2nd Revision

FAB Performance Plan

FABEC

Second Reference Period (2015-2019)

Signatories

Performance plan details	
FAB Name	FABEC
Version number	3.0
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Table of Content

Mapping between the template for the FAB performance plan and Annex II of the performance Regulation

IMPORTANT NOTE FOR SECTION 3.1.(d) – Cost-efficiency:

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
    - The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
    - The entