airspace users**

Cost base item	€000, 2015	Description/Comments
Staff	91,194	Staff costs, net of staff receipts
Other Operating Costs	42,903	Other Operating Costs net of revenues under the user pays principle (UPP)
Depreciation	3,587	
Cost of Capital	251	
Indirect costs	41,864	Apportionment of Eurocontrol overheads, allocated as a proportion of direct costs
Costs of the Past	37,012	Allocated on basis of number of FTEs
<b>Total</b>	<b>216,811</b>	

Source: Agency Business Plan 2015 - 2019

- 5.26 The structure of the Network Manager budget is comparable to that of Eurocontrol as a whole in a number of ways, not least the fact that it is dominated by staff costs (including pension costs). In addition, some 35% of the cost base is represented by the allocation of indirect and pension costs from the general budget. In view of the importance of this allocation, we have investigated the basis of it further.
- 5.27 Indirect costs are allocated between the various parts of Eurocontrol's budget in proportion to their share of direct costs (although MUAC is excluded from this process since it operates from its own facility and the associated indirect costs can be readily identified). The allocation to the

Network Manager initially agreed for 2015 was 30%, but this was subsequently reduced to 25% following internal discussions. The Network Manager has stated that it takes a proactive approach to reducing the allocation as far as possible, although we note that it currently has little or no influence over the total level of indirect costs incurred by Eurocontrol.

- 5.28 The table below shows the allocation of indirect costs to the Part I and Part IX budgets appearing in the Agency Business Plan for 2015 – 2019 and for 2016 – 2020. It confirms that while the absolute value of costs allocated to the Network Manager has fallen by €4.3 million, the costs allocated to the general budget have risen by €7.7 million, suggesting a substantial overall increase.

**Table 5.8: Allocation of indirect costs in the Agency Business Plan: change between 2015 – 2019 and 2016 – 2020**

€M, 2016	ABP 15-19	ABP 16-20	Change
Corporate Functions Allocated to Part I	42.3	49.9	7.7
Corporate Functions Allocated to Part IX	42.2	37.9	-4.3
<b>Total CF budget</b>	<b>84.5</b>	<b>87.9</b>	<b>3.4</b>

Source: SDG analysis based on review of Agency Business Plans

- 5.29 Eurocontrol is currently engaged in a review of the basis for allocating indirect costs, as indicated in a recent Standing Committee on Finance Document<sup>16</sup>. Six different methodologies have been considered, including:
- flat rate;
  - budgeted rate;
  - budgeted rate with penalties;
  - usage billing;
  - full direct charging; and
  - market based pricing.
- 5.30 The Network Manager anticipates that the change in methodology will result in a further reduction in its share of indirect costs, although it will not be applied until it has been tested during 2017 and 2018. In addition, from 2019 it expects to have discretion to use services procured from outside Eurocontrol, which will allow it to market test services provided centrally and obtain them on more competitive terms where appropriate.
- 5.31 The allocation of pension costs from the general Part I budget is proportional to the number of employed staff in the various areas of the business, as set out in a paper to the NMB submitted in 2014<sup>17</sup>. The allocation is therefore sensitive to significant changes in current staff numbers and, in our view, may not reflect the pension obligations actually incurred on behalf of staff working within the Network Manager over the long term.
- 5.32 Significant changes in staff numbers may result from the transfer of staff between different parts of Eurocontrol's organisation, for example between the Network Manager and Network Services. The table below shows the allocation of staff between the two parts of the NMD, and highlights both recent and projected reductions in the number of Network Manager staff and parallel increases in the number allocated to Network Services.

<sup>16</sup> SCF/15/25/9

<sup>17</sup> NMB/14/ad hoc/1/9/CORR



**Table 5.9: Allocation of staff between the Network Manager and Network Services**

FTEs	2015	2016	2017	2018	2019
Network Services	86	92	96	98	99
Network Manager	479	475	472	470	469
<b>Total</b>	<b>565</b>	<b>567</b>	<b>568</b>	<b>568</b>	<b>568</b>
% Network Services	15.2%	16.2%	16.9%	17.3%	17.4%
% Network Manager	84.8%	83.8%	83.1%	82.7%	82.6%

Source: Agency Business Plan 2015 – 2019

- 5.33 The recent reallocation of staff between the Network Manager and Network Services reflects a corresponding reallocation of EAD and safety responsibilities that are not covered by the Implementing Rules. While it will reduce the Network Manager’s cost base, including pension costs, it will not result in a reduction in costs for the NMD as a whole. Moreover, the fact that the staffing of the NMD is expected to remain constant over the next four years demonstrates the potential, already noted by the NMB, for savings in staff costs in the Network Manager to be accommodated through transfers of staff to other parts of Eurocontrol’s organisation, with no real improvements in efficiency overall.
- 5.34 We return to the question of how resources are allocated between the Network Manager and Network Services in the following chapter. Here, we note that the basis of the allocation is not clear in the budget information we have reviewed.

#### Observations on the budget development process

- 5.35 The Network Manager’s budgeting process begins with the development of the annual Work Programme, which provides details of the full range of activities to be undertaken during each forthcoming financial year, together with summary financial and staff data. It is the basis of, and prepared alongside, the budget itself, and is shared with the NMB Budget Task Force before being presented to the NMB. However, there is little disaggregation of the financial data presented in the Work Programme, as shown in the extract below (the columns of figures representing budgeted expenditure in each of the years 2015 – 2019).

**Figure 5.2: Illustration of financial data included in the Work Programme**

Network operations						
	Staff Remuneration	35.029	36.270	37.358	38.479	39.633
	Staff related expenditure	250	250	250	250	250
	External Effort	460	473	210	210	210
	Operating	170	170	170	170	170
	Staff Receipts (Acc.Ins + Special Levy)	-371	-384	-396	-408	-420
	Indirect Costs	10.319	10.691	10.935	11.267	11.610
	Existing agreements (before UPP)	-1.140	-1.143	-1.143	-1.143	-1.143
	<b>Network operations Total</b>	<b>44.717</b>	<b>46.327</b>	<b>47.384</b>	<b>48.825</b>	<b>50.310</b>
Operations Domains						
	Staff Remuneration	1.503	1.557	1.604	1.652	1.701
	Staff related expenditure	24	24	24	24	24
	External Effort	145	145	145	145	145
	Operating	20	20	20	20	20
	Staff Receipts (Acc.Ins + Special Levy)	-16	-17	-17	-18	-18
	Indirect Costs	503	519	533	547	562
	Sales of services UPP	-21	-25	-28	-34	-34
	Sales of services UPP Indirect Costs	-6	-8	-8	-10	-10
	<b>Operations Domains Total</b>	<b>2.152</b>	<b>2.215</b>	<b>2.273</b>	<b>2.326</b>	<b>2.390</b>

Source: Attachment B of the Network Manager Work Programme and Budget 2015

- 5.36 We have sought confirmation from the Network Manager that the budget is prepared at a greater level of granularity and that the required level of resourcing is established through consideration of the activities identified in the Work Programme rather than through incremental adjustments to historical data. In discussion, the Network Manager has:
- provided a list of general ledger codes indicating that management information is recorded at a sufficiently disaggregated level to support budget preparation; and
  - confirmed that senior management challenges the resourcing levels within each NMD unit as part of the process of budget preparation, and that reductions are made when existing levels cannot be justified.
- 5.37 However, budget information disaggregated to the general ledger code level is not shared with the NMB. We also note that, in responding to our draft findings and recommendations presented to the NMB workshop on 11 April, the Network Manager has stated that the Work Programme represents a sufficiently detailed resource plan and that there is consequently no need for a separate exercise to develop such a plan. On the information provided, we are not persuaded that the annual budgeting process is sufficiently thorough, and consider that a periodic, bottom up exercise based on a detailed specification of the activities needed to undertake the functions and tasks defined in legislation would increase the focus on improving efficiency. We consider this issue further in our review of the cost base in Chapter 6.
- 5.38 In addition, we understand that budgeted staff costs are allocated to the tasks in the Work Programme at a standard average rate per FTE rather than at actual rates. The budget documentation reviewed states that “average staff cost is determined on an annual basis, based on an analysis of the entire Network Manager staff population”. However, where this apportionment does not reflect the outturn mix of staff, it will result in a gap between budgeted and actual staff costs even if the work undertaken precisely matches that in the Work Programme. At the same time, we understand that differences between planned and outturn staff costs are shared with the NMB at the end of the year.
- 5.39 Our observations on the budget preparation process have been echoed by members of the NMB, who have noted that:
- The level of aggregation of line items is too high, preventing a full understanding of how the Network Manager plans to use resources and limiting the NMB’s ability to challenge the data presented. For example, it is difficult to assess the justification for €43 million of “other operating costs” without a further breakdown.
  - This is compounded by the fact that the NMB is not provided with sufficient outturn cost information against which to compare the current budget, information that would otherwise help in the review of the following year’s budget prior to endorsing it.
- 5.40 These concerns have led to the NMB endorsing previous budgets with caveats, an approach that it is increasingly reluctant to take.
- 5.41 In addition, the NMB has highlighted that it cannot influence, and hence cannot challenge, a significant proportion of Network Manager costs. By way of example, we note that the overall reduction in FTEs over the period 2015 – 2019 projected in the 2015 Work Programme is expected to be offset by an increase in the cost per FTE, a cost determined by the terms of remuneration applied within Eurocontrol as a whole. Overall, the NMB estimates that some 70% of the Network Manager’s costs are of this kind.

- 5.42 In the table below, we summarise our assessment of the NMB's ability to challenge and influence different elements of the Network Manager's cost base.

**Table 5.10: Influencing the Network Manager's cost base**

Cost base item	% of 2015 cost base	Observations
Staff costs	42%	Remuneration policy of staff for the Network Manager follows Eurocontrol Agency's overall policy. Number of FTEs open to challenge by the NMB, but in practice their ability to do so is weakened by the lack of detailed information.
Other operating costs	20%	Can be challenged by the NMB, but in practice they are constrained by the lack of detailed information. In addition, a high proportion of these costs are likely to be fixed.
Depreciation and cost of capital	2%	Depends on the NMB's ability to challenge investment decisions, an issue discussed further below.
Indirect costs	19%	Represents an apportionment of Eurocontrol overheads, which is difficult to challenge. This situation may change in 2019, when the NMD will be permitted to contract independently for support services (e.g. facilities).
Costs of the past	17%	These are pension costs, allocated on the basis of the number of current FTEs, and cannot be influenced by the NMB (except through any influence it has on FTEs).

Source: SDG analysis

### Issues in reporting

- 5.43 In the course of reviewing the documentation identified in paragraph 5.13, we have identified a number of inconsistencies in the data reported. These serve to illustrate the difficulties faced by the NMB in reviewing budget information given the level of aggregation at which the data is reported.
- 5.44 We note, for example, that there is a discrepancy between the number of Network Manager FTEs presented in the Performance Plan and the number presented in the Agency Business Plan 2015 – 2019 issued one month later, as shown in Table 5.11. This arises from the treatment of a reorganisation of the Operations Room, which resulted in a reduction of around 30 FTEs. Moreover, while the Network Manager cost base figures in the Agency Business Plan (see Figure 5.3) take account of the reorganisation (as indicated in the "UPP+OPS Room Reorg Savings" line), the corresponding FTE figures do not. This issue is presentational, and did not prevent the reduction of 30 FTEs from being achieved, but does illustrate the potential for inconsistency in reporting between Network Manager-specific and Eurocontrol documents.

**Table 5.11: Reporting of Network Manager FTEs in key planning documents**

Document	Issued	2014	2015	2016	2017	2018	2019	2020
2015 Work Programme	24/10/2014	N/A	461	439	436	434	434	N/A
NM Performance Plan	13/11/2014	478	461	439	436	434	433	N/A
ABP 2015-2019	18/12/2014	N/A	479	475	472	470	469	N/A
ABP 2016-2020	19/11/2015	N/A	N/A	439	436	434	433	433

Source: SDG analysis

Figure 5.3: Presentation of the Network Manager cost base

**5.2.9. Cost-base overview Network Manager Functions**

**RESOURCES AND COST-BASE 2015-2019**

	2015	2016	2017	2018	2019
<b>FTE</b>	479	475	472	470	469
<b>+ Staff Costs</b>	91.194	93.685	95.838	98.293	101.021
<b>+ External Effort</b>	30.978	30.641	29.721	30.096	30.044
<b>+ Operating</b>	14.679	13.658	13.052	11.739	11.282
<b>+ Depreciation &amp; Cost of capital ABP 2015-2019</b>	576	1.639	2.651	3.645	4.617
<b>+ Depreciation &amp; Cost of capital Past Investments</b>	3.262	2.263	1.787	1.601	1.028
<b>- Existing agreements (before UPP)</b>	1.140	1.143	1.143	1.143	1.143
<b>Direct Cost</b>	<b>139.549</b>	<b>140.743</b>	<b>141.906</b>	<b>144.231</b>	<b>146.849</b>
<b>+ Indirect Costs</b>	<b>41.864</b>	<b>42.228</b>	<b>42.572</b>	<b>43.271</b>	<b>44.058</b>
<b>Total Direct Costs + Indirect Costs</b>	<b>181.413</b>	<b>182.971</b>	<b>184.478</b>	<b>187.502</b>	<b>190.907</b>
<b>- UPP+OPS Room Reorg Savings</b>	<b>1.614</b>	<b>3.353</b>	<b>4.375</b>	<b>5.475</b>	<b>5.736</b>
<b>COST-BASE</b>	<b>179.799</b>	<b>179.618</b>	<b>180.103</b>	<b>182.027</b>	<b>185.171</b>
<b>Investments</b>	<b>4.876</b>	<b>4.715</b>	<b>4.795</b>	<b>4.795</b>	<b>4.795</b>

\* Rounded figures

**Note:**

- The Cost-base table is fully aligned with the consolidated presentation to the NM Board (NMB/10, 24 June 2014);
- The line UPP + OPS Room Reorg Savings includes the savings planned as a consequence of reorganising the NM OPS Room;
- At this stage, additional savings are included under Operating costs (to be distributed in final ABP);
- Details of Sales of Services UPP are shown by work package in the Agency Work Programme.

Source: Agency Business Plan 2015 – 2019

- 5.45 In addition, the cost base figures shown in the extract above do not include “costs of the past” charged to the Network Manager, budgeted as €37 million in 2015. Hence, while the first note in the extract indicates that the information provided is consistent with information previously provided to the NMB, it suggests that the cost base is €179 million while the budget endorsed in principle by the NMB in October 2014 (two months before the Agency Business Plan was issued) was €216 million (a difference of some 20%). Moreover, while “costs of the past” are reported elsewhere in the Agency Business Plan, specifically in the section presenting the Network Manager budget, there the total cost base is reported as €225 million, which again does not reconcile with the figure endorsed by the NMB.
- 5.46 Finally, we note an apparent inconsistency in the treatment of investment costs in the presentation of the Network Manager budget in the Agency Business Plan (see Figure 5.4). As shown, the budget includes both “investments” and “cost of capital and depreciation”, apparently bringing together cash flow and accruals in a single expenditure table. This is in contrast to the presentation of the cost base in Figure 5.3, which identifies investment expenditure in a separate line below the main table.

Figure 5.4: Network Manager budget presented in the Agency Business Plan

**7.2.5. Part IX: NM**

The NM Budget is prepared in accordance with the regulation for the Network Manager Implementing Rule.

Part IX	2015	2016	2017	2018	2019
Staff Remuneration	92.166	94.689	96.866	99.340	102.104
Operating Expenditure	45.657	44.299	42.773	41.835	41.326
Investments	4.876	4.715	4.795	4.795	4.795
Depreciation and cost of capital	3.838	3.902	4.438	5.246	5.645
Indirect Costs	41.864	42.228	42.572	43.271	44.058
Allocation of Past	37.012	37.427	38.025	38.334	38.391
<b>GRAND TOTAL PART IX</b>	<b>225.413</b>	<b>227.260</b>	<b>229.469</b>	<b>232.821</b>	<b>236.319</b>

*Figures in K€*

**Table 10 Part IX - NM Budget**

Source: Agency Business Plan 2015 - 2019

- 5.47 These examples demonstrate the difficulties in fully understanding the budget, which can require careful reconciliation of data from different sources based on a detailed examination of a number of separate documents. This tends to reduce transparency and makes it more difficult for the NMB to accept accountability for the budget.

### Investment planning and approval

- 5.48 As an organisation responsible for a number of major investment projects, Eurocontrol has an established framework for making major investment decisions. Project sponsors must seek approval from the Agency's Expenditure Review Panel (ERP), presenting it with a transparent and documented procurement plan as well as a justification for the project. In addition, Eurocontrol has developed a business case methodology, known as the EMOSIA model<sup>18</sup>, in cooperation with the wider air traffic management community. This is supported by a number of guidance documents on the organisation's website, including an "ATM CBA Quality Checklist" setting out the requirements for cost benefit analysis accompanying investment business cases<sup>19</sup>. The document states that such analysis should include:

- discounted cash flow (DCF) analysis of costs and benefits;
- identification of input values subject to uncertainty, and an indication of any associated probabilities;
- sensitivity analysis demonstrating the impact of changes to uncertain values on the net present value (NPV) of the project; and
- risk analysis based on defined probabilities.

- 5.49 As part of Eurocontrol, the Network Manager is subject to the same framework, although additionally it presents investment proposals to the NMB in accordance with the CDM process described above. In the course of our engagement with the Network Manager, it has informed us that:

<sup>18</sup> <http://www.eurocontrol.int/articles/cba-methodology-emosia>

<sup>19</sup> [http://www.eurocontrol.int/sites/default/files/content/documents/sesar/business-case/ATM\\_CBA\\_Quality\\_Checklist\\_2010\\_.pdf](http://www.eurocontrol.int/sites/default/files/content/documents/sesar/business-case/ATM_CBA_Quality_Checklist_2010_.pdf)

*“All the Network Manager evolutions and technical projects are detailed in the Network Evolutions, Network Operational Requirements and Network Technical Roadmaps that are detailed in the Network Operations Plan and approved through the NM CDM process. The NM Expenditure Review Panel (ERP) assesses all requests for any expenditure on the basis of the work programme and business priorities of NM. Only after the approval of the ERP the procedure for launching new contracts starts.”*

5.50 The Network Manager also provided us with a paper requesting the NMB’s support for the n-CONNECT project plan, involving annual expenditure of €1.5 million from 2015, funded through operational cost savings made elsewhere in the budget. We have reviewed the paper against the EMOSIA criteria set out above, and the results of this exercise are summarised in the table below.

**Table 5.12: Assessment of n-CONNECT discussion paper against EMOSIA criteria**

EMOSIA Criteria	NMB/15/14/13	Observations
Apply discounted cash flow analysis	No discounted analysis presented	Annual costs presented over six years are constant in value with no explanation Total expected savings presented for a five year period, with no annual breakdown Staff costs appear to be excluded on the basis that FTEs are reallocated such that there is no overall increase, but there is no clear explanation or justification of the treatment of staff costs Does not present an annual net financial impact
Capture uncertain inputs using ranges and probabilities associated to the ranges	No attempt at applying ranges to costs or savings	Risks have been identified qualitatively with a severity of high/medium/low presented, but these have not been related to the inputs
Include sensitivity analysis: How do uncertainties influence the net present value (NPV) of the project? What are the most critical uncertainties to the NPV of the project?	No net present value calculated or sensitivity analysis undertaken	Costs and savings are identified but no NPV is calculated Risks are identified and given a level of uncertainty but not related to the costs or savings
Include probabilistic risk analysis: What is the likelihood of having a certain NPV?	Qualitatively identifies a variety of risks, provides severity as high/medium/low	No further analysis undertaken for the probability of the risks occurring or the impact of them Many risks do not have a mitigation plan, and it is unclear how the costs and benefits would be affected if the risks materialised

Source: SDG analysis

5.51 We have also assessed the paper against a broader set of criteria derived from our own experience of developing and evaluating business cases for a wide range of organisations in the transport sector. In our view, a complete business case should include:

- an explanation of how the investment aligns with the organisation’s broader strategy;
- DCF analysis, as required by EMOSIA;
- a record of all key assumptions (regardless of the degree of uncertainty associated with particular values);
- quantitative as well as qualitative analysis of risks; and
- a clear description of key responsibilities and accountabilities for the project.

5.52 The results of this broader assessment of the n-CONNECT paper are shown below.

**Table 5.13: Assessment of n-CONNECT paper against SDG criteria**

Component of Business Case	NMB/15/14/13	Observations
Strategic assessment	Discusses strategic case in depth	Covers most aspects of strategic case for the project
Financial assessment including discounted cashflow analysis	See Table 5.12	See Table 5.12
Clear recording of key assumptions	Sets out total costs and savings by Work Programme category Sets out implementation programme	Costs not broken down into direct and indirect costs Aggregate assumptions (e.g. saving of €13.2m in System Upgrade and Architecture developments but no explanation of how this is achieved) Relatively detailed implementation plan
Quantitative analysis of risks	See Table 5.12	See Table 5.12
Clear decision making process and accountabilities	Document is requesting approval from the NMB	Unclear how this document fits into any defined decision making process

Source: SDG analysis

5.53 Overall, the n-CONNECT paper covers the strategic assessment and project planning elements of a business case relatively thoroughly, but lacks the quantitative rigour that we would normally expect. In addition, we note that the paper lacks much of the quantitative analysis required by the EMOSIA framework. We have sought other examples of business case information provided to the NMB for the purposes of comparison but have not been provided with any.

5.54 In our view, the deficiencies of the n-CONNECT paper reflect ambiguities in the role of the NMB in relation to investment expenditure analogous to those already discussed in relation to the budget. In particular, we note that:

- the CDM does not provide any explicit guidance on accountabilities and responsibilities for investment decision making, and there is no explanation of how the NMB's role relates to that of the ERP;
- the NMB has not been presented with business cases on all of the Strategic Network Projects included in the Network Manager's Work Programme for review; and
- the NMB has commented that it does not receive information on project outturn costs, making it difficult to suggest corrective action or apply lessons from previous investments to new projects.

### CEF funding

5.55 As already discussed, CEF is the programme through which the Commission supports a wide range of infrastructure development activity, including the SESAR programme. While the general responsibility for managing CEF lies with INEA, the management of funds allocated to SESAR projects is the responsibility of the SESAR Deployment Manager.

5.56 The co-funding rates applying to SESAR projects under CEF are set out in Article 10 of Regulation (EU) No 1316/2013 (the CEF Regulation). The rate for the land-based components of SESAR is up to 50% (other than in the case of funds drawn from the Cohesion Fund, for which the co-funding rate can be up to 85%). The stakeholders potentially benefitting from these funds include ANSPs, the military and the Network Manager.

- 5.57 INEA issued the first call for proposals for CEF funding in September 2014, representing €285 million of co-financing for projects, of which 80% were earmarked for the SESAR Pilot Common Project and 20% for projects relating to ATM network performance. Eurocontrol, on behalf of the Network Manager, successfully applied for funding of €18 million covering the projects shown under the “DNM” column in the figure below.

Figure 5.5: CEF funding for the Network Manager under the September 2014 call

IMPLEMENTATION PROJECT TITLE	DNM	MUAC	DATM	TOTAL
Support to FPA coordination processes	€ 62.236,88			
Transversal AF coordination	€ 64.364,86			
AMAN extended to en-route	€ 411.733,60			
NM DCT/FRA Implementation and support	€ 3.102.014,00			
Interactive Rolling NOP	€ 5.476.223,86			
ATFCM measures (STAM)	€ 2.987.384,21			
Trajectory accuracy and traffic complexity	€ 1.941.223,35			
SWIM Common Components			€ 1.784.672,50	
SWIM compliance of NM systems	€ 3.963.669,00			
<b>TOTAL</b>	<b>€ 18.008.849,77</b>		<b>€ 1.784.672,50</b>	<b>€ 19.793.522,27</b>
Radio Direction Finder supporting SES performance		€ 1.187.550,00		
ASM and AFUA implementation			€ 3.724.588,00	
ATM Data 'as a service'		€ 2.447.294,00		
FABEC N-VCS Voice Communication System implementation		€ 3.855.090,00		
<b>TOTAL</b>	<b>€ 18.008.849,77</b>	<b>€ 7.489.934,00</b>	<b>€ 5.509.258,50</b>	<b>€ 31.008.042,27</b>
LEGEND				
<b>UNDER SDM COORDINATION (Part A)</b>				

Source: SCF/15/25/12, 22.9.15, ITEM 9

- 5.58 The treatment of CEF funds within the financial framework applying to the Network Manager is subject to disagreement arising from the fact that they give rise to unused credits during the year. CEF funds are generally regarded as “other revenue” within the meaning of the Charging Regulation, which requires that such revenue is deducted from costs in the calculation of the unit rate charged to airspace users. This approach is followed by some ANSPs participating in the SES and regulated by the framework set out in the Charging Regulation.
- 5.59 However, there are conflicting views concerning whether a similar approach should be adopted by the Network Manager. More specifically, both the Commission and the NMB consider that airspace users are the ultimate beneficiaries of grants made from CEF, notwithstanding that the Network Manager does not charge a unit rate. They therefore consider that unused funds should be used to reduce the Network Manager’s cost base. By contrast, Eurocontrol has stated that:
- “As long as the NM budget forms part of the EUROCONTROL budget, which is financed through contributions of Member States included in their determined costs, any cost savings in its budget (as approved by the NMB) should be considered in the category of cost exempt and be returned to airspace users through a carry over to the following reference period”.*
- 5.60 In addition, the Network Manager has not sought approval from the NMB on applications for CEF funding (under the first two calls) which, as already noted, currently cannot be made directly by the Network Manager on its own behalf, and the CDM document offers no guidance on the NMB’s role in relation to such applications. The Network Manager does not consider that NMB approval is required, since the application comes from Eurocontrol, and has stated that any failure to apply for funds already earmarked for the Pilot Common Project



(for example following a challenge from the NMB) could delay the work of the SESAR Deployment Manager.

- 5.61 In our view, resolution of the issue concerning the appropriate treatment of unused CEF funds requires the legal position to be clarified. However, we consider that bringing the Network Manager within the framework of the Charging Regulation, as discussed above, would provide an opportunity to ensure a common approach based on the treatment already applied by ANSPs. In addition, following the discussion in Chapter 4 above, we note that if the Network Manager were to have its own “legal personality”, it would be able to apply for CEF funding independently of Eurocontrol. In these circumstances, the NMB could have responsibility for approving applications before submission as part of a redefinition of the governance framework aimed at supporting greater accountability. In the meantime, provision for ensuring that the NMB is consulted could be included in a revised CDM document.

## **Monitoring and control processes**

### *Annual reporting*

- 5.62 The Network Manager is subject to monitoring and reporting requirements set out in Article 20 of the Implementing Rules. These include, inter alia, a requirement to “submit annually a report to the Commission and the Agency on the measures taken to fulfil its tasks”. The report must be “closely linked” to the coverage of the Network Strategy Plan and Network Operations Plan, although it need not be limited to information related to their implementation.
- 5.63 In principle, the preparation of an annual report provides an opportunity to communicate financial as well as operational information, providing stakeholders with assurance that functions and tasks have been undertaken effectively and efficiently. Hence, such reports, whether produced by public or private sector organisations, frequently include:
- a record of outturn expenditure against that budgeted;
  - an evaluation of projects undertaken, commenting on whether they were completed to time and budget as well as on any results observed to date;
  - a record of changes in staff numbers over the course of the year;
  - commentary on key financial and other risks faced; and
  - the results of any audits undertaken.
- 5.64 We have reviewed the Network Manager Annual Report 2015 and note that, while it meets the requirements of the legislation, it does not include supplementary financial information of the kind outlined above. In our view, the report could usefully be developed to include additional information, providing stakeholders with a perspective on matters other than operational performance and contribution to key SES initiatives.
- 5.65 As part of the benchmarking exercise described above, we have compared the Network Manager Annual Report 2015 with equivalent documents produced by the three Commission Agencies used for comparison. The results of the comparison are shown in the table below.

**Table 5.14: Comparison of annual reports produced by the Network Manager and other European Agencies**

	Network Manager	INEA	ERA	EASA
Latest year available	2015	2014	2014	2014
Issued on	February 2016	March 2015	September 2015	May 2015
Publicly available	Yes	Yes	Yes	Yes
Page number	24	72	102	87
Description of achievements of the year	Yes	Yes	Yes	Yes
KPIs	Yes	Yes	Yes	Yes
Budget management reporting	No	Yes	Yes	Yes
Final annual accounts	No	No	No	No
Assessment of effectiveness of internal control systems	No	Yes	Yes	Yes
Management assurance	No	Yes	Yes	Yes
Audit results, ex-post controls	Not in detail	Yes	Yes	Yes
Organisation chart	No	No	Yes	Yes
Staff information	No	No	Yes	Yes
Procurement procedures info	No	No	Yes	Yes

SDG comparison of 2015 Network Manager Annual Report and annual reports of selected Commission agencies

- 5.66 While none of the reports includes final annual accounts, the agencies generally provide more financial and other information useful in assessing the financial performance of the organisation. In particular, the inclusion of budget management reporting and information on staffing provided by ERA and EASA serves to provide assurance that resourcing is effectively monitored and reported. Other information, such as the organisation chart and assessment of internal control systems provide useful context within which to assess operational achievements.
- 5.67 The Network Manager has stated that much of this information is available through other channels and that the NMB has requested that the Annual Report should be concise. In our view, it would nevertheless be useful to include consolidated information in a single document, in line with the equivalent reports produced by pan-European agencies. Moreover, while this would inevitably result in an increase in the size of the document, it need not require a page length similar to the other examples shown.
- 5.68 We have also assessed the Network Manager Annual Report 2015 against the disclosure and transparency requirements set out in the G20/OECD Principles of Corporate Governance<sup>20</sup>. While these are primarily designed to define good practice in the governance of commercial organisations in the interests of investors, they highlight a number of aspects of disclosure that we consider relevant for the Network Manager. In introducing the requirements, the OECD notes that:

<sup>20</sup> G20/OECD Principles of Corporate Governance, OECD 2015.

*“Disclosure ... helps improve public understanding of the structure and activities of enterprises, corporate policies and performance with respect to environmental and ethical standards, and companies’ relationships with the communities in which they operate.”*

- 5.69 The table below sets out a number of disclosure requirements that we consider particularly relevant for the Network Manager. Note that some of these relate to the Board as well as the organisation itself.

**Table 5.15: G20/OECD disclosure requirements**

Requirement	Included in Network Manager Annual Report?
The financial and operating results of the company	No
Company objectives and non-financial information	Yes, to some degree
Information about board members, including the selection process	No, although this is covered in legislation
Foreseeable risk factors	Not explicitly, although report refers to Risk Analysis Tool and there is a “challenges for the Future” section
Issues regarding employees and other stakeholders	Not explicitly
Governance structures and policies	Yes, to some degree

SDG analysis based on G20/OECD Principles of Corporate Governance and Network Manager Annual Report 2015

- 5.70 In our view, while some of these requirements need to be adapted to reflect the roles of the Network Manager and NMB, they could help to shape the development of a more comprehensive Annual Report.

#### *Budget tracking*

- 5.71 The Network Manager informed us that monitoring of actual expenditure against the budget is undertaken weekly, and that a more thorough exercise involving a detailed review of expenditure is undertaken each quarter. It has also provided an example of a quarterly Network Manager Directorate Budget Checkpoint for the third quarter of 2015, an extract of which is reproduced in Figure 5.6. This document compares year-to-date expenditure by business unit within the NMD and by Network Manager and Network Services activity.

**Figure 5.6: Extract of Network Manager Budget Execution Status from NMD Budget Checkpoint**

FM	FM Description	Manager	Current Budget	Committed	Planned	Not Planned	% Committed	% Planned	% Unplanned
N00	Director NM	Mr. Sultana	910.387	483.831	14.829	411.726	53,15%	1,63%	45,23%
N03	Safety Management & Quality	Mr. Oliver	427.426	372.219	14.716	40.491	87,08%	3,44%	9,47%
N10	Performance Forecasts Relations	Mr. Boydell/ Mr. Flynn	634.999	415.965	334.835	-115.802	65,51%	52,73%	-18,24%
N11	Forecast & Traffic Analysis	Mr. Marsh	313.720	75.183	221.632	16.905	23,96%	70,65%	5,39%
N12	Prisme & Data Management	Mr. Marsh	1.456.589	1.235.995	326.566	-103.972	84,74%	22,39%	-7,13%
N22	Surveillance & Code Coordination	Mr. Stewart	25.523	24.893	0	630	97,53%	0,00%	2,47%
N25	ATC Communications	Mr. Pouzet	877.604	776.005	53.339	48.260	88,42%	6,08%	5,50%
N28	European Aeronautical Information Management	Mr. Matern	1.661.829	1.343.808	14.990	303.031	80,86%	0,90%	18,23%
N30	Network Operations Management	Ms. Cooper	37.798	3.423	0	34.375	9,06%	0,00%	90,94%
N32	Network Operations Services	Mr. Lenti	2.367.196	2.254.160	27.233	85.803	95,22%	1,15%	3,62%
N33	Network Operations Management Coordination	Mr. Thomas	173.931	150.101	1.303	22.527	86,30%	0,75%	12,95%
N35	Operations Planning	Mr. Bucuroiu	3.047.319	2.307.154	671.916	68.250	75,71%	22,05%	2,24%
N36	Airport	Mr. Adamsson	745.093	697.107	39.974	8.012	93,56%	5,36%	1,08%
N37	Safety	Mr. Licu	2.233.486	1.933.056	256.585	43.846	86,55%	11,49%	1,96%
N41	Training Development & Delivery	Mr. Dermont	33.073	22.585	7.932	2.556	68,29%	23,98%	7,73%
N50	Network Technical Systems	Mr. Aiguier	31.918.901	29.179.958	531.062	2.207.881	91,42%	1,66%	6,92%
N60	Network Strategy & Development	Mr. Bucuroiu	2.700.897	78.490	126.040	2.496.367	2,91%	4,67%	92,43%
N62	N-conect and CTM	Mr. Bouman	965.229	386.227	658.448	-79.445	40,01%	68,22%	-8,23%
9NIM000			50.533.000	41.740.160	3.301.400	5.491.439	82,60%	6,53%	10,87%

Source: NMD Budget Checkpoint 3 for 2015

- 5.72 The Budget Checkpoint identifies any surpluses and shortages in the remaining budgets for units within the NMD and provides a brief commentary on these. At each Budget Checkpoint, the Director of the NMD assesses the overall resource requirements of the Network Manager and considers the need for any redirection of funds within the Network Manager budget, with any remaining surplus at the end of the year treated as an unspent credit.
- 5.73 Comparing this information to the 2015 budget, we note that the total “current budget” of €50.53 million shown in the extract reflects the sum of the “operating expenditure” and “investment” lines in the Network Manager budget. This total therefore excludes staff costs, overheads, and depreciation, and further illustrates the observation in paragraph 5.41 that the Network Manager has limited control of a significant proportion of the NM cost base.
- 5.74 This information is disaggregated by NMD unit, with the responsible manager identified in each case. However, there is no further breakdown tracking the budget by expenditure type, for example ‘buildings maintenance’ or ‘legal fees’. Hence, the document does not enable a detailed review of the issues underpinning significant variances from the planned budget there (for example, there is no information explaining the €104,000 planned overspend on “prisme & data management”).
- 5.75 We have compared the budget tracking document with published budget information for both ERA and EASA, and reproduce extracts from these below.

Figure 5.7: Extract from the ERA budget 2015

Art.	Item	Title	2013 Budget execution	2014	DB 2015 adopted in March	Changes	BUGDET 2015 Revised	Budgetary comments
<b>Expenditure</b>								
<b>TITLE I EXPENDITURE RELATING TO PERSONS WORKING WITH THE ERA</b>								
<b>110</b>	<b>Chap. 11</b>	<b>Staff in active employment</b>						
	1100	Agents included in the workplace Basic salaries	9 400 000	9 820 600	10 383 000	(683 000)	9 700 000	Staff Regulations of officials of the European Communities, and in particular Articles 62 and 66 thereof. This appropriation is intended to cover the basic salaries of officials and temporary staff holding posts on the establishment plan.
	1101	Family allowances	1 154 324	1 250 000	1 242 000	(42 000)	1 200 000	Staff Regulations of officials of the European Communities, and in particular Articles 42, 61, 67 and 68 thereof and Section I of Annex VII thereto. This appropriation is intended to cover the family allowances; household allowance; dependent child allowance; pre-school allowance; education allowance (including special grants within the provision as decided yearly by the Executive Director); parental leave allowance of relevant staff.
	1102	Transfer and expatriation allowance	1 382 382	1 500 000	1 460 000	(60 000)	1 400 000	Staff Regulations of officials of the European Communities, and in particular Articles 62 and 69 thereof and Articles 4 of Annex VII thereto. This appropriation is intended to cover the expatriation and foreign residence allowances of relevant staff.
	1103	Secretarial allowance		pn	pn	-	pn	Staff Regulations of officials of the European Communities, and in particular Article 18 (1) of Annex VIII thereto. This appropriation is intended to cover the secretarial allowance paid to officials and temporary staff in category C*, employed as shorthand-typist, telex operators, typewriter, executive secretaries or principal secretaries, who were entitled in the month before 1 May 2004.
<b>110</b>		<b>Total article</b>	<b>12 037 106</b>	<b>12 570 600</b>	<b>13 087 000</b>	<b>(787 000)</b>	<b>12 300 000</b>	
<b>111</b>		<b>Other staff</b>						
	1110	Contract Agents and auxiliary	326 000	470 000	800 000	-	800 000	Conditions of employment of other servants of the European Communities, and in particular Article 3a and Title IV thereof. This appropriation is intended to cover the remuneration of contract staff.
	1112	Local staff						Conditions of employment of other servants of the European Communities, and in particular Article 3 and Title III thereof. This appropriation is intended to cover the remuneration (including overtime) of, and the employer's social security contributions for, auxiliary staff.
								Conditions of employment of other servants of the European Communities, and in particular Article 4 and Title V thereof. This appropriation is intended to cover the remuneration (including overtime) and the employer's social security contributions for local staff.

Figure 5.8: Extract from the EASA budget

Title Chapter Article Item	Heading	Budget 2015		Draft Budget 2015		1st Amending Budget 2014		Remarks
		Commitment	Payment	Commitment	Payment	Commitment	Payment	
21	INFORMATION AND COMMUNICATION TECHNOLOGY							
210	<i>ICT equipment</i>							
2100	ICT equipment acquisition & maintenance	1,486,000	1,486,000	700,000	700,000	600,000	600,000	This appropriation is intended to cover the hardware, maintenance and installation costs of ICT and telecommunications equipment for the official purposes of the Agency. This includes the hardware, maintenance and installation costs of computers, printers, laptops, servers, copiers, scanners, fax machines, mobile phones, mobile equipment, other network components and other peripherals. This appropriation may receive the appropriations corresponding to the assigned revenue.
2101	Development of business applications and provision of data centre services	1,808,000	1,808,000	775,000	775,000	1,074,000	1,074,000	This appropriation is intended to cover consultancy needs for studies, applications development, data centre services, storage and IT security for the business purposes of the Agency. This appropriation may receive the appropriations corresponding to the assigned revenue
2102	Development of business applications	p.m.	p.m.	1,552,000	1,552,000	1,348,000	1,348,000	This appropriation is intended to cover consultancy needs for studies & applications development for the business purposes of the Agency. This appropriation may receive the appropriations corresponding to the assigned revenue
2103	IT Hardware Maintenance	p.m.	p.m.	130,000	130,000	124,000	124,000	This appropriation is intended to cover the costs of the maintenance of the IT infrastructure of the Agency, including maintenance for servers, fax machines, copiers, laptops, and printers. This appropriation may receive the appropriations corresponding to the assigned revenue.
2104	ICT training	p.m.	p.m.	60,000	60,000	60,000	60,000	This appropriation is intended to cover the cost of specialised ICT training needs of the Agency, for IT staff and IT consultants. This appropriation may receive the appropriations corresponding to the assigned revenue.

- 5.76 Based on this comparison, we suggest that the published budget information for both ERA and EASA is considerably more detailed than the corresponding available information for the Network Manager. For example, the case of the ERA budget we note that it includes not only a comparison of budgeted amounts with actual expenditure but also:
- line items disaggregated at the general ledger code level; and
  - more detailed line-by-line commentary on the meaning of specific line headings.
- 5.77 The ERA budget also presents a table of current budgeted and actual staff numbers by grade for the previous year, alongside budgeted staff numbers by grade for the next year.
- 5.78 The EASA budget is presented at a similar level of disaggregation, as indicated by the breakdown of IT costs in the extract. In the same way, staff costs are broken down by “basic salary”, “family allowance”, “expatriation allowance” and “secretarial allowance”, while under the temporary staff category the costs of “national experts”, “interim”, “contractual agents” and “trainees” are all identified separately. The budget presentation also includes a comparison of ‘Commitment’ and ‘Payment’ or budgeted and outturn figures. This facilitates tracking of budgeted and outturn figures, enabling more effective financial oversight at both the executive and board levels.
- 5.79 While some comparable information can be seen in the NMD Budget Checkpoint, for instance a comparison between budgeted amounts and actual expenditure, the information presented is considerably more aggregate. Moreover, the report is not provided to the NMB.
- 5.80 In addition, we note that the NMB has expressed concerns about other financial information produced in support of the Work programme and budget for 2016 – 2020. More specifically, in commenting on the Agency Business Plan 2016 -2020, the NMB Task Force has stated that the balance sheet and cash flow statement need to be improved, with the balance sheet in particular failing to provide sufficient information on key line items<sup>21</sup>.

#### *Auditing*

- 5.81 The Network Manager is subject to Eurocontrol’s audit procedures, which provide for both internal and external audits. External audits are carried out by Eurocontrol’s Audit Board, assisted by an auditing company selected through an open tender procedure. In addition, EASA has undertaken a number of audits of the Network Manager, the findings of which have been considered in the preparation of this report.

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<sup>21</sup> ‘Network Manager Board Budget Task Force - Comments to ABP 2016-2020- 28May 2015 Draft.docx’.

## Summary of findings

- There is a strong case for establishing a Network Manager unit rate to improve the transparency of Network Manager costs. Such a rate could be introduced by either:
  - treating the Network Manager in the same way as the CRCO and adding the rate on to the determined unit costs for each charging zone; or
  - treating the Network Manager in the same way as a charging zone and subject to the same reporting requirements under Regulation No (EU) 391/2013.
- Our preliminary view is that the advantages of the second option (in terms of additional transparency) are likely to outweigh the disadvantages (in terms of the need for legislative change), although the legislative implications would require further investigation.
- While the Network Manager budget is presented separately from that of Eurocontrol, a large proportion of the Network Manager's costs are effectively determined by Eurocontrol.
- The process of budget preparation is insufficiently transparent and the information reported to the NMB is at too high a level of aggregation.
- More generally, the NMB is not kept sufficiently informed:
  - it does not receive management accounts or regular reports of expenditure against budget;
  - its approval for CEF applications under the first two calls has not been sought;
  - it is generally not asked to approve project expenditure and its role in relation to the role of the ERP is not defined; and
  - when consulted on investment expenditure, it is not provided with a thorough business case prepared according to good practice.



## 6 Review of the cost base

### Our Terms of Reference

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**Requirement:** examine the cost base of the Network Manager, reviewing the functions designated to it and measuring against the actual activities of the Network Manager in strict response to those functions, assessing the budgetary requirements to achieve those tasks using agreed methodologies. The contractor will make the best use of previous EASA audit reports to ensure continuity of the review process, supplemented by a suitable assessment of the financial issues. The functions under assessment should cover the full scope of services being provided by the Network Manager either directly or via outsourcing and the basis upon which they are delivered (e.g. service level agreements, contractual agreements, specifications, application and allocation). As a result of this analysis the contractor will provide a detailed view on the costs involved in the execution of each network function, including variable and fixed costs, as well as an assessment of their eligibility with regard to network functions.

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6.1 In responding to the Terms of Reference, we have sought to:

- map the activities of the Network Manager set out in the Work Programme to the functions and tasks defined in legislation; and
- map the same activities to specific units within the NMD's organisational structure and the resources allocated to those units.

6.2 For the reasons set out later in this chapter, we have been unable to undertake a precise mapping and consequently we are not in a position to either validate the cost base reported in Chapter 5 or propose adjustments to it. The difficulties of undertaking this exercise, which echo the challenges that EASA has faced in undertaking audits of the Network Manager<sup>22</sup>, have themselves informed a number of our recommendations.

6.3 In the remainder of this chapter we:

- provide an overview of the cost base and organisational structure of the Network Manager;

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<sup>22</sup> A recent information paper on EASA's oversight activities submitted to the NMB noted the following; "The process for the definition of the NM Work Programme and the inclusion of certain activities therein continues to be contentious, as it is difficult to link some of the activities included with the functions allocated to the Network Manager. Although the level of transparency and clearness of the presentation of NM activities and costs to the stakeholders - who are finally approving and endorsing the Work Programme and Budget through NM governance arrangements in place - have improved considerably during the last oversight cycle, the open description of some of the tasks of the Network Manager in Article 4 of Regulation (EU) No 677/2011 is a source of controversy." (NMB/15/14/17 20.11.15 Item 1.2)

- discuss the relationship between legislative functions and tasks and the Work Programme;
- discuss the allocation of activities set out in the Work Programme between the units within the NMD’s organisational structure; and
- draw a number of conclusions about the transparency of the cost base and its relationship to the role of the Network Manager as defined in legislation.

## Overview of Network Manager organisation and resourcing

6.4 For ease of reference, we reproduce in the table below the information on the Network Manager cost base for 2015 obtained from a review of the Agency Business Plan 2015 – 2019. The cost base charged to airspace users was €216.8 million, of which 42% was accounted for by current staff costs and a further 19% and 17% by, respectively, an allocation of indirect costs and an allocation of pension costs or “costs of the past”. The Network Manager employed 532 FTEs in 2015, after taking account of the reorganisation of the operations room to which we referred in Chapter 5.

**Table 6.1: Eurocontrol’s Part IX (Network Manager) cost base charged to airspace users**

Cost base item	€000, 2015	Description/Comments
Staff	91,194	Staff costs, net of staff receipts
Other Operating Costs	42,903	Other Operating Costs net of revenues under the user pays principle (UPP)
Depreciation	3,587	
Cost of Capital	251	
Indirect costs	41,864	Apportionment of Eurocontrol overheads, allocated as a proportion of direct costs
Costs of the Past	37,012	Allocated on basis of number of FTEs
<b>Total</b>	<b>216,811</b>	

Source: Agency Business Plan 2015 - 2019

6.5 We noted in Chapter 3 that the NMD includes both the Network Manager functions and a number of additional Network Services, and explained in Chapter 5 that these are accounted for in Eurocontrol’s general Part I budget. The Network Manager provided us with an organisation chart for the NMD, which distinguishes between the units delivering predominantly Network Manager functions and those concerned primarily with the provision of Network Services, and explained a number of recent changes. Our understanding of the current organisation is shown in Figure 6.1<sup>23</sup>.

6.6 As shown in the figure, the following activities are excluded from the activities of the Network Manager:

- nearly all Communication, Navigation and Surveillance (CNS) activities, apart from radio-frequency allocation (IFF) and code allocation (SSR);
- most of the training activities; and

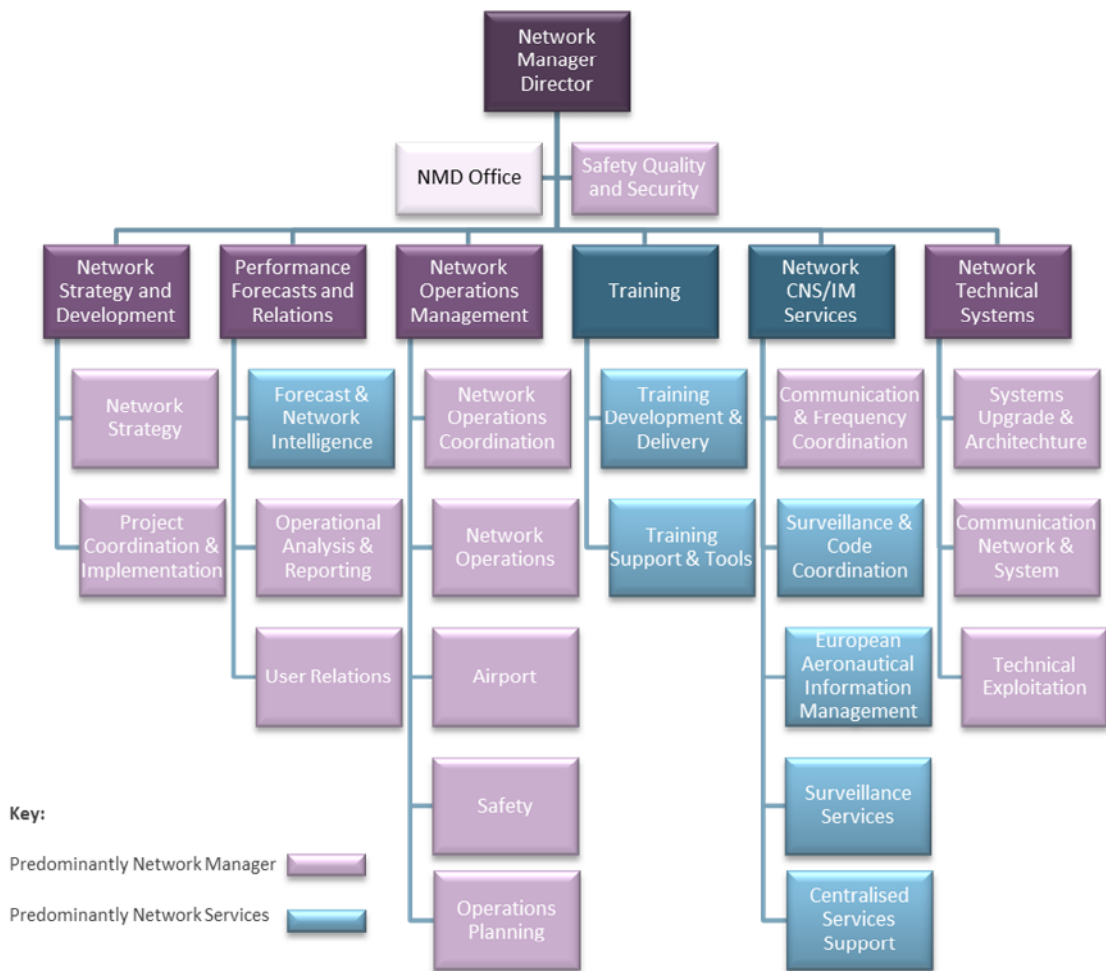
<sup>23</sup> The Network Manager provided an organisation chart dated 10 March 2014 at a meeting on 19 January 2016. This indicated that the European Aeronautical Information Management unit was within the Network Manager’s scope of responsibility. However, at the same meeting the Network Manager indicated that this unit had been transferred to Network Services as it was not formally included in the legislative functions and tasks, although in its view the work of this and other units has an impact on the operation of the network.

- forecasting services.

6.7 We understand that a number of activities were transferred between the Network Manager and Network Services in 2014. In particular, responsibility for the EAD was transferred to Network Services whereas the Network Manager took over some safety management activities. However, there have been no changes to the overall scope of activity undertaken by the NMD since it was formed.

6.8 In discussion, the Network Manager stated that it considers that all of the activities undertaken by the NMD, including Network Services, should be included in the list of functions and tasks defined by legislation. In its view, Network Services are critical to the effective functioning of the network and their inclusion in its legislative responsibilities would make for a more coherent and rational definition of the role. At the same time, the NMB has expressed concern that some of the work currently being undertaken is not necessary for compliance with the legislation as it stands.

Figure 6.1: NMD organisation



Source: Steer Davies Gleave representation of information provided by the Network Manager

6.9 From the Work Programme, we have identified a breakdown of current and projected staff numbers by unit, which is shown in the table below. Note that the FTE numbers shown are for

the Network Manager and exclude Network Services. They are consistent with those presented in the Network Manager Performance Plan and (to within one to two staff) the Agency Business Plan 2016 – 2020. The table illustrates that the Network Operations Management and Network Technical Systems units together account for around 75% of staff, and that the planned reduction in staff will be delivered primarily by the former.

**Table 6.2: Network Manager**

Unit	Sub-unit	Unit predom.	2015	2016	2017	2018	2019
Directorate Management Support	Total unit	Unclear	<b>31.98</b>	<b>30.08</b>	<b>28.38</b>	<b>26.38</b>	<b>25.38</b>
	Office	Unclear	21.98	20.08	19.38	18.38	17.38
	Safety Quality & Security	NM	10	10	9	8	8
Network Strategy & Development	Total unit	NM	<b>57.8</b>	<b>57.8</b>	<b>56</b>	<b>56</b>	<b>56</b>
	Network Strategy	NM	11.3	11.3	9.5	9.5	9.5
	Project Coordination & Implementation	NM	46.5	46.5	46.5	46.5	46.5
Performance Forecasts Relations	Total unit	NM	<b>19.46</b>	<b>19.46</b>	<b>19.46</b>	<b>19.46</b>	<b>19.46</b>
	Op.Monitoring and Reporting Line mgmt	NM	2	2	2	2	2
	Forecast & network Intelligence	NS	5.96	5.96	5.96	5.96	5.96
	Operational Analysis & Reporting	NM	5.5	5.5	5.5	5.5	5.5
	Users Relations	NM	6	6	6	6	6
Network Operations Management	Total unit	NM	<b>227.76</b>	<b>209.66</b>	<b>209.66</b>	<b>209.66</b>	<b>209.66</b>
	Current Operations	NM	N/A	N/A	N/A	N/A	N/A
	Airport	NM	4.65	4.65	4.65	4.65	4.65
	Safety	NM	N/A	N/A	N/A	N/A	N/A
	Operations Planning	NM	41.75	41.75	41.75	41.75	41.75
	Network Operations Coordination	NM	3	3	3	3	3
	Total unit	NM	<b>113</b>	<b>111</b>	<b>110</b>	<b>110</b>	<b>110</b>
Network Technical Systems	Systems Upgrade & Architecture	NM	12.5	12.5	12.5	12.5	12.5
	Comm Network & Systems	NM	40.5	38.5	37.5	37.5	37.5
	Technical Exploitation	NM	60	60	60	60	60
	Total unit	NS	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>
Network CNS/IM Services	Communication & Frequency Coordination	NM	8	8	8	8	8
	Surveillance & code Coordination	NS	0	0	0	0	0
	European Aeronautical Information Mgmt	NS	0	0	0	0	0
	Surveillance Services	NS	0	0	0	0	0
	Centralised Services Support	NS	0	0	0	0	0
Training	Total unit	NS	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
	Training development & Delivery	NS	N/A	N/A	N/A	N/A	N/A

Unit	Sub-unit	Unit predom.	2015	2016	2017	2018	2019
	Training Support & Tools	NS	N/A	N/A	N/A	N/A	N/A
TOTAL Network Manager			461	439	434.5	432.5	431.5

Source: Source: Steer Davies Gleave analysis of the Work Programme 2015-2019

“N/A” indicates that no figure appears against this activity in the Work Programme

## Functions and tasks in legislation and the Work Programme

- 6.10 At an early stage in the study, we asked the Network Manager to explain the relationship between the functions and tasks in the legislation and the activities described in the Work Programme. It provided us with a compliance matrix showing, for each function and task, the responsible NMD unit and a description of the work to be undertaken to ensure compliance. The Network Manager has confirmed that this is the only documented mapping of the requirements of the legislation to activities actually undertaken<sup>24</sup>.
- 6.11 We used the compliance matrix, together with the Work Programme and organisational structure presented above to undertake our own mapping exercise. We then shared the results with the Network Manager to test our understanding, and were provided with a response in the form of an amended mapping. A summary of the results of our initial exercise and the amended version prepared by the Network Manager is provided in the following table (with acronyms identifying activities in the Work Programme explained in the key below the table). A more detailed comparison is provided in Appendix D.

**Table 6.3: Mapping of legislative tasks to Work Programme activity**

Task in Regulation	Description	SDG Mapping	NM Mapping
667/2011.4.1a	(a) develop, maintain and implement a Network Strategy Plan;	NSD; NOP; PFR;	NTS; DNM; SNP; SM; NSD; NOP; SR; PFR;
667/2011.4.1b	(b) detail the Network Strategy Plan through a Network Operations Plan;	NOP;	NTS; DNM; SNP; SM; NSD; NOP; SR; PFR;
667/2011.4.1c	(c) develop an integrated European Route Network Design set out in Annex I;	SNP; NOP;	NTS; DNM; SM; NOP; SR; PFR;
667/2011.4.1d	(d) provide the central function for the coordination of radio frequencies;	SR;	DNM; SM; NOP; SR; PFR;
667/2011.4.1e	(e) coordinate the improvement of the SSR transponder code allocation process set out in Annex III;	SR;	NTS; DNM; SM; NOP; SR; PFR;
667/2011.4.1f	(f) organise the management and operation of the functions and execute in particular the obligations of the Central Unit for ATFM;	NTS; NOP;	NTS; DNM; SM; NSD; T; NOP; PFR;

<sup>24</sup> Confirmed in an e-mail from the Head of Operations Planning dated 23 February 2016.

Task in Regulation	Description	SDG Mapping	NM Mapping
667/2011.4.1g	(g) provide a consolidated and coordinated approach to all planning and operational activities of the network, including monitoring and improvement of its overall performance;	NOP; PFR;	NTS; DNM; NSD; T; NOP; SR; PFR;
667/2011.4.1h	(h) provide support for network crisis management;	NOP;	NTS; DNM; SM; NOP; SR;
970/2014.4.1i	(i) support the different operational stakeholders in the execution of the obligations that are placed on them, in the deployment of air traffic management and/or air navigation services (ATM/ANS) systems and procedures;	SNP; NOP; PFR;	NTS; DNM; SNP; SM; NSD; T; NOP; SR; PFR;
667/2011.4.1j	(j) provide support to entities entrusted with the investigation of civil aviation accidents and incidents or with the analysis of occurrences as requested by those entities;	NTS; NOP;	DNM; NOP; SR; PFR;
667/2011.4.1k	(k) ensure coordination with other regions and third countries which do not participate in the work of the Network Manager;	DNM; NOP; PFR;	NTS; DNM; NSD; NOP; SR; PFR;
970/2014.4.1l	(l) develop and maintain a work programme and associated budget providing a multiannual dimension;	DNM; NSD;	DNM; NSD;
970/2014.4.1m	(m) contribute to SESAR deployment in accordance with Commission Implementing Regulation (EU) No 409/2013(*), in particular Article 9(7)(a) thereof;	NTS; SNP; NSD; NOP; PFR;	NTS; DNM; SNP; NSD; NOP; PFR;
970/2014.4.1n	(n) execute the work programme and annual budget;	DNM; NSD; SV;	NTS; DNM; SNP; SM; NSD; T; SV; NOP; SR; PFR;
970/2014.4.1o	(o) draw up a Network Performance Plan in accordance with Article 6 of Implementing Regulation (EU) No 390/2013;	NSD; PFR;	DNM; NSD; PFR;
970/2014.4.1p	(p) identify operational safety hazards at network level and assess the associated network safety risk;	SM;	DNM; SM; NOP; SR;
970/2014.4.1q	(q) provide the Commission with an alerting or alarming system, based on the analysis of flight plans, in order to monitor compliance with operating bans imposed on air carriers and/or with other safety and security measures;	NOP;	NTS; DNM; NOP;

**Key:**

NTS	Network Technical Systems
DNM	DNM Directorate Support
SNP	Strategic Network Projects
SM	Safety Management
NSD	NSD
T	Training
SV	RP-II Savings
NOP	Network Operations
SR	Scarce Resources
PFR	Performance Forecasts & Relations

Source: SDG analysis and Network Manager response

6.12 As a further exercise to investigate the relationship between legislative requirements and Work Programme activity, we sought to relate the staff numbers against each activity reported in the Work Programme to specific tasks defined in the legislation. The results are reported in the table below. Note that we identified a number of activities which, while they did not correspond to particular tasks defined in Article 4 of the Implementing Rules, nevertheless

appeared to support the delivery of those tasks or enabled other requirements of the legislation to be met. These are referenced as “Support Function” in the table.

**Table 6.4: Mapping of Work Programme activities and resources to legislative tasks**

Work Programme description	FTEs	Tasks in Regulation
<b>Network Technical Systems</b>		
<b>Communications Networks and Systems</b>		
TFMS - Facilities for NM	14	Support Function;
Support DNM infrastructure – network and platforms	9	Support Function;
IT Infrastructure Projects	5	Support Function;
PAN EUROPEAN NETWORK SERVICE (PENS)	3	667/2011.4.1f; 970/2014.4.1m;
Technical Architecture, Procurements and Contract Management	8	Support Function;
NTS Line Management	2	Support Function;
<b>System Upgrade and Architecture</b>		
Support and Management	10	Support Function;
Software Adaptations	2	Support Function;
New Developments	2	Support Function;
<b>Technical Exploitation Unit</b>		
Business Continuity Support	50	667/2011.4.1j; Support Function;
Business continuity Project	6	Support Function;
<b>DNM Directorate Management Support</b>		
<b>Directorate Management Support</b>		
Business Partnering Finance, HR and Procurement	10	970/2014.4.1n; Support Function;
Ensuring Safety, Quality and Security Management and Regulatory Compliance)	6	970/2014.4.1n; Support Function;
Line Management	6	667/2011.4.1a; 667/2011.4.1k; 970/2014.4.1l; 970/2014.4.1n; Support Function;
<b>Strategic Network Projects</b>		
<b>Strategic Network Projects</b>		
Free Route Airspace Project	7	667/2011.4.1c; 970/2014.4.1i; 970/2014.4.1m;
Flight Plan & Flight Data Evolutions	3	970/2014.4.1i; 970/2014.4.1m;
Airspace Management Advanced FUA	6	667/2011.4.1c; 970/2014.4.1i; 970/2014.4.1m;
N-CONNECT	8	970/2014.4.1i; 970/2014.4.1m;
Cooperative Traffic Management	6	970/2014.4.1i; 970/2014.4.1m; 970/2014.4.1o;
Network Business Intelligence	5	970/2014.4.1i; 970/2014.4.1m;
Airport and TMA Network Integration	8	970/2014.4.1i; 970/2014.4.1m;
European ATM Information Management Service (EAIMS)	4	970/2014.4.1i; 970/2014.4.1m;
<b>Safety Management</b>		
<b>Safety</b>		
Identification of the operational safety hazards at network level and assess the associated network safety risk	10	970/2014.4.1p;
<b>NSD</b>		



Work Programme description	FTEs	Tasks in Regulation
<b>NSD</b>		
Network Strategy and Network Strategy Plan (NSP), implementation, evolution and monitoring	11	667/2011.4.1a; 970/2014.4.1l; 970/2014.4.1m; 970/2014.4.1n; 970/2014.4.1o;
<b>NMD Training</b>		
<b>NMD Training</b>		
Network Operations Training for external customers	3	Support Function;
<b>RP-II Savings</b>		
<b>OPS Room Reorg</b>		
OPS Room Reorg	(18)	970/2014.4.1n;
<b>Additional Savings to be identified</b>		
Additional Savings to be identified	-	970/2014.4.1n;
<b>Network Operations</b>		
<b>Operations Domains</b>		
Network operations	182	667/2011.4.1a; 667/2011.4.1f; 667/2011.4.1h; 970/2014.4.1i; 667/2011.4.1k; 970/2014.4.1m; 970/2014.4.1q;
Operations Domains	8	667/2011.4.1f; 667/2011.4.1j; 970/2014.4.1q;
NM Crisis Management Response	2	667/2011.4.1h;
Operational System Acceptance Testing	5	667/2011.4.1f;
Network Operations Management Coordination	3	667/2011.4.1g; 667/2011.4.1k; 970/2014.4.1m;
<b>Operations Planning</b>		
Airspace Design	12	667/2011.4.1c; 667/2011.4.1g;
Network Operations Plan	13	667/2011.4.1b; 667/2011.4.1g; 667/2011.4.1k; 970/2014.4.1m;
ASM/ATFCM Processes and Procedures	0	667/2011.4.1f; 667/2011.4.1g; 970/2014.4.1i;
Development, Harmonisation, Validation ATM Procedures	3	667/2011.4.1f; 667/2011.4.1g; 970/2014.4.1i;
Airspace Simulations	12	Support Function;
Network Operations Line Management	2	667/2011.4.1f; 667/2011.4.1g;
<b>Airports</b>		
NM Airports	5	970/2014.4.1i;
<b>DNM Scarce Resources</b>		
<b>Scarce Resources</b>		
Transponder Code Function	3	667/2011.4.1e;
Mode S Interrogator Code Allocation (MICA)	1	
Radio Frequency Function (RFF)	4	667/2011.4.1d;
<b>Performance Forecasts Relations</b>		
<b>Operational Monitoring and Reporting</b>		
OMR Line Management	2	667/2011.4.1a; 667/2011.4.1g;
<b>Forecasts and Network Intelligence</b>		
CODA	1	Relationship to legislative tasks unclear
STATFOR	2	667/2011.4.1a;

Work Programme description	FTEs	Tasks in Regulation
PRISME	3	Relationship to legislative tasks unclear
<b>Operational Analysis and Reporting</b>		
Operational Analysis and Reporting	6	667/2011.4.1a; 970/2014.4.1o;
<b>User Relations</b>		
Relations, agreements, customer access and support	6	970/2014.4.1i; 667/2011.4.1k; 970/2014.4.1m;

Source: SDG analysis

6.13 In the light of this exercise, we make the following observations:

- As shown in Table 6.3, the Network Manager mapped a much greater number of Work Programme activities to legislative tasks than we were able to on the basis of a review of documentation alone. While we have no reason to challenge the Network Manager’s mapping, we have no means of independently verifying it either.
- The “Support Function” activities in Table 6.4 account for 143 FTEs, equivalent to 31% of the total staff resources in the Work Programme for 2015. The fact that these activities do not relate directly to legislative tasks but are considered critical to their delivery adds to the difficulty of assessing the associated level of resourcing.
- The relationship between the work of the Forecasts and Network Intelligence unit and the legislation is particularly unclear, although the number of staff involved is small.
- While training is not included in the list of legislative tasks, the Work Programme does cover the provision of training to external parties. The Network Manager advised us that the three FTEs allocated to this role enable external parties to use the systems supporting network operations and that they are properly included in the scope of Network Manager resources.
- More generally, the documentation that we have reviewed provides no means for assessing whether the level of resourcing of each activity is efficient. We note, for example, that the Network Manager plans to deliver substantial staff reductions in Network Operations in 2016 but no further improvements thereafter. The information provided in the Work Programme is insufficient to determine how the revised level of resourcing was derived and hence to allow us to challenge it.

6.14 We also consider that the description of “Strategic Network Projects” in the Work Programme does not demonstrate that they are properly within the scope of the Network Manager functions and tasks. Given the large number of these projects, we raised this concern with the Network Manager. It stated that all provide direct support to the delivery of Network Manager functions, and that they draw on resources from a number of units (with FTE contributions from each identified at the start of the year). However, as noted in the previous chapter, the NMB has not had the opportunity to review these projects and consider whether they are needed to support the Network Manager in undertaking its legislative role.

### **Allocation of Work Programme activity to NMD units**

6.15 As a further stage in the investigation of the relationship between legislative functions and tasks and the cost base, we also sought to map the activities in the Work Programme to the NMD units. In the course of this exercise, we focused particularly on whether any of the activity identified should properly be allocated to Network Services. A high level summary of the results of this exercise is provided in the table below, and a more detailed mapping is

included in Appendix E. As shown, they indicate that every unit in the NMD supports at least one of the activities included in the Work Programme.

**Table 6.5: Mapping of Work Programme to NMD organisational structure**

Work Programme 2015-2016	Network Manager Directorate						
	NMD	NSD	PFR	NOM	CNS	T	NTS
Network Technical Systems							X
DNM Directorate Management Support	X						
Strategic Network Projects		X					
Safety Management				X			
NSD		X					
NMD Training						X	
RP-II Savings	X			X			
Network Operations				X			
DNM Scarce Resources					X		
Performance Forecasts Relations			X				

**Key:**

NMD	Network Manager Directorate Support
NSD	Network Strategy and Development
PFR	Performance Forecasts & Relations
NOM	Network Operations Management
CNS/IM	Network CNS/IM Services
T	Training
NTS	Network Technical Systems

Source: SDG analysis

6.16 Again, we shared the initial results of the detailed mapping exercise with the Network Manager for comment. The comments received helped to clarify a number of issues and we consider that it is an accurate representation of how the NMD is organised to deliver the Work Programme. However, taken together with information provided in the Agency Business Plan 2015 – 2019, it does indicate a need for greater clarity in specific areas. In particular:

- The Safety Management activity mentioned in the Agency Business Plan under Network Services refers to ‘activities of a non-regulatory nature’ to ‘assist operational stakeholders in achieving their own safety performance targets’. This includes support implementing ‘Safety Culture’ and ‘Just Culture’ improvements. The safety-related activity in the Network Manager Work Programme refers to ‘management of safety at the network level’, and covers a wide range of tasks including work to ‘Validate Safety Culture methodology for FABs and perform Safety Culture measurements during RP2.’ We note the apparent similarity in some of these activities, and that the documentation does not distinguish clearly between regulated and unregulated tasks.
- There is no mention in the Agency Business Plan of the Forecast & Network Intelligence unit within the NMD. We would expect reference to be made to it in the breakdown of Network Services costs, reproduced in Table 6.6 below, although it is possible that it is too small to justify separate treatment.
- As already noted, three FTEs in the Training unit are included in the resourcing of the Network Manager Work Programme. According to the Agency Business Plan, Network

Services accounted for 86 FTEs in total, which implies 13 FTEs allocated to the Training unit (if FTEs are allocated in proportion to the costs shown in Table 6.6). If so, the three FTEs would account of 20% of staff in the unit, which is higher than we would expect if training is mainly a Network Services function.

- The mapping presented by the Network Manager indicates that several activities are undertaken by multiple NMD line management areas (for example, 1.5 FTEs against the task 'NM Crisis Management Response' in the 'Operations Domain' functional area are spread across all 2 sub-units of 'Network Operations Management'). It is not clear how this apparent split of line management responsibility operates in practice.

**Table 6.6: Eurocontrol Part I budget – breakdown of Network Services costs**

Network Services Expenditure	€000, 2015	Description/Comments
Safety Management	2,110	Non-Regulated Safety activities
Network CNS/IM Services	43,838	
Training	8,055	
<b>Total</b>	<b>54,003</b>	

Source: Agency Business Plan 2015 - 2019

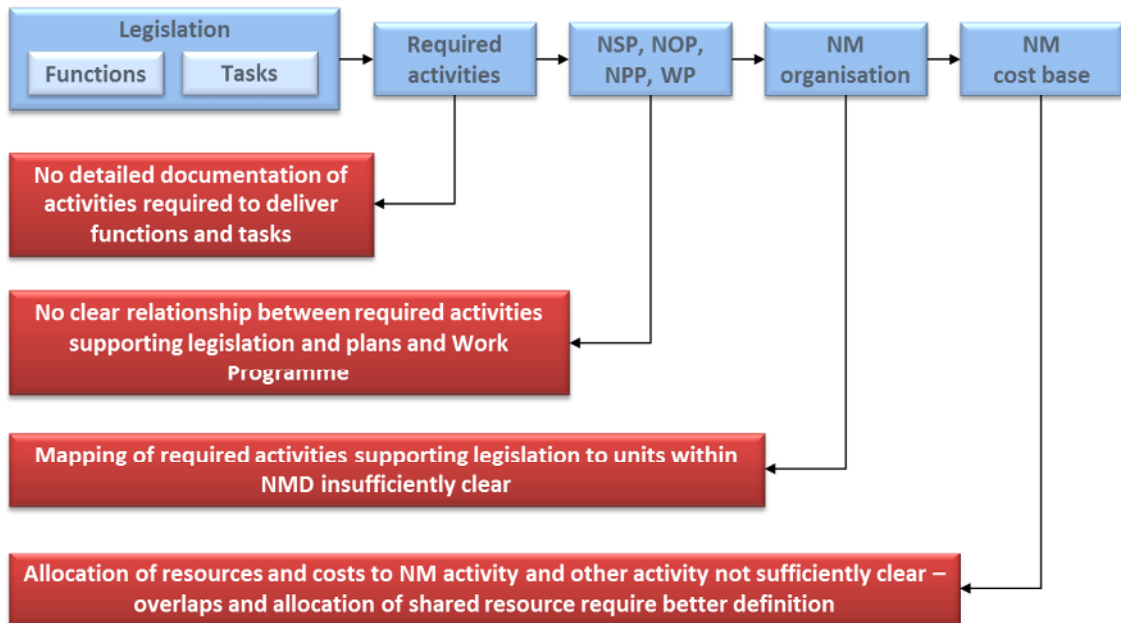
- 6.17 In order to better understand how the Network Manager functions interact with those of Network Services, we requested a Work Programme covering Network Services activities. However, the Network Manager advised us that the planning for this area of work is not undertaken in a similar format and that the Work Programme for Network Services is included in the Agency Business Plan rather than as a standalone document.
- 6.18 Overall, these results suggest that the allocation of activity within each unit between the Network Manager and Network Services is more complex than is suggested by the organisation chart in Figure 6.1. Moreover, the lack of a comparable Work Programme for the Network Services delivered by the NMD makes it difficult to understand how resources are allocated in those business units that undertake both Network Manager and Network Services functions.

### **Implications for assessment of the Network Manager cost base**

- 6.19 In the light of the findings described above, we conclude that the definition of Network Manager functions and tasks is not sufficiently precise to enable an independent assessment of the cost base. More specifically, while we are confident that the majority of the activity described in the Network Manager Work Programme is required to undertake the functions and tasks defined in the legislation, we have not been able to confirm that:
- all of the activity described is necessary;
  - the work described is efficiently resourced; or
  - that the distinction between the activities included in the Work Programme and those undertaken by Network Services is sufficiently clear.
- 6.20 We note that, in the course of undertaking audits of the Network Manager, EASA reached a similar conclusion, noting that the relatively open description of the tasks included in Article 4 of the Implementing Rules resulted in disagreement over the appropriate interpretation of scope and hence the appropriate level of resourcing.

- 6.21 This issue is illustrated in the figure below, which highlights the need for greater clarity at various stages in the process of determining the Network Manager's cost base on the basis of the legislation.

Figure 6.2: Issues in determining the Network Manager's cost base



- 6.22 This suggests a need for a fuller description of the tasks and functions of the Network Manager set out in the legislation that is independent of the Work Programme itself. In principle, such a document would provide an objective benchmark against which the scope of activity in the Work Programme could be compared. In our view, this would allow a more thorough assessment of the cost base than we have been able to undertake, and support the NMB in testing and challenging the Network Manager's plans, investment projects and resourcing of activities as well as giving the Commission greater confidence that the functions and tasks are being undertaken efficiently.

### Summary of findings

- The functions and tasks of the Network Manager are clearly set out in the Implementing Rules but the description of them is necessarily high level.
- The NM interprets the scope of the role in preparing the:
  - Network Strategy Plan;
  - Network Operations Plans;
  - Network Performance Plan;
  - Work Programme; and
  - budget.
- The NMB is unable to decisively test and challenge the interpretation implicit in these documents, since there is no detailed, independent specification of the functions and tasks and the level of resources required to undertake them is therefore unclear. The Commission is therefore not in a position to assess whether the functions and tasks are being undertaken efficiently.
- The distinction between the Network Manager's cost base and that of Network Services is not sufficiently clear.

# 7 Review of cost efficiency

## Our Terms of Reference

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Requirement: identify the cost effectiveness of the Network Manager through its contribution to the overall SES objectives. This task will assess whether the outputs obtained by the Network Manager are obtained at reasonable cost, in proportion to the agreed objectives, highlighting areas of work carried out beyond the limits established within the NF IR. Attention should be paid to the level of expended effort to third countries in the work of the Network Manager (as based on definition (21) in Article 2 of the NF IR). This analysis should benchmark Network Manager costs with other similar costs in the ATM sector and produce a view on the relative cost effectiveness of the Network Manager.

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7.1 We have undertaken the following analysis in order to address the Terms of Reference:

- a review of the evidence on the factors determining the Network Manager's costs, focusing in particular on the extent to which costs vary with traffic levels, a key consideration in the development of appropriate measures of cost efficiency;
- an investigation of the costs of the Network Manager's work in relation to third countries;
- an assessment of the Network Manager's contribution to Union-wide targets, drawing on the Network Manager Performance Plan for RP2 and the PRB's assessment of it as well as the Network Operations Report 2014 and other relevant documentation;
- benchmarking analysis of the Network Manager's unit and staff costs; and
- an assessment of the potential for further cost savings and consideration of measures of cost efficiency to be monitored in the future.

7.2 The results of each element of the analysis are discussed in turn below.

### Factors determining Network Manager costs

#### Impact of traffic volume on costs

7.3 In assessing the Network Manager Performance Plan, the PRB noted that it undertakes a number of functions the costs of which are not related to volumes of traffic (measured in terms of service units). By way of illustration, the table below summarises the activities supporting a number of operational tasks undertaken by the Network Manager and comments on the extent to which they are affected by traffic levels. In the case of two out of three tasks, we consider that the relationship between activity and traffic is weak, although it is considerably stronger in the case of ATFCM.

**Table 7.1: Impact of traffic levels on activity in key operational areas**

Operational function	Description of task	Link to traffic
Airspace data management	Updating the airspace data system, with static (e.g. ATC boundaries) and dynamic (e.g. ATC capacities) data.	No direct link between traffic levels and activity levels.
Flight plan processing	Flight plans (up to 33,400 per day) are checked against airspace structure in the IFPS (an automated process). Any inconsistencies are generally resolved manually before the flight plan is accepted.	Partial link between traffic and activity levels: The process is mostly automated, but as traffic increases, we would expect the processing requirements of the IFPS to increase. Issues requiring manual intervention could also be expected to increase with traffic.
ATFCM	<ul style="list-style-type: none"> <li>This task is undertaken in three phases:</li> <li>strategic - avoiding imbalance between capacity and demand;</li> <li>pre-tactical - preparation for ATFCM operations the next day; and</li> <li>tactical - updating ATFCM plans on the current day based on current situation.</li> </ul>	The level of ATFCM activity is linked to traffic levels, but there is no simple direct relationship.

Source: SDG assessment

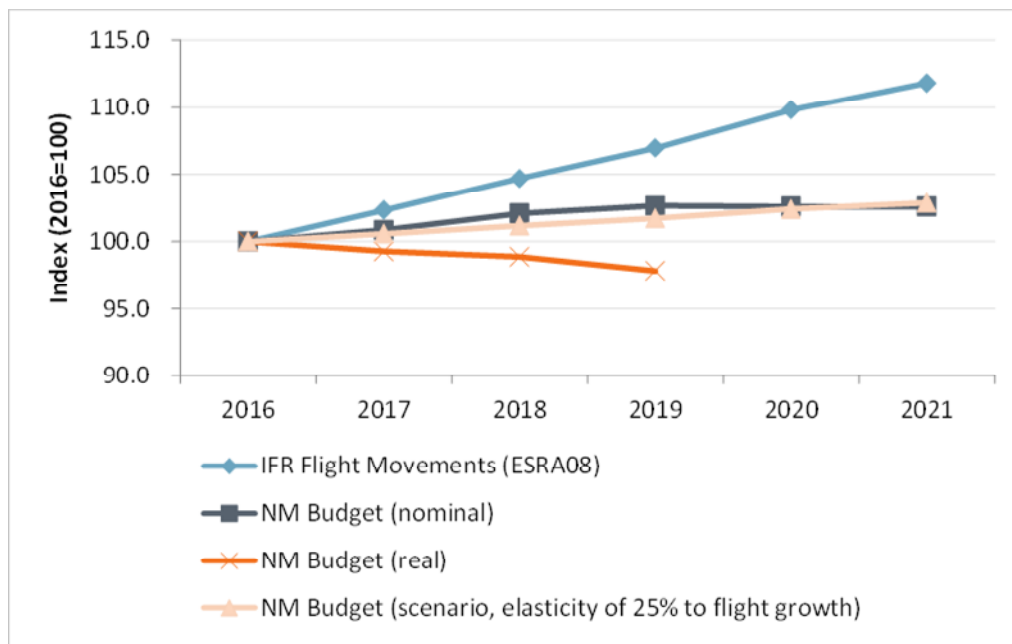
7.4 This assessment is broadly consistent with the assumption made by the Network Manager in preparing budget forecasts that the elasticity of its cost base to traffic is 0.25<sup>25</sup>. While we have not seen any analysis supporting this assumption, we note that the elasticity is below the range of 0.3 – 0.7 estimated by the PRB for ANSPs<sup>26</sup>. We would expect the elasticity for the Network Manager to be significantly below that for an ANSP in view of its central role in capacity planning and data management, and consider the value of 0.25 to be reasonable when compared to the PRB’s central estimate of 0.5.

7.5 Against this background, the figure below compares the trend in historical and forecast IFR flights to the planned changes in the Network Manager’s budget shown in the Agency Business Plan 2016 – 2020 and the trend implied by the cost elasticity of 0.25. Note that the budget values are expressed in nominal and real terms, with real values derived using the inflation rates provided in the Network Manager Performance Plan for RP2.

<sup>25</sup> This indicates that an increase in traffic of 1% is associated with an increase in costs of 0.25%.

<sup>26</sup> EU-wide targets for RP2: indicative performance ranges for consultation, February 2013.

Figure 7.1: Comparison of Network Manager budget forecast and trend implied by 0.25 cost elasticity



Source: SDG analysis based on STATFOR forecasts September 2015 and Agency Business Plan 2016 - 2020

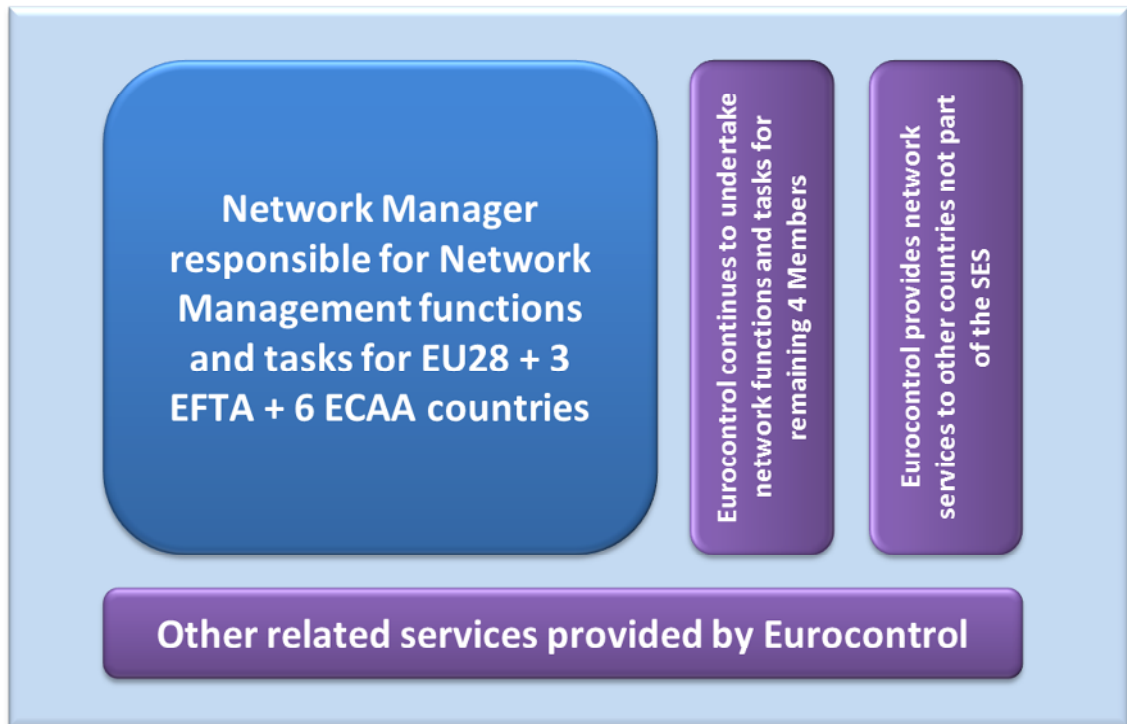
7.6 Over the period 2016 – 2019, the number of flights is expected to increase by 7% while the Network Manager budget is expected to decrease by 2.2%. Under a scenario based on the cost elasticity of 0.25, the budget increases by 1.7%, indicating that the Network Manager expects to make significant cost savings. However, on its own this analysis does not demonstrate that the Network Manager’s plans for improving cost efficiency are sufficiently challenging. We consider this issue further in the context of the benchmarking of costs discussed later in this chapter.

**Impact of geographical scope of the network on costs**

7.7 A number of stakeholders have expressed concern that the Network Manager is incurring significant costs in undertaking work in relation to third countries not required by the legislation. In principle, an increase in the cost base resulting from such work will reduce cost effectiveness measured by reference to the Network Manager’s role in relation to the SES. In practice, defining the geographical scope of the area for which the Network Manager is responsible is complex given the status of different countries in relation to the SES. This is illustrated in Figure 7.2.



Figure 7.2: Geographical scope of the Network Manager



- 7.8 The Network Manager has been designated by the Commission to undertake the functions and tasks defined in legislation on behalf of the 28 Member States of the European Union. However, a number of other countries have concluded agreements with the Union that have the effect of extending the geographical scope of the Network Manager’s role. The European countries committed to the SES are the EU 28 Member States, the EFTA and EEA countries (Norway, Switzerland and Iceland), and the six European Civil Aviation Area (ECAA) countries (Albania, Bosnia and Herzegovina, Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Kosovo). Ukraine has also signed a comprehensive aviation agreement with the Union. The SES area therefore encompasses 37 Member States, each committed to applying the SES requirements and with a direct interest in the Network Manager functions.
- 7.9 However, the Network Manager has stated that it undertakes the functions and tasks defined in the legislation for the 41 Member States in Eurocontrol together with Morocco (the latter having concluded a service agreement with Eurocontrol). It has also confirmed that it makes no distinction between these countries in discharging its responsibilities. In its view, any exclusion or discriminatory treatment of individual countries would undermine the coherence of network operations. It also considers that it is generally not possible to disaggregate the cost base in a way that aligns with particular geographies and that the additional costs of servicing the five countries that are outside the SES are anyway small, although we have not seen any analysis supporting this assessment.
- 7.10 In our view, there is scope for clarifying the geographical scope covered by the various provisions of the Implementing Rules. In order to illustrate some of the ambiguities, we comment on a number of specific references to the treatment of third countries in the table below. We understand that the NMB shares our concerns about the difficulties of defining the network and that a separate study has been commissioned to address this issue more directly.

**Table 7.2: References to third countries in the Implementing Rules**

Reference in Implementing Rules	Provision	Comment
Definitions - Article 2 (21)	<i>'third countries' means non-Member States that are members of Eurocontrol or have concluded an agreement with the Union on the implementation of the single European sky or are participating in a functional airspace block.</i>	This is potentially confusing, as the same term is used to cover countries committed to applying the requirements of the SES and those that are not.
Tasks of the Network Manager - Article 4 (1) k	<i>ensure coordination with other regions and third countries which do not participate in the work of the Network Manager</i>	The phrase "do not participate in the work of the Network Manager" is not sufficiently precise. In particular, it is not clear whether participation implies that the countries concerned benefit from all of the functions and tasks defined in Articles 3 and 4 or engage with the Network Manager in a more limited sense.
Relations with third countries – Article 22 (1)	<i>Third countries together with their operational stakeholders may participate in the work of the Network Manager</i>	Again, the reference to participation lacks clarity. There is no reference to the basis on which countries may participate.
Relations with third countries – Article 22 (2)	<i>The Network Manager may, where it has a direct impact on the performance of the network, enter into cooperative arrangements with air navigation service providers established in third countries other than those defined in Article 2(21) within ICAO EUR and AFI regions</i>	This provision appears to contradict Article 2(21). If the latter defines the concept of "third countries" for the purposes of the legislation, the concept of "third countries other than those defined in Article 2(21)" is not meaningful. The provision also implies that the Network Manager must demonstrate a direct impact on performance before entering into a cooperative arrangement, but this is not clear.
Relations with third countries – Article 22 (3)	<i>In order to better perform the ATFM function referred to in Article 3(5), the Network Manager may, where it has a direct impact on the performance of the network, also enter into cooperative arrangements with air navigation service providers operating in regions other than the ICAO EUR and AFI regions in so far that cooperation activities are directly related to improving the performance of the network</i>	Again, the provision implies that the Network Manager must demonstrate a direct impact on performance before entering into a cooperative arrangement, but this is not clear.

Source: SDG assessment of the Implementing Rules

7.11 As already noted, the Network Manager has not provided any analysis of the costs of providing services to third countries, however defined. We accept that the legislation provides for extensive cooperation with such countries where this improves the performance of the network. Further, we recognise the potential for improving the operational integrity of the network by expanding its geographical scope, and that a proportion of the costs of the Network Manager will be joint and common, such that they cannot be attributed to individual Member States or third countries. Nevertheless, we consider that the Network Manager should be able to assess, on an incremental basis:

- the performance benefits of entering into new cooperative arrangements with third countries other than those participating in the SES; and

- the additional costs arising from such arrangements, including those incurred by the Network Manager and by third parties (for example, airspace users) where relevant.

7.12 In the absence of such an assessment, it is not possible to determine the value of the Network Manager's work in relation to third countries outside the SES or whether it is being delivered cost effectively.

7.13 We note that applying this approach retrospectively may be considered an artificial exercise to some degree, since the costs arising from entering into a new arrangement and those avoided by withdrawing from an existing one are unlikely to be equivalent (at least some of the costs of existing arrangements being sunk). However, we suggest that there would be value in undertaking a bottom-up cost benefit analysis of activity relating to some third countries. This would help to improve the transparency of the cost base and inform the further specification of the Network Manager's role in preparation for the designation in 2019, as discussed in Chapter 8.

7.14 Notwithstanding the ambiguities highlighted in Table 7.2, we consider that a cost benefit analysis of this kind should reflect the categorisation of countries shown in the table below, with the incremental costs and benefits of Category 2 and 3 countries separately established.

**Table 7.3: Categories of country with an interest in the work of the Network Manager**

Category	Member States	Rationale
Category 1	Countries committed to the SES: EU28 + 3 EFTA/EEA countries + 6 ECAA countries	These Member States have a binding agreement towards the achievement of the SES objectives. They must comply with European legislation including all legislation related to the Network Manager.
Category 2	Eurocontrol Member States not committed to the SES: Turkey, Georgia, Armenia and Ukraine	These countries are not committed to the SES and may not seek to benefit from all the tasks provided, and powers exercised, by the Network Manager. Their ANSPs are not part of the Performance Scheme and cannot be expected to comply with its performance targets, meaning that the impact of the Network Manager on their airspace is likely to be more limited than for Category 1 countries.
Category 3	Other countries outside Category 1: with whom cooperative arrangements at operational level (ANSPs) are needed.	As for Category 2 countries. Under investigation at NMB level.

Source: SDG analysis

7.15 However, we suggest that the exercise does not begin until the study on the definition of the network is complete, since this may highlight further issues that need to be taken into account and/or provide further guidance on the geographies for investigation.

## Measures of Network Manager performance

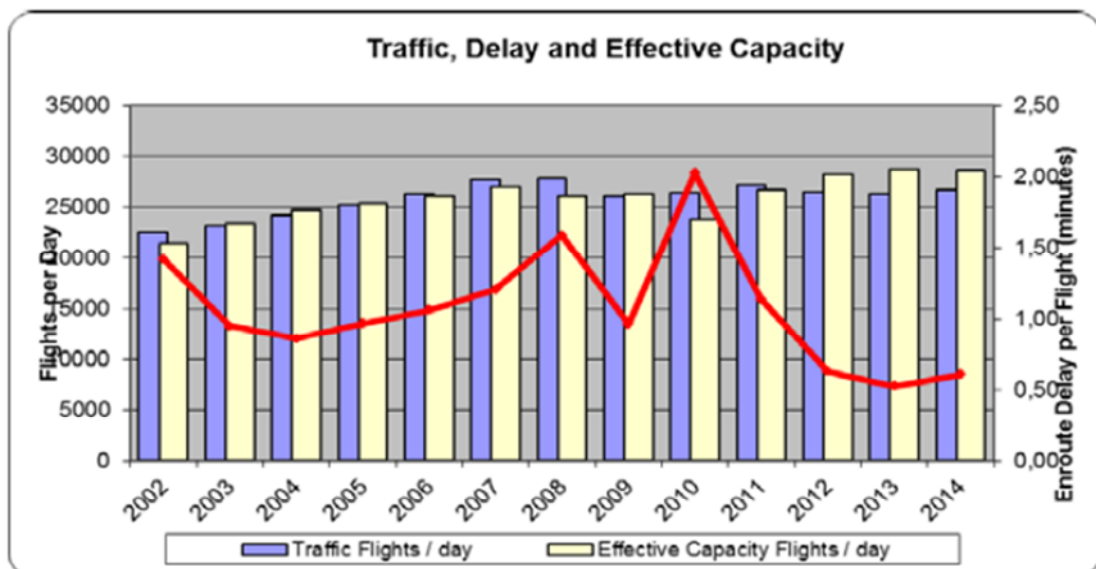
### Overview of Union-wide performance

7.16 The performance scheme for the European ATM industry defined by Regulation (EU) No 390/2013 includes targets for a number of Key Performance Areas (KPA), including Capacity and Environment. The Network Manager plays a key role in setting these targets and makes a major contribution to their delivery. As the PRB has noted, commenting on the Network Manager Performance Plan for RP2:

“The Network Manager is a specific and essential actor playing a well-defined role, delivering performance in line with the Union-wide targets for RP2. This is done, not only through achieving its own targets but also by creating the necessary operational framework for States, FABs and their ANSPs to achieve theirs. In essence, the Network Manager’s activities have a primary impact on operational performance (Capacity and the Environment KPAs and associated Safety implications). For example, the Network Manager provides the Union-wide and FAB reference values for en-route Capacity and the Environment, including regular performance monitoring.”

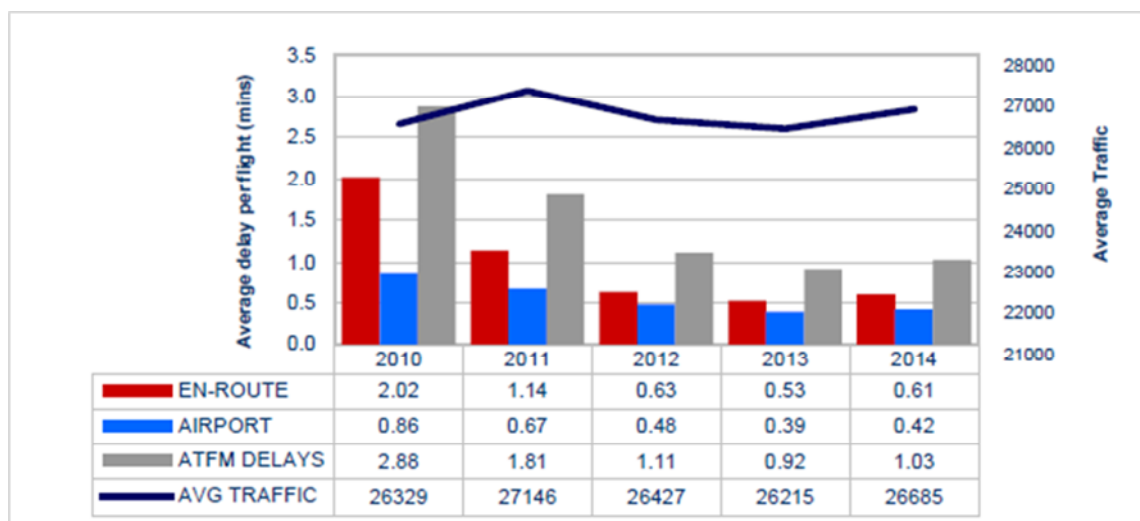
7.17 The Network Manager included an overview of network performance in its Annual Network Operations Report for 2014. As shown in Figure 7.3, it reported that effective network capacity in 2014, measured in terms of flights per day, was at its highest ever level, and that en-route delay per flight had fallen substantially since 2010. At the same time, it noted that the percentage of flights subject to long ATFM restrictions (those exceeding 15 and 30 minutes) increased slightly, and the percentage of flights delayed from all causes also increased.

Figure 7.3: Traffic delay and effective network capacity 2002 – 2014



Source: Annual Network Operations Report 2014

Figure 7.4: Average daily ATFM delay per flight 2010 – 2014



Source: Annual Network Operations Report 2014

- 7.18 With regard to flight efficiency, the same report indicated that average route extension due to airspace design decreased from 2.80% in 2013 to 2.63% in 2014, meeting the annual target of 2.70%. The average route extension based on the latest filed flight plan was 4.57% in 2014, the same level as in 2013 and above the annual target of 4.15%. The target was missed mainly because of capacity shortfalls arising from industrial action by air traffic control staff and airspace avoidance/closure as a result of crisis situations.

### Contribution to Union-wide performance

- 7.19 These outcomes were the result of many interacting factors, and the attribution of flight delay and flight efficiency to specific causes is challenging. Nevertheless, the Network Manager includes a number of indicators of its own contribution to network performance, together with associated target values, in Appendix I of its Performance Plan for RP2. These are shown in the table below.

**Table 7.4: Network Manager performance indicators**

Network Manager Indicator	Network Manager Internal objective
ENV: DES: The average horizontal en route flight efficiency of the airspace design	Improvement of the DES indicator by 0.57 percentage points from 2012 to 2019
ENV: N-KEP: Network Manager contribution to flight efficiency savings on KEP	Deliver 10% (2015-2016) and 5% (2017-2019) of the savings required to achieve the annual 0.17 pp reduction in KEP
ENV: CDR-RAI: The rate of planning of conditional routes	to increase the CDR planning (CDR-RAI) by 5% between 2015 and 2019
ENV: CDR-RAU: The effective use of CDRs	to increase the CDR usage (CDR-RAU) by 5% 2015 and 2019
CAP: W-DLA: Weekend delays reduction	to reduce en-route weekend delays by 80,000 minutes per year
CAP: NWR: Mitigation of Weather generated delays, achieving the Decision maturity for the Network Weather Resilience process.	Achieve Decision maturity level (M3) for 50% of the top 60 airports (based on the airport network impact and/or past weather phenomena significance) as well as 50% of the top 20 ACCs
CAP: B-DLA: Minimising individual flight penalties	Maintain the percentage of flights with delay (any cause) > 30 minutes to less than 1% of total flights
CAP: S-DLA: ATFCM Efficiency	to reduce the average daily number of ATFCM regulations that produce less than 200 minutes of delay to below 20 per day.
CAP: F-DLA: Reactionary Delays	to target at least one airport/ACC each year from the ones with significant network impact to reduce first rotation delays (related to capacity and staffing) by 10% at those airports
CAP: A-DLA: The average minutes of arrival ATFM delay per flight attributable to terminal and airport air navigation services and caused by landing restrictions at the destination airport	Delivering additional operational benefits of arrival delay savings of 5% of total arrival delays

Source: Network Manager Performance Plan for RP2

- 7.20 These targets represent a development of the approach to targeting of Network Manager performance taken in RP1, which was less precise in terms of capturing its specific contribution to Union-wide performance. In 2014, the Network Manager targeted a reduction in ATFM delay of 10% through proposing alternative routes, manually optimising calculated take-off times and, where possible, excluding flights from airspace regulations. In measuring its performance, it is important to note that while it is possible to identify the direct impact of

decisions taken by the NMOC, it is not possible to measure the indirect impacts. Similarly, the effect on delay of the NMOC's pre-tactical planning and applied scenario analysis cannot be readily captured.

- 7.21 The Annual Network Operations Report for 2014 records a reduction of 1.23 million minutes of ATFM delay on 40,651 flights as a result of action taken by the NMOC. 74% of this delay, equivalent to 0.91 million minutes, was accounted for by savings in en-route delay. These represented 13.3% of en-route ATFM delays for the year as a whole, indicating that the Network Manager delivered better-than-target performance. Its contribution to reducing airport ATFM delay was equivalent to 7.3% of the total for the year. There was no flight efficiency target in RP1, but the Network Manager nevertheless introduced a flight efficiency initiative from May 2013.
- 7.22 Commenting on these outcomes in the report, the Network Manager noted that:
- “Even though delays were higher compared to 2013, the airspace users highlighted that it is fair to say that a good job has been done by the Network Manager and ANSPs when it comes to the reduction of delay minutes .... and when it comes to reducing the network route extension.”*
- 7.23 However, in the course of this study some stakeholders have observed that these results must be seen against the background of reductions in traffic following 2008. In particular, IATA has commented that recent performance implied that the Network Manager would not meet its targets if traffic returned to pre-2008 levels, and it considers the Network Manager ATFM budget to be relatively high compared to those of the ANSPs. At the same time, a number of stakeholders, including IATA, have stated that the Network Manager's day-to-day operational performance is good. We also note that the general decline in traffic after 2008 masked significant variations at the Member State level.
- 7.24 The Network Manager envisages that the targets underpinning the performance schemes as a whole, and by implication the measures of its own performance, will be developed further in preparation for RP3. It has stated that:
- “The SES Performance Targets for RP2 were developed in 2013 / 2014 and cannot reflect the changed scenario of 2016. The capacity planning process of the Network Operations Plan is a tool and basis that corresponds better and supports the achievement of network targets. Through the work that will start on RP3, Network Manager will provide its further views on how the performance scheme could improve to the benefit of the entire network. The way in which Network Manager has implemented the approach to the indicators and the targets makes also those extremely relevant. Nevertheless, more decision-making powers for Network Manager would help in a better management of the performance scheme and will permit more accountability for Network Manager in this respect.”*
- 7.25 As discussed below, we would expect the evolution of the performance scheme to include the introduction of additional indicators of the Network Manager's performance, in particular measures of its cost efficiency.

### **Efficiency benchmarking analysis**

- 7.26 We noted in paragraph 2.14 that benchmarking the Network Manager's costs is difficult given the unique nature of its role. This view has been echoed by EASA in the context of its audit work:

*"In the absence of other organisations performing similar functions for comparison purposes, it is difficult to judge whether Network Manager's budget is cost-effective as required by Article 1.2 of the Commission Decision C(2011) 4130."*

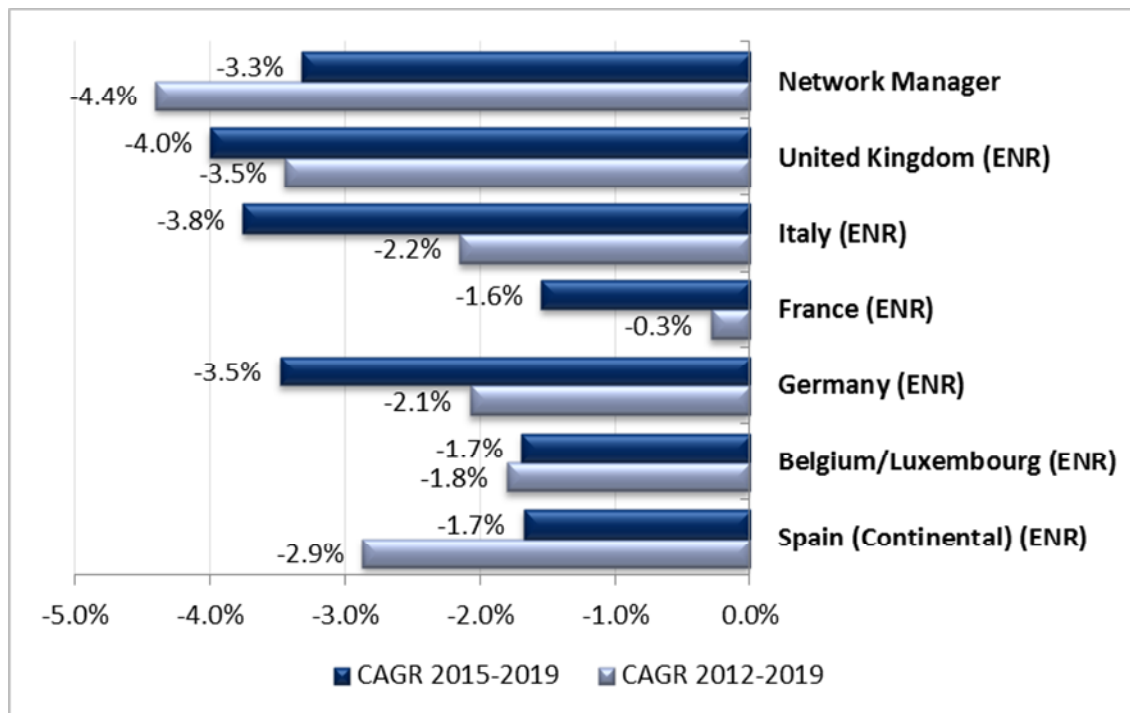
7.27 Nevertheless, we have sought to compare the Network Manager’s unit and staff costs with those of a number of ANSPs, the latter employing similarly skilled staff and undertaking a range of activities related to the functions and tasks defined in the Implementing Rules. This provides an indication, albeit incomplete, of the Network Manager’s relative efficiency.

**Comparison of overall unit costs**

7.28 We began the benchmarking exercise with a comparison of unit costs measured in terms of cost per service unit, the primary indicator of cost efficiency under the performance scheme. As a supplementary exercise, we have also compared unit cost per flight for each of the benchmark organisations. Given that the Network Manager’s cost base is considered less elastic to traffic than that of an ANSP (see paragraph 7.4 above), we would expect these measures to overstate the cost efficiency of the Network Manager relative to the comparator organisations (assuming growing traffic).

7.29 Figure 2.1 compares projected changes in unit costs for the Network Manager and selected Member State ANSPs over the periods 2015 – 2019 and 2012 – 2019, based on data extracted from the relevant Performance Plans for RP2. Note that unit costs are calculated on the basis of en-route (ENR) service units. Over the longer period, the Network Manager is expected to achieve a compound annual growth rate (CAGR) of -4.4% per year (i.e. unit costs are expected to fall by more than 27% over the period as a whole). As noted by the PRB, this exceeds the best performance among the ANSPs. Over the period of RP2, the Network Manager’s performance is in line with the Union-wide target trend of -3.3% per year, although somewhat below the three best performing ANSPs.

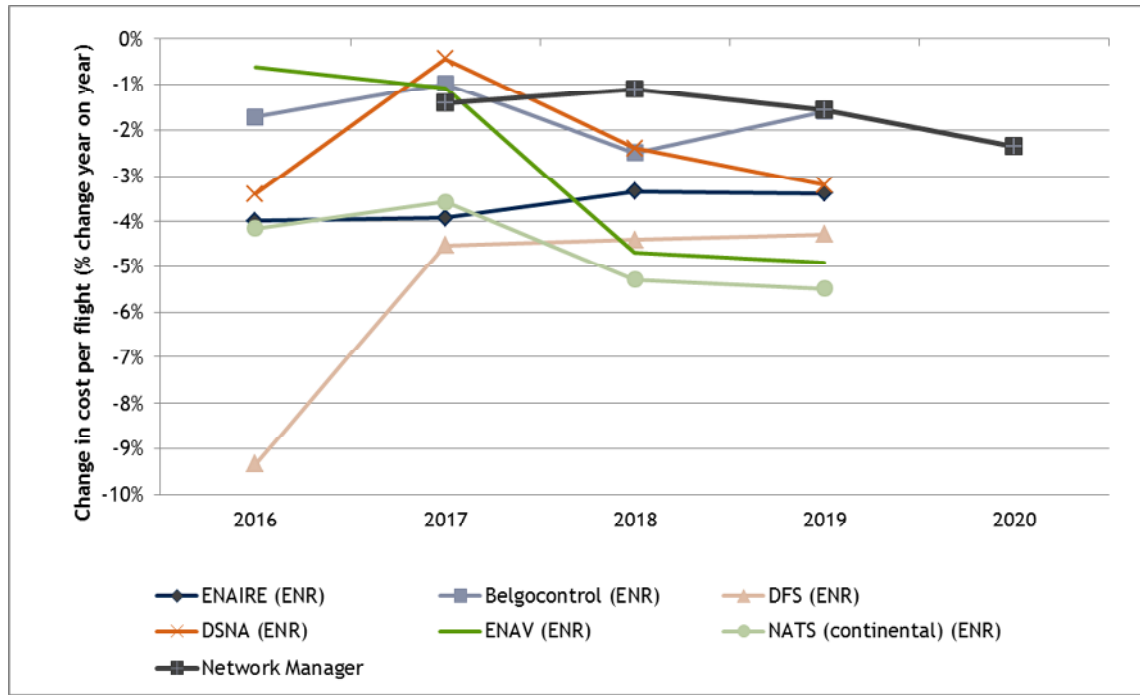
**Figure 7.5: Comparison of changes in unit costs for Network Manager and selected ANSPs**



Source: SDG analysis based on Performance Plans for RP2

7.30 Figure 7.6 shows the year-on-year change in cost per flight for the same organisations. The values for the Network Manager have been calculated using STARFOR flight data for ESRA08, since the latter covers the whole of the area currently overseen by the Network Manager. The ANSP flight data is taken from their Performance Plans for RP2. On this measure, the Network Manager’s plans for improving efficiency appear less ambitious than those of comparable organisations. This is further illustrated by Table 7.5, which shows the CAGR for each organisation over the period 2016 – 2019. The planned reduction in the Network Manager’s unit costs per flight is 1.4% per year, less than all of the ANSPs included in the comparison.

Figure 7.6: Changes in cost per flight for Network Manager and selected ANSPs



Source: SDG analysis based on RP2 Performance Plans and STATFOR traffic forecast (September 2015)

Table 7.5: CAGR of unit cost per flight for Network Manager and selected ANSPs

ATSP	Item	CAGR 2016-2019
ENAIRE (ENR)	ATSP cost per IFR flight (ENR)	-3.6%
Belgocontrol (ENR)	ATSP cost per IFR flight (ENR)	-1.7%
DFS (ENR)	ATSP cost per IFR flight (ENR)	-4.4%
DSNA (ENR)	ATSP cost per IFR flight (ENR)	-2.0%
ENAV (ENR)	ATSP cost per IFR flight (ENR)	-3.6%
NATS (continental) (ENR)	ATSP cost per IFR flight (ENR)	-4.8%
<b>Network Manager</b>	<b>Cost per IFR flight (ESRA08 area)</b>	<b>-1.4%</b>

Source: Source: SDG analysis based on RP2 Performance Plans and STATFOR traffic forecast (September 2015)

7.31 This analysis is high level and the results do not provide conclusive evidence that the Network Manager is less efficient than the comparator ANSPs, not least because the different measures of unit cost suggest different conclusions. However, we note that the interpretation of cost per service unit is particularly difficult as service units can increase substantially without materially affecting the Network Manager’s workload (for example, as a result of changes in aircraft take-off weight). In addition, while cost per flight is also subject to limitations because



of the inelasticity of costs to traffic discussed at the beginning of the chapter, it is no more problematic as a measure of efficiency than cost per service unit. The implication of the table above, that the Network Manager's plans for cost reduction are less aggressive than those of the comparator ANSPs, cannot therefore be ignored.

### Comparison of staff costs

- 7.32 We have sought to identify further evidence to support this proposition by extending the benchmarking to staff costs. We began the exercise by comparing the Network Manager's unit staff costs with those of the European agencies included in the comparison of financial reporting arrangements discussed in Chapter 5. In the case of the agencies, we were able to identify both total staff costs and staff numbers for 2014, while in the case of the Network Manager we have calculated unit costs using FTEs for 2015. While the comparison must therefore be qualified, it does indicate that the Network Manager's staff costs are substantially above those of the agencies, as shown in the table below.

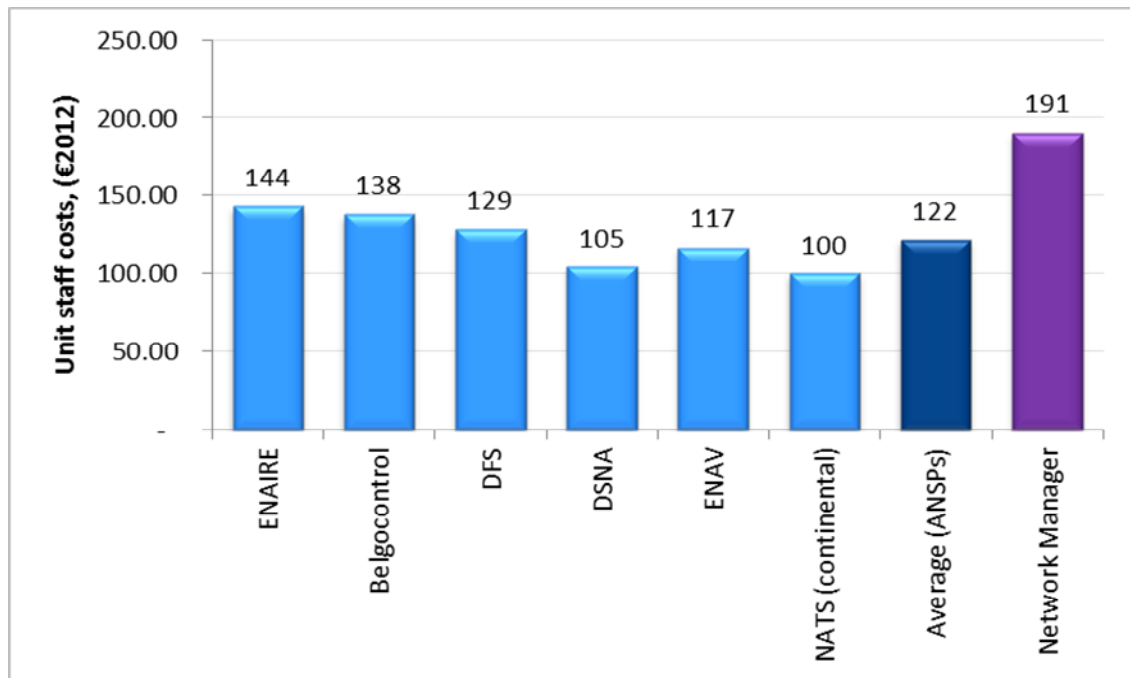
**Table 7.6: Unit staff costs for the Network Manager and European agencies**

Organisation	Year	Unit staff cost (€)
EASA	2014	104,832
ERA	2014	101,804
INEA	2014	55,772
Network Manager	2015	199,312

Source: SDG analysis based on agency annual reports and Network Manager Performance Report for RP2

- 7.33 We recognise that the value of this comparison is limited since the agencies employ staff with very different skills to those working within the Network Manager. In addition therefore, we have used ANSP data from the ATM Cost-effectiveness (ACE) Reports for 2013 (the year in which the most recent reports were issued) to calculate an average cost per FTE for each of the comparator ANSPs and obtained a corresponding value for the Network Manager from the latter's RP2 Performance Plan. Notwithstanding the difference in years, we consider the comparison to be indicative of relative unit costs of staff undertaking a range of broadly similar activities within the same industry. All costs are gross of taxation and inclusive of benefits, and were converted to 2012 Euro values for the purpose of comparison.
- 7.34 The figure below compares average unit staff costs of the organisations included in the benchmarking exercise, and indicates that the value for the Network Manager is substantially higher, by some 56%, than the average value for the selected group of ANSPs and above that of the ANSP with the highest unit staff costs. In responding to our initial findings presented at the workshop on 11 April, the Network Manager has noted that the comparison takes no account of different mix of skills, and hence remuneration packages, within the different organisations. While we accept that this is a limitation of the analysis, which we have sought to address in the comparison discussed below, we nevertheless consider the difference of 56% between the Network Manager and average ANSP unit staff costs to be striking.

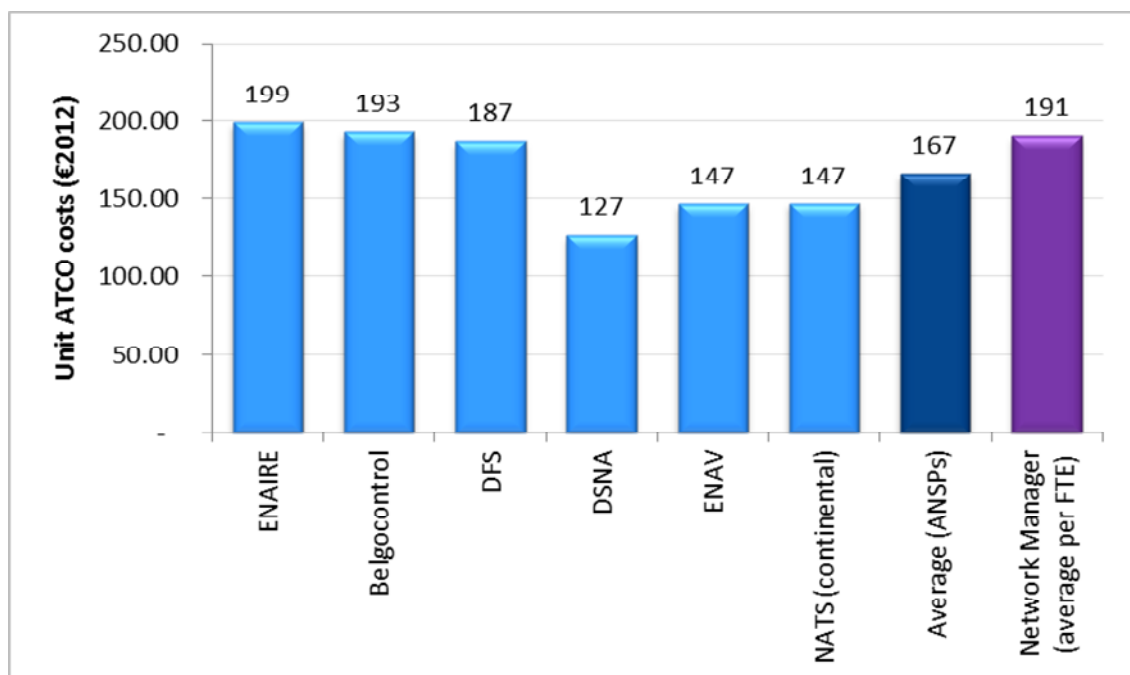
Figure 7.7: Comparison of Network Manager and ANSP unit staff costs (€000s)



Source: SDG analysis based on ACE Reports and Network Manager Performance Report for RP2

7.35 We do not have sufficient data to compare unit staff costs for specific groups of staff. However, we consider the comparison of ANSP unit ATCO costs with the average staff cost for the Network Manager shown in the figure below to be informative. This indicates that the Network Manager’s average staff costs, calculated across both specialist and administrative staff, are comparable with the average ATCO costs of the highest paying ANSPs and significantly above the average for the selected group of ANSPs as a whole.

Figure 7.8: Comparison of unit ATCO costs with Network Manager average staff costs (€000s)



Source: SDG analysis based on ACE Reports and Network Manager Performance Report for RP2

7.36 This evidence suggests that there is scope for reducing the Network Manager’s unit staff costs while maintaining parity of remuneration for staff with similar skills to those working elsewhere in the European air navigation industry. At the same time, we note that:

- As discussed in Chapter 4, the Network Manager has little or no ability to influence the remuneration package of its staff, since they are employed on the same terms as other Eurocontrol staff. Establishing the Network Manager as a separate legal entity would, in our view, help to address this issue.
- The analysis takes no account of any differences in staff productivity. We have not identified a suitable measure of productivity that would allow comparison between the Network Manager and the ANSPs, but we note that the former’s RP2 Performance Plan implies an increase in the number of flights processed per FTE of 4% per annum. This suggests that the productivity of the Network Manager’s staff is expected to increase significantly over RP2, although it is not clear how the current level of productivity compares with the achieved elsewhere in the industry.

7.37 The potential for cost savings within the Network Manager is considered further below.

### **Potential for further cost savings**

7.38 During RP1, the Network Manager sought to ensure that its costs remained below a threshold of 2.9% of total, system-wide, en-route costs, although we understand that this threshold has not been retained for RP2. The PRB’s assessment of the Network Manager’s Performance Plan for RP2 noted that its total costs are expected to fall by an average of 1.7% per year to 2019, which compares with a Union-wide cost efficiency target of 2.1% per year over the same period. However, as discussed above, the PRB also pointed to the 4.4% per annum reduction in unit costs that the Network Manager expects to achieve over the period 2012 – 2019, and noted that its costs as percentage of total FAB and Member State costs fall from 3.5% in 2012 to 3.1% in 2019.

7.39 We have discussed the potential for cost savings during RP2 and beyond with the Network Manager, and it has highlighted a number of opportunities, for example:

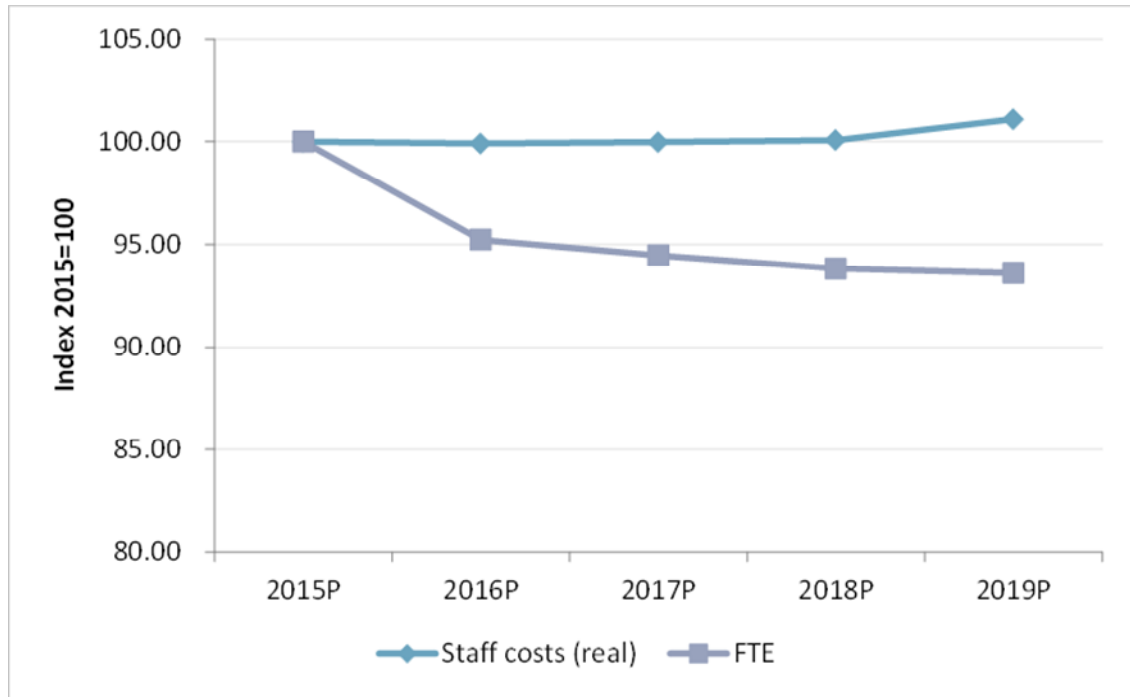
- consolidation of contracts by Eurocontrol, which is expected to reduce the costs of IT and other services (for example, the Agency currently has three separate IT contracts, which could be consolidated to one, although we note that such consolidation does not always result in cost savings);
- independent procurement of services currently obtained centrally from 2019, which will enable the Network Manager to market test certain costs allocated under the mechanisms described in Chapter 5; and
- an increase in the standard working hours for Eurocontrol as a whole from 37.5 hours to 40 hours (although we note that, in itself, this need not lead to an increase in actual productivity of staff).

7.40 In addition, as noted above, the Performance Plan for RP2 indicates an increase in flights per FTE of 4% per year to 2019.

7.41 It is striking that the majority of these opportunities depend on action by Eurocontrol rather than on the Network Manager acting independently. Moreover, even where the Network Manager is able to take action to reduce its cost base, the results may be constrained or offset by changes within Eurocontrol as a whole. For example, notwithstanding the planned reduction in the number of FTEs working in the Network Manager during RP2, its total staff

costs are expected to remain broadly constant because of the offsetting impact of increases in remuneration determined in accordance with Eurocontrol’s staff regulations. This is illustrated in Figure 7.9.

**Figure 7.9: Planned Network Manager FTEs and total staff costs during RP2**



Source: SDG analysis based on Network Manager Performance Plan for RP2

7.42 In order to illustrate the potential for cost savings, we have estimated the impact of a reduction in the Network Manager’s unit staff costs bringing them more in line with those observed elsewhere in the industry. This exercise was based on the assumption that the current difference between the Network Manager’s average staff cost and the average for the ANSPs included in the benchmarking is reduced from 56% to 25% (i.e. average staff costs fall from €191,770 to €152,700). While such a reduction would be ambitious, we consider it to be representative of the level of saving that might be achieved if:

- the Network Manager was independent and able to recruit staff on its own terms without reference to Eurocontrol’s staff regulations; and
- it faced strong incentives to control costs, for example as a result of participating in a competitive bidding system or facing stronger regulation than at present.

7.43 The results of this exercise are shown in the table below. They indicate a total saving in staff costs of €87.9 million, or 20%, over the whole of RP2.

**Table 7.7: Illustration of staff cost savings over RP2**

Staff costs (€2012 million)	2015	2016	2016	2018	2019	RP2
Current projection	87.9	87.9	87.9	88.0	88.9	440.7
Following reduction <sup>27</sup>	70.4	70.3	70.4	70.5	71.2	352.8
Saving	17.6	17.5	17.5	17.6	17.7	87.9

Source: SDG analysis based on Network Manager Performance Plan for RP2

- 7.44 There may be potential for further savings through reductions in staff numbers although, as discussed in Chapter 6, we do not consider that the functions and tasks of the Network Manager are defined precisely enough to make an independent assessment of the level of resources it requires. In our view, the potential for staff savings would need to be estimated using a comprehensive, bottom-up budgeting exercise based on a more detailed specification of the role of the Network Manager than is available from a review of the Implementing Rules and Nomination Decision alone. Again, this kind of exercise would be most effective when undertaken during the preparation of a bid to undertake the role as part of a competitive procurement exercise. We consider the approach to such a procurement further in Chapter 8.

### Reporting of cost efficiency

- 7.45 We noted above that the Network Manager has identified a number of performance measures capturing its contribution to the achievement of Union-wide performance targets for RP2. It is also planning to undertake further work on the development of measures and targets in preparation for RP3. However, none of the measures included in Appendix I of the Network Manager Performance Report captures cost efficiency or other financial outcomes.
- 7.46 We have already alluded to some of the difficulties of establishing measures of cost efficiency for the Network Manager, noting for example that a relatively low proportion of its costs are influenced by traffic levels (making it difficult to identify meaningful measures of unit cost) and that the mix of specialist and administrative staff is different from that in other organisations in the industry (making comparisons of staff costs more difficult to interpret). Nevertheless, we consider that the following metrics would assist in tracking cost effectiveness if reported regularly.

<sup>27</sup> Assumes equivalent rate of increase in unit staff costs

**Table 7.8: Suggested measures of cost efficiency**

Measure	Rationale
Cost per service unit	Provides an indication of the level of Network Manager costs in relation to the level of traffic. Consistent with unit cost data reported by the ANSPs and with the metric used in the calculation of unit rates.
Cost per flight	Provides a different perspective on the level of Network Manager costs in relation to the level of traffic.
Indirect costs as a percentage of total costs	Provides an indication of how well the organisation is controlling central costs that are not directly related to the activities that are its primary focus.
Average cost per FTE (broken down by groups of staff with different skills)	Provides an indication of how well the organisation is bearing down on staff costs.
Flights per FTE (broken down by groups of staff as appropriate)	Provides an indication of staff productivity

- 7.47 These measures are analogous to measures reported by a number of ANSPs and identified by the Performance Review Commission as part of its work in support of the implementation of the performance scheme. In our view, they would usefully supplement the operational metrics that the Network Manager is already proposing to monitor, enabling a more balanced assessment of performance based on consideration financial and resource efficiency as well as operational effectiveness.

## Summary of findings

- The Network Manager's cost base is relatively insensitive to traffic levels.
- The provisions of the Implementing Rules relating to the Network Manager's work in relation to third countries lack clarity in some areas, but we note that in order to enter into cooperative arrangements with third countries the Network Manager must be confident that they will have an impact on the network.
- At present, there does not appear to be any means of establishing the benefits and costs of the arrangements that are already in place with countries not participating in the SES, although we recognise that withdrawing from them is likely to compromise the operational integrity of the network.
- While on some measures the Network Manager's plans for efficiency improvements are in line with, or even ahead of, those of ANSPs, on other measures the plans appear less ambitious.
- The results of an exercise to benchmark the Network Manager's unit costs against those of ANSPs, while subject to qualification, indicate that its costs are significantly higher, even after taking account of differences in the mix of skills of the staff employed by different organisations.
- However, the Network Manager's ability to secure significant cost savings is constrained by the lack of management independence already noted.
- We would expect organisations participating in a competitive tender for the provision of Network Manager services to face stronger incentives to identify cost savings through both reductions in staff numbers and staff remuneration.
- At present, there is insufficient information to monitor the cost efficiency of the Network Manager, The operational performance metrics to be monitored in RP2 could usefully be supplemented by a number of financial and productivity metrics.

## 8 Findings and recommendations

### Introduction

- 8.1 In this chapter, we present our recommendations for addressing the findings reported in Chapters 4 – 7. These have been developed in the light of comments received on the draft findings and recommendations presented at the NMB workshop held on 11 April 2016. We are grateful to all the stakeholders who have submitted comments, and have considered these carefully in preparing this report.
- 8.2 The Network Manager submitted extensive and detailed comments to us on 26 April. In view of the Network Manager’s particular interest in the results of the study, we have prepared point-by-point responses to each of the specific comments raised. These are provided in Appendix F.
- 8.3 In the remainder of this chapter, we set out our findings and recommendations under each of the tasks included in our terms of reference, following the order of Chapters 4 – 7. In each case, we reproduce the summary findings appearing at the end of these chapters for ease of reference and to illustrate the link with our recommendations. We also provide a rationale for each recommendation and highlight associated issues that require further consideration where appropriate. Proposed recommendations should be implemented either swiftly (from the start of 2017) or should be considered as part of the preparation for the designation of the Network Manager to act after 2019.

### Governance

#### Independence and accountability

##### *Findings*

- 8.4 As part of a directorate within Eurocontrol, the Network Manager cannot act independently of Eurocontrol’s management and governance structure. This has the potential to create tension in the event that the objectives of the SES and those of Eurocontrol conflict.
- 8.5 In addition, the Network Manager does not enjoy the level of management autonomy that we would expect of a body with responsibilities under EU legislation, since it does not have full delegated authority from Eurocontrol in a number of areas:
- it cannot recruit staff or employ them on terms and conditions that differ from those set by Eurocontrol;
  - it cannot apply for CEF funding on its own behalf;
  - it cannot make legal agreements with third parties;
  - it cannot put investment and other proposals to the NMB without the approval of Eurocontrol; and



- it relies on Eurocontrol for central services (although this is expected to change from 2019).

8.6 This lack of management autonomy arises from the fact that the Network Manager does not have independent legal status analogous to that of European agencies.

8.7 The NMB lacks accountability for the resourcing and efficiency of the Network Manager because of the tension between the governance arrangements defined in legislation and those already in place for Eurocontrol.

*Recommendation – to take effect from the start of 2017*

***Eurocontrol should define internal procedures providing the Network Manager with greater management autonomy, to be approved by the NMB. These should allow the Network Manager to seek approval for new initiatives from the NMB without first securing the approval of Eurocontrol management and be incorporate into the CDM document.***

*Recommendation – to be implemented as part of the preparation for the designation of the Network Manager in 2019*

***The Network Manager should be established as a separate legal entity, able to manage its activities and make decisions and agreements on its own behalf. It should prepare its own financial accounts, which should be subject to independent audit.***

***The NMB should have full powers to:***

- ***approve the appointment of the Director of the Network Manager;***
- ***approve the annual accounts as well as the budget and investment proposals and applications for CEF funding;***
- ***approve the Network Strategy Plan and Operations Plans (as now);***
- ***undertake ongoing monitoring of both operational and financial performance; and***
- ***ensure performance of the tasks as laid down in the Implementing Rules.***

8.8 In our view, establishing the Network Manager as a distinct legal entity is the only means of securing the level of independence and management autonomy required in order to ensure that its planning and day-to-day operational activities are always in line with the objectives of the SES. We note that there are a number of ways in which an independent legal entity could be created:

- Eurocontrol could itself establish such an entity under procedures defined in its existing governance arrangements.
- The Commission could establish the entity, possibly as part of the process for procuring the Network Manager functions and tasks through a competitive tender (discussed further below). The entity would then be acquired by the successful tenderer, following a process similar to that applied in the tendering of transport concessions.

8.9 Either case would allow the designation of Eurocontrol as the Network Manager in 2019, although in the second case it would first need to successfully secure the tender to undertake the role. We also note that the compatibility of the first option with expanded powers for the NMB would need to be investigated further. More generally, it would be important to consider different models for establishing the separate legal entity and assess their merits in terms of compatibility with the objectives of the SES, ensuring the necessary management autonomy in line with the recommendation above, and ease of implementation.

## Provision of information

### Findings

- 8.10 The NMB must be provided with more financial and other information if it is to undertake its role effectively (specific information requirements are considered in the following chapter).

*Recommendation – to take effect in 2016/2017*

***The Network Manager should prepare and make available to the NMB information to support its oversight role (as discussed further below in relation to financial arrangements).***

*Recommendation – to be implemented as part of the preparation for the designation of the Network Manager in 2019*

***Transparency and reporting requirements should be documented and be included as a requirement of the designation in 2019.***

- 8.11 Documentation of the reports that the Network Manager must provide to the NMB will remove the potential for any disagreement over disclosure. Making disclosure a condition of the designation in 2019 will further reinforce the requirement for transparency.

## Addressing potential conflicts of interest

### Findings

- 8.12 As is the case with any supervisory board, there is the potential for conflicts of interest to arise within the NMB, although we have seen no evidence of a conflict arising in practice. While this does not justify withholding information from the NMB, mechanisms for addressing conflicts of interest must be put in place if an effective working relationship between the Network Manager and its Board is to be established.

*Recommendation – to take effect in 2016/ 2017:*

***In accordance with Article 13 of its Rules of Procedure, the NMB should prepare a Data and Confidentiality Policy Statement. The statement should define the procedures to be followed in a range of potential conflict situations, including the participation of a member of the NMB in any organisation established to participate in a competitive procurement of the Network Manager functions and tasks. All members of the NMB and their alternates should be required to confirm that they understand and will abide by the terms of the Statement.***

- 8.13 The requirement to prepare a Data and Confidentiality Statement already exists. In meeting this requirement, the NMB will help to remove any concerns the Network Manager may have over conflicts of interest and establish a more productive relationship. The Network Manager should be consulted on the scope and content of the statement and the Commission should ensure that its requirements in respect of participation in any future competitive procurement are fully consistent with a fair and open tendering process.

## Financial arrangements

### More transparent financing of the Network Manager

#### Findings

- 8.14 There is a strong case for establishing a Network Manager unit rate to improve the transparency of Network Manager costs. Such a rate could be introduced by either:

- treating the Network Manager in the same way as the CRCO and adding the rate on to the determined unit costs for each charging zone; or
- treating the Network Manager in the same way as a charging zone and subjecting it to the same reporting requirements under Regulation No (EU) 391/2013.

8.15 Our preliminary view is that the advantages of the second option (in terms of additional transparency) are likely to outweigh the disadvantages (in terms of the need for legislative change), although the legislative implications would require further investigation.

*Recommendation – to be implemented as part of the preparation for the designation of the Network Manager in 2019*

***In 2016/2017 the Commission should establish an approach to the application of a unit rate for Network Manager services. In particular it must decide:***

- ***An appropriate calculation methodology for the unit rate;***
- ***Whether it should be subject to cost risk-sharing under Regulation (EU) No 391/2013; and***
- ***Whether this should be charged as an administrative unit rate analogous to that covering the costs of the CRCO or through classification of the Network Manager as a Charging Zone with determined costs.***

***The Network Manager should calculate and publish this unit rate in parallel with the operation of current financial processes prior to its full introduction in 2019. The unit rate should be the financing mechanism for the Network Manager from the beginning of the new designation.***

8.16 The introduction of a unit rate under either of the options outlined in paragraph 8.14 would increase transparency by explicitly identifying the proportion of airspace user charges covering Network Manager costs. While we consider that the additional transparency provided by subjecting the Network Manager to the full reporting provisions of the Charging Regulation (the second option) to be considerable, we have not investigated the legislative implications in detail. Moreover, the practical implications of this approach (for example, the extent to which the Network Manager’s financial systems would support it) would need to be considered before it was introduced. The first option might therefore be more practical, at least in the shorter term.

8.17 Given that the Network Manager’s costs are less sensitive to traffic than those of ANSPs, we do not consider that it should be subject to traffic risk sharing arrangements. However, while the requirement to manage activities against a determined cost base would result in stronger incentives to improve efficiency, it is likely that some costs should be subject to pass through under the costs exempt from risk sharing arrangement. These would need to be established through a case-by-case consideration of individual cost categories. Further consideration would also need to be given to the appropriate measure of traffic volume for use in the calculation. While the use of service units would be in line with the Charging Regulation framework, it may not be appropriate given the insensitivity of the Network Manager’s cost base to traffic levels.

## Greater transparency of financial information

### Findings

- 8.18 While the Network Manager budget is presented separately from that of Eurocontrol, a large proportion of the Network Manager's costs are effectively determined by Eurocontrol.
- 8.19 The process of budget preparation is insufficiently transparent and the information reported to the NMB is at too high a level of aggregation.
- 8.20 More generally, the NMB is not kept sufficiently informed:
- it does not receive management accounts or regular reports of expenditure against budget;
  - its approval for CEF applications under the first two calls has not been sought;
  - it is generally not asked to approve project expenditure and its role in relation to the role of the ERP is not defined; and
  - when consulted on investment expenditure, it is not provided with a thorough business case prepared according to good practice.

### *Recommendation – to take effect in 2016/ 2017*

#### ***The Network Manager should prepare and make available to the NMB on a quarterly basis:***

- ***management accounts providing information at the general ledger level; and***
- ***a comparison of actual and budgeted expenditure by quarter, disaggregated to the general ledger level, and a comparison of KPIs against targets.***

***Requests for approval of investment expenditure made to the NMB should be supported by a business case prepared according to a template and methodology agreed by the NMB.***

#### ***Business cases should include:***

- ***an explanation of the strategic case for the investment;***
- ***an assessment of the financial impact based on discounted cash flow analysis;***
- ***a record of assumptions underpinning the analysis; and***
- ***qualitative and quantitative risk analysis.***

***The NMB's role in approving investment expenditure in relation to that of ERP should be defined and documented. The NMB should be consulted on all applications for CEF funding.***

- 8.21 In our view, provision of the information set out in the recommendation is essential if the NMB is to undertake its oversight role effectively. We understand that the financial systems used by the Network Manager are capable of generating information at general ledger code level, and a budget tracking document is already produced. Moreover, much of the business case information listed is anyway required by the EMOSIA framework and reviewed by the ERP. Provision of the information to the NMB should therefore not require significant additional effort.

## Cost base

### Improving the definition of the Network Manager role

#### Findings

- 8.22 The functions and tasks of the Network Manager are clearly set out in the Implementing Rules but the description of them is necessarily high level.

8.23 The NM interprets the scope of the role in preparing the:

- Network Strategy Plan;
- Network Operations Plans;
- Network Performance Plan;
- Work Programme; and
- budget.

*Recommendation – to take effect in 2016/ 2017*

***The European Commission should initiate the preparation of a more precise description of the required activities of Network Manager (a detailed specification), providing more precise information on the scope of work needed to deliver the functions and tasks defined in legislation. This should be completed during 2016/ 2017.***

***The preparation of the specification should draw on the expertise of the Network Manager as necessary, but should be led by the Commission with guidance from the NMB and stakeholders, as appropriate. The specification should also take account of the findings of the current study on the definition of the network.***

8.24 The specification will provide a basis for independent assessment of the Work Programme and budget. It could also underpin any future competitive procurement exercise by providing bidders with a clear definition of the services to be provided and the means to make a more precise estimate of the level of resourcing required. Finalisation of the specification would need to await the completion of the study on the definition of the network, which could have implications for the scope of future activity.

**Establishing the Network Manager cost base**

*Findings*

8.25 The NMB is unable to decisively test and challenge the interpretation implicit in these documents, since there is no detailed, independent specification of the functions and tasks and the level of resources required to undertake them is therefore unclear.

8.26 The distinction between the Network Manager’s cost base and that of Network Services is not sufficiently clear.

*Recommendation – to take effect in 2016/ 2017*

***Following completion of the specification, the Network Manager should prepare a bottom-up resource plan for delivering the activity defined in the specification for each remaining year of RP2. For each activity, the resources and associated costs should be identified, distinguishing between relevant staff grades and skills.***

***The specification should provide the basis for the preparation of all Network Manager documentation and the budget from 2018. The Work Programme and the budget should align with the elements of the specification.***

8.27 This exercise would ensure greater transparency in the resourcing of the Network Manager, since the latter would need to demonstrate the required level of resources bottom-up and activity-by-activity by reference to the detailed specification. In our view, the Work Programme and budget do not currently provide the transparency required to enable the NMB to review and challenge resourcing decisions and levels of cost. We understand that the development of the 2017 Work Programme has already begun, but suggest that this work can

proceed in parallel, with the bottom-up resourcing exercise subsequently informing the budget presented to the NMB in March of 2018.

## Cost efficiency

### Understanding key elements of the Network Manager's cost base

#### *Findings*

- 8.28 The Network Manager's cost base is relatively insensitive to traffic levels.
- 8.29 The provisions of the Implementing Rules relating to the Network Manager's work in relation to third countries lack clarity in some areas, but we note that in order to enter into cooperative arrangements with third countries the Network Manager must be confident that they will have an impact on the network.
- 8.30 At present, there does not appear to be any means of establishing the benefits and costs of the third country arrangements that are already in place, although we recognise that withdrawing from them is likely to compromise the operational integrity of the network.

*Recommendation - to be implemented as part of the preparation for the designation of the Network Manager in 2019*

***The Commission should give consideration to clarifying the provisions of the Implementing Rules relating to the third countries, in particular to address the ambiguities highlighted in Chapter 7. It should also consider amending the legislation to require the Network Manager to demonstrate impacts on the network arising from cooperative arrangements with third countries.***

*Recommendation – to take effect in 2016/ 2017*

***Following completion of the current study on the definition of the network, the Network Manager should undertake a full cost benefit analysis of arrangements with those third countries that have not concluded agreements with the EU on the implementation of the SES.***

- 8.31 For the avoidance of doubt, we are not proposing that current arrangements with third countries should be suspended pending the results of the cost benefit analysis, or that their continuation should necessarily be contingent on a positive economic result (for example, where broader policy considerations also need to be taken into account). However, there is concern among some stakeholders and members of the NMB that the value of work in relation to third countries relative to the costs has not been demonstrated, and we consider that it is important for the Network Manager to provide reassurance. As discussed in Chapter 7, we recognise that it may be difficult to attribute some categories of cost among third countries, but consider that some analysis of incremental costs and benefits should be possible.

### Securing cost savings

#### *Findings*

- 8.32 While on some measures the Network Manager's plans for efficiency improvements are in line with, or even ahead of, those of ANSPs, on other measures the plans appear less ambitious.
- 8.33 The results of an exercise to benchmark the Network Manager's unit costs against those of ANSPs, while subject to qualification, indicate that its costs are significantly higher, even after

taking account of differences in the mix of skills of the staff employed by different organisations.

8.34 However, the Network Manager's ability to secure significant cost savings is constrained by the lack of management independence already noted.

8.35 We would expect organisations participating in a competitive tender for the provision of Network Manager services to face stronger incentives to identify cost savings through both reductions in staff numbers and staff remuneration.

*Recommendation - to be implemented as part of the preparation for the designation of the Network Manager in 2019*

***Regardless of whether the designation is subject to competitive tender, re-designation of Eurocontrol or nomination of another body should be subject to the organisation preparing and submitting a proposal to undertake the role in response to an invitation and accompanying contract.***

***The European Commission should lead the preparation of the contract requirements, drawing on the detailed specification of the Network Manager role prepared in 2016/ 2017 and relevant industry expertise. The requirements should include:***

- ***the detailed specification of functions and tasks over the next [two] RPs;***
- ***a service level agreement, defining a series of financial and operational KPIs; and***
- ***performance incentives linked to the KPIs, as appropriate.***

***In submitting a response, Eurocontrol or other bodies should be required to prepare:***

- ***a proposed unit rate sufficient to cover the expected costs of delivery;***
- ***a delivery plan, explaining how it intends to deliver the contract requirements efficiently and effectively for the unit rate indicated; and***
- ***a resource plan and financial model supporting the unit rate and delivery plan.***

***The NMB should have delegated authority to oversee the delivery of the contract on behalf of the Commission.***

8.36 Note that implementation of this recommendation is not conditional on the Commission introducing a competitive procurement process, although it would not preclude such a process. The purpose of the recommendation is ensure that Eurocontrol is required to submit a costed proposal to undertake the role of Network Manager and agree to contractual terms even if it is the only candidate for designation in 2019. There are many precedents for awarding contracts on the basis of a single tender process, and while such a process generally does not result in the cost efficiency secured through competitive tendering, it does subject the tenderer to a degree of commercial discipline.

8.37 The introduction of a formal contract would also provide an opportunity to set out performance requirements, payment terms and reporting obligations in a legally binding document. This would help to ensure that the Network Manager committed an appropriate level of resources, consistent with meeting operational performance targets while achieving cost efficiency. The scope of the contract and its relationship with the broader regulatory framework would require further consideration however, particularly if the Network Manager were to be brought within the framework of the Charging Regulation prior to the introduction of a unit rate.

*Recommendation - to be implemented as part of the preparation for the designation of the Network Manager in 2019*

***The European Commission should investigate further the requirements of a competitive procurement strategy covering the following issues:***

- ***market interest in providing the service;***
- ***the timescales required to prepare a credible bid;***
- ***key contractual requirements, for example relating to the handling of security and other sensitive information;***
- ***the mechanisms for ensuring that organisations other than Eurocontrol have access to the required skills and assets as well as operational data; and***
- ***the risks that potential bidders would be willing to accept.***

8.38 It is beyond the scope of this study to consider in detail the practical implications of introducing a competitive procurement process to determine the designation of the Network Manager. However, we have identified a number of important issues that would need to be addressed before such a process could begin. The issues outlined below are not exhaustive, but provide an indication of the programme of work that would need to proceed a competitive tender:

- In the course of this study, the Network Manager and a number of stakeholders have stressed the importance of ensuring that the entity responsible for network management functions is both impartial and competent in discharging its responsibilities. These are clearly key criteria for the nomination of an organisation to undertake the role and they, together with the other criteria identified in the Nomination Decision of 2011, would need to be embedded within any regulatory and contractual framework in place from 2019. In addition, the evaluation framework applied in assessing bids would need to include mechanisms for verifying that bidders were able to comply with the criteria, and the contract would need to provide for withdrawal of the designation in the event that they did not.
- Similarly, the Network Manager and some stakeholders have noted that the entity responsible for network management functions will be required to handle sensitive information relating to international security, as was the case, for example, following the shooting down of flight MH17. They have also suggested that access to such information is best restricted to an organisation responsible to national governments rather than a commercially focused entity providing services under a contract. In our view, the requirement to handle sensitive information should not preclude a competitive tender but it is clearly essential for any entity undertaking the role of Network Manager to implement mechanisms for ensuring that information remains secure. Hence, the contractual and regulatory framework would need to include appropriate obligations covering both information handling procedures and guarantees on the behaviour of individual staff members.
- For the procurement to be successful, it would be important to ensure sufficient interest in undertaking the role among potential bidders. In the absence of such interest, the level of competition and hence the incentive on bidders to identify cost savings would be limited. In order to prepare credible tenders, bidders would need access to assets, skilled resources and operational data and, in our view, it is unlikely that they could develop assets and expertise comparable to those available to Eurocontrol prior to 2019. The



means by which they might obtain the necessary access would need to be determined and communicated to bidders as part of the procurement process.

- The Commission would need to develop a framework for evaluating tenders, taking account of key compliance requirements, the need to verify the deliverability of individual tenders and the need to place an appropriate weight on the price offered. While there is considerable experience of the design of such frameworks for the purpose of evaluating tenders to provide services of different kinds, the development of a robust evaluation methodology that recognised the unique role of the Network Manager would be challenging.

### **Monitoring of cost efficiency**

#### *Findings*

- 8.39 At present, there is insufficient information to monitor the cost efficiency of the Network Manager. The operational performance metrics to be monitored in RP2 could usefully be supplemented by a number of financial and productivity metrics.

*Recommendation - to take effect in 2016/ 2017*

***The Network Manager should provide the NMB with quarterly reports comparing KPIs with targets. KPIs should include all the operational KPIs currently tracked internally as well as measures of cost efficiency, for example:***

- ***cost per service unit/flight;***
- ***indirect costs as a % of total costs;***
- ***average cost per FTE; and***
- ***flights per FTE.***





# A Information reviewed

Table A.1: List of documents and other data sources

Source/data type	Description
Legislative documents	<ul style="list-style-type: none"> <li>Council Regulation (EC) No 58/2003</li> <li>Regulation (EC) No 881/2004</li> <li>Council Regulation (EC) No 219/2007</li> <li>Commission Decision of 7 July 2011 nominating the Network Manager</li> <li>Regulation (EU) No 677/2011</li> <li>Commission Decision 2013/801/EU</li> <li>Regulation (EU) No 970/2014 amending EC Regulation (EU) No 677/2011</li> </ul>
Network Management Board documents	<ul style="list-style-type: none"> <li>Minutes of the Network Management Board meetings (2011-2015)</li> <li>Composition of the members of the Network Management Board</li> </ul>
Network Manager reports and documents	<ul style="list-style-type: none"> <li>Network Manager Annual Reports (2012-2015)</li> <li>Network Operations reports (2012-2014)</li> <li>ATFM annual report (2014)</li> <li>Network Manager Budget (2015)</li> <li>Appendices A (Work Programme), B and C of 2015 budget</li> <li>Network Manager Strategy Plan</li> <li>Endorsement of 2016 budget document</li> <li>Network Manager Directorate Budget Checkpoint for the third quarter of 2015</li> <li>Paper on n-CONNECT</li> <li>Organigram of the Network Management Directorate</li> <li>Breakdown of Network Manager staff by grade</li> <li>Network Manager mapping of legislation</li> <li>A series of policy papers prepared by the Network Manager relating to its future governance, role and powers</li> </ul>
Network Manager Budget Task Force documents/information	<ul style="list-style-type: none"> <li>Documents related to the findings of the work of the Network Management Board</li> <li>Budget task force</li> <li>Reports of the Budget Task Force on the preparations of 2014 and 2015 budgets and related work programmes</li> </ul>

Source/data type	Description
Network Manager Performance Plan	Approved Network Manager 2015-2019 Performance Plan (Nov 2014) PRB report of Network Manager draft 2015-2019 Performance Plan Draft Network Manager 2015-2019 Performance Plan
Eurocontrol documents	Agency Business Plan (2015-2019 and 2016-2020) Ledger codes for class 2 and class 6 Standard Inputs for EUROCONTROL Cost-Benefit Analyses (dated Nov 2015)
Standing Committee on Finance documents	Centralised services: PC/44 (8.12.15, Flimsy No 10), PC/15/44/28 (23.11.15, Item 5), PC/15/44/14 (19.11.15, Item 5), PC/15/43/12 (30.4.15, item 5); Operational items: Global ATFM PC/15/44/24 (20.11.15, item 3), Network Manager Report PC/15/43/6 (29.4.15, ITEM 3), Network Manager Report PC/15/44/26 (20.11.15, ITEM 3), Network Manager Report PC/15/44/26 (20.11.15, ITEM 3); Extracts of PC44 final results, extracts of summary conclusions of the SCF's 25th meeting, extracts of final minutes of the 43rd session of the Provisional Council; CEF Pilot Common Project funding: SCF/15/25/12 (22.9.15, item 9), SCF/15/25/flimsy1 (14.10.15, items 8 & 9); Savings/Unspent Credits: SCF/15/25/9 (22.9.15, item 8), SCF/15/25/8 (22.9.15, item 8);
Other documents	G20/OECD Principles of Corporate Governance

## B Stakeholder consultation

Table B.1: List of stakeholders interviewed

Entity	Name	Title	Consultation status
Network Manager	Mr Joe SULTANA	Director of the Network Manager	Face-to-face meetings held on 19/01/2016, 29/01/2016, 11/02/2016, 10/02/2016.
	Mr. Razvan BUCUROIU	Head of Operations Planning Unit	
	Michel VAN LANGERAK and Zarko SIVCEV		
DG MOVE	Mr Olivier WALDNER	Deputy Head of Unit	Face-to-face meeting held on 2/12/2015
Network Management Board	Mr. Simon HOCQUARD	Chairman (NATS)	Face-to-face meeting held on 03/03/2016
	Mrs. Alison MACMASTER	Adviser to the NMB Chairman	Face-to-face meeting held on 11/12/2015
	Mrs. Sylviane LUST	Airspace User representative (IACA)	
	Mr John Hanlon	Airspace User representative (ELFAA)	Telephone interview held on 01/03/2016
	Mr Luc Laveyne	Airports (ACI)	Face-to-face meeting held on 11/12/2015
Relevant Airspace users	Mr Peter Curran	Airspace User representative (IATA)	Telephone interview held on 01/03/2016
Relevant ANSPs and their representatives	Mr Alex Bristol	Chairman Network Director of Operations (Skyguide)	Telephone interview held on 06/04/2016
	Mrs. Annette Bremes	DFS	Telephone interview held on 27/01/2016
	Mr. Guenter Martis	CANSO	
Single Sky Committee	Stephen Hand	UK Department for Transport	Telephone interview held on 26/04/2016
	Eric de Vries	Dutch Ministry of Infrastructure and Environment	Telephone interview held on 14/04/2016
EASA	Mr Manfred Dieroff	Officer	Telephone interview held on 08/01/2016
	Mr Manuel Rivas Vila	Officer	
PRB	Mr Peter Griffiths	Chairman	Telephone interview held on 29/01/2016

## C Stakeholder questionnaire

### **Governance of the Network Manager**

Could you please describe the role of the SSC in relation to the NM?

Could you please describe who are the attendees of the SSC meetings? For “Member States” is it mainly representatives from MoT, CAAs, ANSPs, NSAs?

How are decisions of the SSC taken (formal/informal vote, etc)?

What happens if the SSC does not deliver a positive opinion? The legislation does not cover the case where it would disagree with what is presented to it.

What is your overall view of the governance arrangements of the Network Manager?

What do you think of the responsibilities of the Network Manager Board?

Could you please describe the formal and informal lines of communication taking place between all the parties involved (Network Manager, Network Manager Board, SSC and EC)?

Do you think that interfaces between the Network Manager and Network Manager Board could be improved? If yes, how?

Do you have any recommendations as to how the governance of the Network Manager should evolve in the future?

### **Cost-effectiveness**

To what extent do you think the Network Manager carrying out its work efficiently?

What aspects / means / actors or processes render the Network Manager more or less efficient? What can be improved (if relevant)?

### **Cost-base and financial arrangements of the Network Manager**

Do you have any areas of concerns regarding the budget and cost allocation of the Network Manager?

How transparent do you think the budgeting process and financial arrangements of the Network Manager are?

What processes are you aware of to ensure that investment or expenditure decisions of the Network Manager provide good value for money e.g. business case procedures?

Do you have any recommendations on improvements of the cost base and financial arrangements of the Network Manager?

## D Mapping of legislation to Network Manager Work Programme



**Mapping prepared by Steer Davies Gleave**



**Mapping prepared by Network Manager**



## E Mapping of Network Manager Work Programme to organisational structure

Agency Business Plan	Functional Area	WP Description	NMD		Network Strategy and Development		Performance Forecasts & Relations			Network Operations Management				Network CNS/IM Services				Training		Network Technical Systems			
			Safety Quality and Security	NMD Office	Network Strategy	Project Coordination & Implementation	Forecast & Network Intelligence	Operational Analysis & Reporting	User Relations	Network Operations Coordination	Network Operations	Airport	Safety	Operations Planning	Communication & Frequency Coordination	Surveillance & Code Coordination	European Aeronautical Information Management	Surveillance Services	Centralised Services Support	Training Development & Delivery	Training Support & Tools	Systems Upgrade & Architecture	Communication Network & System
<b>Network Technical Systems</b>																							
	<b>Communications Networks and Systems</b>																						
	TFMS - Facilities for NM																						
	Support DNM Infrastructure – network and platforms																						
	IT Infrastructure Projects																						
	PAN EUROPEAN NETWORK SERVICE (PENS)																						
	Technical Architecture, Procurements and Contract Management																						
	NTS Line Management																						
	<b>System Upgrade and Architecture</b>																						
	Support and Management																						
	Software Adaptations																						
	New Developments																						
	<b>Technical Exploitation Unit</b>																						
	Business Continuity Support																						
	Business continuity Project																						
<b>DNM Directorate Management Support</b>																							
	Directorate Management Support																						
	Business Partnering Finance, HR and Procurement																						
	Ensuring Safety, Quality and Security Management and Regulatory Compliance																						
	Line Management																						
<b>Strategic Network Projects</b>																							
	<b>Strategic Network Projects</b>																						
	Free Route Airspace Project																						
	Flight Plan & Flight Data Evolutions																						
	Airspace Management Advanced FUA																						
	N-CONNECT																						
	Cooperative Traffic Management																						
	Network Business Intelligence																						
	Airport and TMA Network Integration																						
	European ATM Information Management Service (EAIMS)																						

Agency Business Plan	Functional Area	WP Description	NMD		Network Strategy and Development		Performance Forecasts & Relations			Network Operations Management				Network CNS/IM Services					Training		Network Technical Systems																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
			Safety Quality and Security	NMD Office	Network Strategy	Project Coordination & Implementation	Forecast & Network Intelligence	Operational Analysis & Reporting	User Relations	Network Operations Coordination	Network Operations	Airport	Safety	Operations Planning	Communication & Frequency Coordination	Surveillance & Code Coordination	European Aeronautical Information Management	Surveillance Services	Centralised Services Support	Training Development & Delivery	Training Support & Tools	Systems Upgrade & Architecture	Communication Network & System	Technical Exploitation																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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## F Organisations providing responses to our draft findings and recommendations

**Table F.1: Organisations providing comments**

Organisation	Contact
Network Manager	Joe Sultana, Head of Network Management Directorate
Blue Med FAB	Alessandro Ghilari, Blue Med Administrative Secretariat
FAB CE	Jan Klas, ANS
FABEC	Robert Schickling, DFS
SW FAB	Mário Neto, SW FAB representative on NMB
UK Ireland FAB	Robert Westerberg, NATS



# G Response to Network Manager comments on draft findings and recommendations

Table G.1: Table of responses received from Network Manager on 26 April 2016

Draft finding/ recommendation	Network Manager comment	Steer Davies Gleave response
<b>Governance</b>		
<p>Key findings II</p> <p>The NM is not independent</p>	<p>NM as part of Eurocontrol is an independent and impartial body ensuring no interference on the achievement of the SES objectives.</p> <p>NM has made its own decisions with respect to the CEF applications, can make agreements with third parties based on the NM CDM process, it ensures its own views to the NMB and the fact that it relies on Eurocontrol staff for the NMB secretariat does not have any impact on the independence of the NM.</p> <p>There was no issue with the communication between NMB and the PC and several NMB actions requested the NMB chairperson to write to the PC chairman.</p>	<p>For the reasons set out in this report, we consider that the Network Manager should be legally independent in order to ensure that it pursues SES objectives effectively. Giving the Network Manager separate legal status will enable it to exercise full management autonomy, for example with regard to the recruitment and remuneration of staff and making legal agreements with third parties.</p>
<p>Key findings III</p> <p>The working relationship between the NM and NMB needs to be improved</p>	<p>There is no lack of transparency between the NM and NMB. All the information requested by the NMB has been provided by NM. The example on conflict of interest is out of context and partially reflected.</p>	<p>This statement is not consistent with our understanding based on discussions with the NMB. The NMB is not provided with regular access to management accounts and has not been consulted on strategic projects and CEF funding applications.</p>

Draft finding/ recommendation	Network Manager comment	Steer Davies Gleave response
<p>Recommendations I</p> <p>Eurocontrol should define internal procedure ensuring greater autonomy for NM</p>	<p>The already existing internal procedures cater to greater autonomy. For example:</p> <ul style="list-style-type: none"> <li>• Part IX implemented</li> <li>• CDM processes on WP, budget, third countries</li> <li>• Signature by Director Network Manager on behalf of NM.</li> </ul> <p>Cost allocation in the future will potentially lead to greater managerial freedom on the part of NM vis-à-vis the delivery of support services.</p>	<p>We consider that, pending legal independence, the Network Manager should seek further autonomy, based on additional CDM processes as appropriate.</p>
<p>Recommendations I</p> <p>The NM should be established as a legal entity, able to manage its activities and make decisions and agreements on its own behalf. It should prepare its own financial accounts, which should be subject to independent audit.</p>	<p>The goals listed by the NMB are already and predominantly addressed by the existing structure.</p> <p>Any new form of entity, if so decided by the Member States, should only be within the Eurocontrol structure – only in this way will impartiality and independence be preserved as the only authority to which the NM is accountable would remain the States and not commercial interests.</p>	<p>We note that the creation of a separate legal entity within Eurocontrol is possible and refer to this option in our revised findings and recommendations. However, in our view other options, including the creation of an entity with “legal personality” should also be explored. The aim of this recommendation to establish the Network Manager as an entity that can take management decisions independently of Eurocontrol.</p>
<p>Recommendations I</p> <p>The NMB should have full powers to:</p> <ul style="list-style-type: none"> <li>• Approve the appointment of the Director of the NM</li> <li>• Approve the annual accounts as well as the budget and investment proposals</li> <li>• Approve the Network Strategy and Operations Plans (as now)</li> <li>• Undertake ongoing monitoring of both operational and financial performance</li> <li>• Ensure performance of the tasks as laid down in the IR.</li> </ul>	<p>Some of those points are currently not applicable to any European “network” entity.</p> <p>The other points are currently feasible and achieved in the context of the existing Implementing Rule CDM.</p>	<p>As discussed in Chapter 4 of this report, a number of these powers are exercised by the supervisory boards of European agencies. They are also exercised by conventional corporate boards. Powers such as approving annual reports and the budget are fundamental to the accountability of the NMB.</p>
<p>Recommendations II</p> <p>The NM should prepare and make available to the NMB information to support its duties</p>	<p>Any information requested by the NMB members has been provided and will be provided in the future.</p>	<p>This statement is not consistent with our understanding based on discussions with the NMB. The NMB is not provided with regular access to management accounts and has not been consulted on strategic projects and CEF funding applications.</p>

Draft finding/ recommendation	Network Manager comment	Steer Davies Gleave response
<p>Recommendations II</p> <p>Transparency and reporting requirements written into the specification of the contract</p>	<p>677/2011, 390/2013, NM CDM set out all the requirements for the reporting. There is no need to duplicate the reporting requirements in new specifications and contracts. This would defeat the purpose of having legislation regulating the matter.</p>	<p>The reporting requirements set out in legislation are too high level to provide clear guidance on detailed reporting requirements. The CDM process is helpful in this regard, but we consider that greater clarity could be achieved by documenting requirements in the same way as for a contract.</p>
<p>Recommendations III</p> <ul style="list-style-type: none"> <li>• In accordance with Article 13 of its Rules of Procedure, the NMB should prepare a Data and Confidentiality Policy Statement</li> <li>• All members of the NMB should be required to confirm that they understand and will abide by the terms of the Statement.</li> </ul>	<p>The proposed solution is not going to eliminate the conflict of interest. Independent personalities need to sit in the NMB. We welcome the industry participation in the CDM process, but sufficient protection should exist to reflect the need to have a neutral Network Management Board. Also, the issue of the conflict of interest has been perceived in a one-sided way. Wouldn't it also exist if, according to the 'competitive tender', a member of the NMB applies for this tender using the info they obtained during their term in the board?</p>	<p>We suggest that the Data and Confidentiality Statement should be developed before making a judgement on whether it is sufficient.</p> <p>As noted in our report (see paragraphs 4.17 to 4.19), we are not persuaded that a potential conflict of interest provides a justification for withholding information from the NMB. Bidders for a contract are frequently provided with detailed historical information to ensure a level playing field, and we would expect the same approach to apply if the Network Manager role were subject to a competitive procurement.</p>
<p><b>Financial arrangements</b></p>		
<p>Key findings IV</p> <p>The NMB is not sufficiently informed</p>	<p>Several incorrect statements are made in these findings, showing a lack of detailed understanding of the tasks, despite several discussions and meeting notes with the contractor that were showing the contrary of what was put in the findings.</p> <p>The NM activities are defined in detail in the NM work programme and they correspond to the various legal obligations that NM has. On this basis, the NMB always had the opportunity to challenge such activities and related resources.</p> <p>The NMB can receive any further information as described in the key findings; they have to define what they want.</p> <p>The KPIs are defined in the NPP and they are available to the NMB.</p>	<p>We disagree strongly with the first and second parts of this statement. There is currently no means by which the correspondence between the requirements of the legislation and the activities set out in the Work Programme can be independently verified.</p>

Draft finding/ recommendation	Network Manager comment	Steer Davies Gleave response
<p>Key findings VI</p> <p>Illustration of good practice (EASA budget presentation)</p>	<p>NM provides to the NMB much more detailed information than the EASA good practice mentioned in the document. It seems that the contractor did not fully assess the information provided.</p>	<p>This statement is not consistent with our understanding based on discussions with the NMB. In addition, we have reviewed the Budget Checkpoint for the third quarter of 2015 and do not consider that this provides the same level of disaggregation of information as is reported by EASA (see paragraphs 5.71 to 5.79).</p>
<p>Key findings IV</p> <p>NM is funded through the financing arrangements for Eurocontrol as a whole – airspace users do not transparently benefit from cost savings</p>	<p>Processes are currently discussed to put this in place for RP2.</p>	<p>We note the Network Manager’s comment but consider that a move to a unit rate would be the most effective means of addressing this finding.</p>
<p>Recommendations IV</p> <p>In 2016/2017 the Commission should establish an approach to application of a unit rate for NM services. In particular it must decide:</p> <ul style="list-style-type: none"> <li>• An appropriate calculation methodology for the unit rate</li> <li>• Whether it should be subject to cost-sharing under 390/2013</li> <li>• Whether this should be charged as an administrative unit rate in the manner of the CRCO or through classification of the NM as a Charging Zone with determined costs.</li> </ul> <p>The NM should calculate and publish this unit rate in parallel with the current financial processes.</p> <p>The unit rate should be the NM financing mechanism from the beginning of the new designation.</p>	<p>NM executes functions and tasks, not services. All those are public functions and tasks addressing both civil and military aspects.</p> <p>NM would support further work on this matter.</p>	<p>We consider that many of the functions and tasks are services as the term is generally understood. We also note that The Network Manager makes reference to the description of functions as “services of general interest” in legislation in a later comment.</p> <p>We welcome the Network Manager’s support for further work on this issue.</p>

Draft finding/ recommendation	Network Manager comment	Steer Davies Gleave response
<p>Recommendations V</p> <p>The NM should prepare and make available to the NMB on a quarterly basis:</p> <ul style="list-style-type: none"> <li>• Management accounts providing information at the general ledger level</li> <li>• A comparison of actual and budgeted expenditure by quarter, disaggregated to the general ledger level, and a comparison of KPIs against targets.</li> </ul> <p>Requests for approval of investment expenditure made to the NMB should be supported by a business case prepared according to a template and methodology agreed by the NMB. Business cases should include:</p> <ul style="list-style-type: none"> <li>• an explanation of the strategic case for the investment</li> <li>• an assessment of the financial impact of the investment based on discounted cash flow analysis</li> <li>• a record of assumptions underpinning the analysis</li> <li>• qualitative and quantitative risk analysis.</li> </ul>	<p>As said above, NM has shared and will continue to share any information requested by the NMB.</p> <p>The preparation of the business cases on specific projects is feasible and has been initiated for N-CONNECT.</p>	<p>As already noted, our understanding is that the NMB has not had access to all the information it requires in order to carry out its role.</p> <p>We welcome the Network Manager’s comment in relation to business cases.</p>
<b>Cost base and cost effectiveness</b>		
<p>Key findings VII</p> <p>The NM interprets the scope of the role in preparing NSP, NPO, NPP, Work Programme, budget</p>	<p>NM does not interpret anything. The content of all these are either described in the IR or are part of the CDM process. The content of the Work Plan and budget has been developed following the requests expressed by the NMB Budget Task Force. This was recognised in the minutes of the NMB Budget Task Force in June 2015. EASA constantly checks the full conformity of those documents with the NMF IR. This includes also the civil/military coordination procedures and associated system requirements. This finding shows the lack of understanding of the consultants of the NM functions/tasks or the lack of knowledge of the applicable legislation, despite the fact that full explanations and evidence has been provided.</p>	<p>We disagree strongly with this statement, as already noted. There is currently no means by which the correspondence between the requirements of the legislation and the activities set out in the Work Programme can be independently verified. This is demonstrated by the fact that only the Network Manager was in a position to comment on the results of our work to relate the requirements of the legislation to the Work Programme.</p>

Draft finding/ recommendation	Network Manager comment	Steer Davies Gleave response
<p>Key findings VIII</p> <p>It is not possible to determine whether the NM’s cost base is appropriate.</p>	<p>The drawing on slide No 25 is completely incorrect and misleading. There is a detailed description of the Work Programme provided to and approved by the NMB. NM had to re-do for the consultants a full mapping done by them.</p>	<p>We disagree strongly with this statement, as already noted. We are grateful to the Network Manager for its assistance in the mapping work reported in Chapter 6. However, the fact that only the Network Manager could provide this support demonstrates that it is not possible to independently verify the correspondence between the legislation and Work Programme activities.</p>
<p>Key findings IX</p> <p>The costs and benefits of the inclusion of non-SES states are not transparent.</p> <p>The distinction between the Network Manager cost base and Network Services cost base is not clear.</p> <p>The approach to cost estimation and allocation could be improved.</p>	<p>The NM area is currently defined in the NMF IR and in the EC Appointment Decision. There is no need for a CBA related to third countries as per the definition of NMF IR. For the inclusion of other “third countries” a CDM process has been agreed.</p> <p>There is a clear distinction between Part I and Part IX activities and costs. This has been provided to the contractors. The statement that this distinction is not clear is not fully understandable.</p> <p>The allocation of pension costs has been explained to the NMB and the method was accepted as this was part of the budget approval. Unenhanced methodology for the allocation of indirect costs is currently under investigation and is expected to be implemented in the near future, most probably as from 2018 budget. The average staff costs for part IX are based on the various job brackets of the NM posts and, as a result, they take account of the level of specialisation of the staff.</p>	<p>There is no definition of the “NM area” in Article 2 of the Implementing Rules. While third countries are defined, the provisions relating to them are, in our view, subject to ambiguity (see Table 7.2 of the main report).</p> <p>We have also identified a number of issues relating to the distinction between the Network Manager and Network Services in Chapter 5.</p> <p>Our concern about the basis for allocating pension costs – that it does not take account of obligations accumulated in respect of Network Manager staff over the long term – remain.</p>

Draft finding/ recommendation	Network Manager comment	Steer Davies Gleave response
<p>Key findings X</p> <p>Overall NM unit staff costs are significantly higher than those of ANSPs</p>	<p>The metrics used “cost per flight” is not the one used in IR 390/2013. In the assessment made by PRB on the NPP, they concluded the NM has a better reduction of the Determined Unit Cost than the European average.</p> <p>The comparison of the staff costs does not take into consideration the specialisation level of the staff. It is not clear which staff categories have been used for the evaluation. In the majority of ANSPs, the average cost is lower as there is a wider range of administrative staff whose salaries are much lower than that of operational staff. The data seems inconsistent since the source is not mentioned, it is uncertain whether the salary costs of the ANSPs include benefits provided by their national legislation or simply the basic salary. In contrast, the metrics used to calculate the staff costs of Eurocontrol seem to accumulate all benefits, allowances and internal taxation.</p>	<p>The full analysis described in this report demonstrates that the average unit staff cost for the Network Manager is above the average unit ATCO cost of a number of ANSPs. This tends to confirm our view that Network Manager unit staff costs are high relative to those observed elsewhere in the industry. The data used in the analysis described in this report is fully sourced.</p>
<p>Key findings XI</p> <p>The NMB is not able to monitor cost efficiency according to well-defined KPIs.</p> <p>The NM’s internal KPIs and targets are limited to operational metrics. There are no KPIs focused on the NM’s specific contribution to outcomes.</p>	<p>It is incorrect to say that there are no KPIs focusing on the NM’s specific contributions to outcomes. They are all included in the NPP. The NPP also includes KPIs focused on the NM’s specific contribution to outcomes.</p>	<p>We accept the Network Manager’s comment in relation to KPIs focused on its specific contribution to outcomes. However, the lack of KPIs focused on cost efficiency remains a concern.</p>
<p>Recommendations VI</p> <p>The European Commission should initiate the preparation of a more precise description of required activities (specification) of Network Manager activities, providing more detailed information on the scope of work required to deliver the functions and tasks defined in legislation. This should be completed in 2016/ 2017.</p> <p>The preparation of the specification should draw on the expertise of the NM as necessary, but should be led by the Commission with guidance from the NMB and stakeholders, as appropriate. The specification should also take account of the findings of the current study on the definition of the network.</p>	<p>NM does not interpret anything. The content of all these are either described in the IR or are part of the CDM process. The content of the Work Plan and budget has been developed following the requests expressed by the NMB Budget Task Force. This was recognised in the minutes of the NMB Budget Task Force in June 2015. EASA constantly checks the full conformity of those documents with the NMF IR. This includes also the civil/military coordination procedures and associated system requirements. Guidance from NMB should consider the coverage of all current roles and tasks as they are currently well described in the NMF IR.</p>	<p>We disagree strongly with this statement. All legislation requires interpretation to some degree. As already noted, there is currently no means by which the correspondence between the requirements of the legislation and the activities set out in the Work Programme can be independently verified. This is demonstrated by the fact that only the Network Manager was in a position to comment on the results of our work to relate the requirements of the legislation to the Work Programme.</p>

Draft finding/ recommendation	Network Manager comment	Steer Davies Gleave response
<p>Recommendations VII</p> <p>Following completion of the specification, the NM should prepare a bottom-up resource plan for delivering the activity defined in the specification for each remaining year of RP2. For each activity, the resources and associated costs should be identified, distinguishing between relevant staff grades, skills and salary levels.</p> <p>The specification should provide the basis for the preparation of all NM documentation and the budget from 2017. The Work Programme and the budget should align with the elements of the specification.</p>	<p>The bottom-up resource plan already exists in the detailed NM work programme. The need to go at relevant staff grades, skills and salary levels is not understood. The WP and budget for 2017 is currently under preparation. It will not be feasible to align it with any specification.</p>	<p>The preparation of the work programme is not a substitute for the exercise we propose since it is not a fully bottom-up exercise using a zero-based budgeting approach. We consider that such an approach could be applied in parallel with the development of the Work Programme, with the latter (and the budget) brought into line with the bottom-up resource plan in time for NMB approval in March 2017.</p>
<p>Recommendations VIII</p> <p>Following completion of the current study on the definition of the network, the NM should undertake a full cost benefit analysis of inclusion of non-SES Member States in the NM area.</p>	<p>The NM area is currently defined in the NMF IR and in the EC Appointment Decision. There is no need for a CBA related to third countries as per the definition in of the NMF IR. For the inclusion of other “third countries” a CDM process has been agreed.</p>	<p>As already noted, there is no definition of an “NM area” in Article 2 of the Implementing Rules, and we consider the use of the term “third country” in the legislation to be ambiguous.</p> <p>We consider the cost benefit exercise to be important in providing reassurance to stakeholders. However, we are not suggesting that existing work in relation to third countries should necessarily be conditional on a positive outcome and recognise that issues of operational integrity and wider SES policy must be taken into account.</p>
<p>Recommendations IX</p> <p>The NM should provide the NMB with quarterly reports comparing KPIs with targets.</p> <p>KPIs should include all the operational KPIs currently tracked internally.</p> <p>KPIs should also include financial measures, for example:</p> <ul style="list-style-type: none"> <li>• Cost per Service Unit/flight</li> <li>• Indirect costs as a % of total costs</li> <li>• Average cost per FTE.</li> </ul>	<p>This is feasible, depending on a clear request from NMB. Nevertheless, such information is already available to the NMB through the NPP (cost per service unit) and through the budget papers and budget outturns (indirect costs as a % and average cost per FTE). This information was provided to the consultants.</p>	<p>We welcome the Network Manager’s comment that this is feasible. We note that, regardless of whether information is available to the NMB from other sources, it should be reported to the NMB on a regular basis if an effective working relationship between the Network Manager and its Board is to be established.</p>



Draft finding/ recommendation	Network Manager comment	Steer Davies Gleave response
<p>Recommendations X</p> <p>Regardless of whether the designation is subject to competitive tender, re-designation of Eurocontrol should be subject to the organisation preparing and submitting a tender to undertake the role.</p> <p>The European Commission should lead the preparation of a tender specification, drawing on the detailed specification prepared in 2016/ 2017 and relevant industry expertise, to include:</p> <ul style="list-style-type: none"> <li>• A contract for the delivery of the NM functions and tasks over the next [two] RPs</li> <li>• A service level agreement, defining a series of financial and operational KPIs</li> <li>• Performance incentives linked to the KPIs, as appropriate.</li> </ul>	<p>This recommendation makes the assumption that a tender will be organised. This needs to be clarified by the EC. The preparation of the tender specifications should also include Network Management expertise, as required, to preserve the fully network interests.</p> <p>The “contract” and SLA might be possible after the designation of Eurocontrol and could be based on aspects already included in the NPP and on additional elements, if required. The performance incentives could also be part of the NPP.</p>	<p>We emphasise that implementation of this recommendation is not conditional on a competitive tendering process being introduced. In our view, a single tender process would provide for greater discipline than the designation process in 2011, although it would not generate the same incentives for cost efficiency as a full competitive tender.</p> <p>Introducing the contract and SLA after the designation would be self-defeating – the aim would be to ensure that Eurocontrol responded to the contractual requirements as part of the designation process.</p>
<p>Recommendations XI</p> <p>In submitting a tender, any applicant should be required to prepare:</p> <ul style="list-style-type: none"> <li>• A proposed unit rate sufficient to cover the expected costs of delivery</li> <li>• A delivery plan, explaining how it intends to deliver the contract requirements efficiently and effectively for the unit rate indicated</li> <li>• A resource plan and financial model supporting the unit rate and delivery plan.</li> </ul>	<p>This recommendation makes the assumption that a tender will be organised. This needs to be clarified by the EC. NM strongly contests any declarations being made to introduce a market discipline into sovereignty-based functions and sees the recommendations of a full commercial tender as a means to a priori exclude Eurocontrol from applying.</p> <p>It is important to note that the contractor disregards that network functions are “services of general interest” and the provision of air traffic services, being connected with the exercise of the powers of a public authority, which are not of an economic nature justifying application of rules of competition (EU Regulation 550/2004).</p>	<p>We agree that the introduction of a competitive tendering process will require clarity in terms of scope and timing.</p> <p>We do not accept that introducing competitive discipline into the designation process is incompatible with ensuring sovereignty of airspace, although we accept that the unique role of the Network Manager has implications for the design of such a process.</p> <p>We do not accept that competitive tendering would mean that Eurocontrol was precluded from the process – indeed, its participation would in our view be essential for a competitive bidding environment.</p> <p>We have discussed the legislative position with the Commission and, subject to legal advice to the contrary, do not accept that the definition of the network functions as services of general interest would preclude a competitive tender. The services in question are, by their nature, a natural monopoly in economic terms and cannot therefore be provided through a normally functioning competitive market. However, this does not mean that they could not be provided under a contract awarded following a competitive tender.</p>

## H Response to Network Manager comments on the draft final report



Date: 29<sup>th</sup> May 2016  
Ref.: NMD-D/4521  
Subject: Review of the Network Manager  
Contact: J. SULTANA  
Direct Line: + 32 (0)2 729 9155  
Encl.:

Simon ELLIS  
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Steer Davies Gleave  
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Dear Mr Ellis,

I refer to the draft final review of the Network Manager and your request for final comments. The first part of this letter contains the Network Manager's general comments of the study, whereas more detailed comments are available in Annex. These comments are intended to support the constructive development of recommendations which will move European ATM forward in the next decade.

1. The draft Report covers a highly complex substance and arrives at far-reaching short-, and medium- to long-term draft recommendations. Given the implications of the recommendations for EUROCONTROL's current functionality, and the Network Manager's role as integral pillar of the SES architecture, it would appear more appropriate if further clarifications could be discussed with EUROCONTROL before presenting the results to European Commission.
2. Extensive contributions have been made by the Network Manager both during the study and subsequent to the presentation of the draft findings and recommendations. Some of the contributions of the Network Manager have been selectively annexed to the Report, others not taken into consideration at all, without any further explanation, and others have been apparently misunderstood without any questions for clarification. The comments made by the Network Manager to date and additional comments to be provided separately aim at providing arguments to ensure that the Report is more consistent and in itself accurate. The right recommendations based on a balanced consideration of NM contributions will be an important step in the further evolution of the Network Manager.

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For example, the issues of conflict of interest have been reduced to a requirement to sign some data confidentiality document by the NMB members and misinterpreted into an apparent lack of transparency from the Network Manager. While it can be stated that the Network Manager has never withheld any information requested, the review should address proposals for avoiding conflict of interest in the NM governing body in which currently ANSPs and airspace users are represented.

3. Several statements and conclusions of the Report are still not substantiated by the findings of the Report itself. For example, despite several verbal and written contributions, the Report still confuses non-EU States, which from the start of NM have been part of the network performance delivery, and other 3rd countries for which a CBA is needed to include them in the NM operations. It makes no sense to calculate separately the cost of providing the NM service to Non-EU ECTL States when the system was set up to include these states in the first place.
4. The Report should provide an at least descriptive, if not analytical overview of the environment and context within which a Network Manager operates; such an overview is a pre-requisite for an understanding of the effects of the recommendations. Surprisingly enough, while the Report recognizes the NM is a unique entity, it then proceeds to qualify it by drawing comparisons with entities which are fundamentally different in terms of legal form, structure and costs.

The lack of any consideration of the context within which the Network Manager operates is more significant considering the previous comments of the Network Manager on these issues, such as the public service nature of a number of NM functions and its impact on the governance, work program and ways of working (airspace management, route design, representation of states in governance, ensuring state sovereignty is respected, working with states during crisis, acting on behalf of states in rejecting flight plans, network planning of major military deployment scenarios and cross border military exercise coordination). It is essential that recommendations take good account of this important consideration.

5. The Report makes recommendations affecting the whole Network Manager concept without the recognition of the increased performance delivered to date. In addition, while the Report dwells at length on the apparent disadvantages of having the NM function within EUROCONTROL, there is no analysis of the advantages. Although acknowledging that the terms of reference did not require such an overall performance review, recommendations which question the whole structure cannot be separated from issues of performance, impartiality and public service.
6. Finally, the legislation applicable to the NM and of its work program should have been thoroughly analyzed. In the absence of an analysis of the legislative framework, readers who are not fully aware of the detailed legal requirements, or of the manner in which the NM adheres to them, can be misled. The Report furthermore does not address the legislative measures and enabling or disabling factors that would be required to ensure the legal feasibility of implementing the recommendations.
7. The draft report concludes that a benchmark comparison of NM is not possible as there is no clear network definition in the current legislation. It would have been beneficial that the review addressed both current

requirements and needed future tasks for the benefit of Europe in order to support a better assessment of the cost benefit of the NM.

Overall, the report seems to be driven by a pre-determined principle approach, namely that public functions would be better provided if done by the private sector under market conditions, whereas elsewhere in the document (§ 4.42) it recognizes that NM functions are '*quasi-regulatory and/or services that cannot be provided by competitive markets*'.

To conclude, the Network Manager was looking forward to seeing recommendations on how to streamline the network management and governance processes, given the designation of EUROCONTROL as the Network Manager. Recommendations on how to achieve better cost efficiency would also be welcome. However recommendations driven by preconceived views of EUROCONTROL without addressing the indisputable merits of EUROCONTROL to deliver Network Management functions puts into question the study's usefulness as a basis for developing long-term structural changes to ensure sustainable performance improvements.

Yours sincerely,

A handwritten signature in blue ink, consisting of several loops and a long horizontal stroke extending to the right.

Joe Sultana  
Director Network Manager

Cc.: Mr Castelletti, Head of Unit SES, DG MOVE, European Commission  
Mr Waldner, Deputy Head of Unit SES, DG MOVE, European Commission

2 June 2016

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**Client Ref.** NMD-D/4521  
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Dear Mr Sultana

## Review of the Single European Sky Network Manager

Thank you for your letter providing comments on our draft final report. While there are clearly significant differences between us on the findings and recommendations, we are very grateful to you and your team for the time you have taken to review the report in detail, and for your support during the five months of the review. In view of your obvious concerns, we thought it appropriate to set out our response in writing.

In the remainder of this letter, I provide a response to each of the points you raise. For ease of reference, the numbering of the following paragraphs corresponds to that in your letter.

1. We agree that the review has covered a complex area, and recognise that a number of our recommendations indicate a need for far-reaching change. In our view, they are based on a thorough review of the evidence made available to us by the Network Manager and other parties, and we consider that this has been accurately reported. Further, while the report highlights a number of areas of uncertainty, for example in the relationship between the Network Manager's Work Programme and the functions and tasks defined in legislation, we consider that these serve to demonstrate our general finding that there is a need for greater clarity and transparency in both the definition and reporting of the Network Manager's activities.
2. As already noted, we are grateful for the contributions made by the Network Manager throughout the study, and we have taken account of your detailed comments in finalising the report. However, as an independent consultant responsible for undertaking the review, we must be free to present our analysis and findings in a way that we consider appropriate in order to meet our Terms of Reference, drawing on the evidence provided by all parties to the extent that we consider it relevant. All of the Network Manager's specific comments on our draft findings and recommendations, together with our response, were presented in full in an annex to the draft report. In addition, as indicated below, we would like to suggest that your letter and this response are also included as an annex to the final published report.

On the particular question of conflicts of interest, for the reasons set out in the report we are not persuaded that this is currently a material issue. More specifically, we note that if a competitive procurement process were to be introduced in the future, we would anyway expect relevant financial and other data to be made fully transparent to all bidders. We also note that a conflict of interest in relation to such a process could only arise if and when the Commission formally launched the competition, prior to which it remains hypothetical. As to the question of the adequacy of our recommendation in this area, we suggest that this can only be assessed once specific proposals for a Data and Confidentiality Policy Statement have been tabled. The report also states that the Network Manager should be consulted on the scope and content of the document. Finally, in response to your statement that the Network Manager has never withheld information requested, we are bound to observe that members of the Network Management Board with whom we have engaged in the course of the study do not agree.

3. We do not accept that the report confuses the issue of non-EU states. In our view, the key distinction is between Member States participating in the Single European Sky (SES) and those that do not. Since the Network Manager is, as you say, an integral pillar of the SES, it surely follows that the net benefit of extending the geographical scope of the Network Manager's functions and tasks beyond the SES geography ought to be demonstrated. Moreover, regardless of the position in legislation, several stakeholders, including those represented on the Network Management Board, continue to question whether activity relating to third countries is justified. We suggest that the best way of addressing challenges of this kind would be to respond to them directly with a robust analysis of costs and benefits.
4. Any report of the kind we have prepared is constrained to some extent in terms of content, and it will always be possible to expand on the material presented. However, we consider that the description of the Network Manager's role and governance arrangements presented in Chapter 3 provides sufficient context for a proper understanding of the issues discussed subsequently. Further, we see no contradiction in recognising the unique characteristics of the Network Manager while comparing it to other pan-European bodies with responsibilities defined in European Union legislation. In our view, notwithstanding their different roles, a comparison with these organisations offers useful insights into the current governance arrangements for the Network Manager, in particular the benefits of establishing it as a legal entity in its own right. Further, to state that the Network Manager cannot be compared with any other organisation, as your comments imply, is to suggest that nothing useful can be learned by looking outside the organisation, a view which we reject.

We note your comments in relation to the public service nature of the Network Manager's role, and we confirm that we have considered the implications carefully in framing our recommendations. In our view, none of our recommendations is inconsistent with the concept of public service provision, and legal separation coupled with the development of a more detailed specification of the Network Manager's role could only help to give greater focus on, and definition of, the service. The pan-European agencies discussed in the report also undertake key public service functions in support of the development of network-based sectors, making them particularly relevant for the purposes of comparison.

5. The report provides a clear account of the Network Manager's performance, drawing on a range of published material, in Chapter 7. While no doubt more could be written, we consider

the discussion is balanced and gives appropriate weight to what is only one aspect of our Terms of Reference. We do not accept that the report dwells on the disadvantages of having the Network Manager role within Eurocontrol. Rather we have focused on whether the governance, financial and reporting arrangements are sufficiently clear, transparent and effective to ensure that the role is undertaken efficiently in line with SES objectives. We stress that we do not consider that implementation of any of the recommendations would prevent Eurocontrol from continuing to undertake the role of Network Manager in the future. Indeed, we suggest that the organisation's proactive and constructive engagement in their implementation could only strengthen the case for its re-designation.

6. A full analysis of the relevant legislative framework is beyond the scope of our Terms of Reference and could only have been carried out by legal advisers. However, our findings and recommendations have been developed after careful examination of the provisions of the Implementing Rules, the Nomination Decision and other legislation. Where we consider that implementation of our recommendations would have implications for legislation we have highlighted this in the report, noting that we are not in a position to give legal advice. At the same time, we note that our Terms of Reference do not require us to restrict our recommendations to proposals that would not require legislative change.
7. Our Terms of Reference did not include a requirement to consider how the role of the Network Manager might develop, although we suggest that the development of a more detailed specification of the functions and tasks would provide a useful starting point for such an exercise.

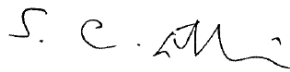
Finally, we reject the suggestion that the report has been driven by a pre-determined view that the role of the Network Manager would be better undertaken by the private sector. Of the 14 recommendations made, only one relates to the potential for competitive procurement, and that is restricted to proposals for further investigation of the requirements for such a process. The report does not include any recommendation to the effect that the provision of the Network Manager's functions and tasks should be subject to competitive tender. Indeed, it highlights a number of important issues that would need to be investigated further before any such process could be introduced.

To conclude our response, we consider that implementation of our recommendations would result in far more effective governance and financial oversight of the Network Manager than has been the case hitherto. Moreover, far from undermining Eurocontrol's ability to undertake the role in future, we believe that adoption of our proposals would help to improve the relationship with the Network Management Board and other stakeholders, a relationship that at times has clearly been strained in the past. In our view, this is essential if the Network Manager is to continue to make a strong contribution to the development of the SES.



As already noted, in the interests of transparency we suggest that your letter, together with this response (as well as your earlier comments and our responses relating to the draft findings and regulations) should be included in an annex to our final published report. This would ensure that readers would have the opportunity to assess our respective views and draw their own conclusions about the validity of our findings and recommendations. Perhaps you could indicate whether you would be happy with this approach. For the avoidance of doubt, we would obviously not include any of these documents without your consent.

Yours sincerely



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cc      Olivier Waldner, European Commission  
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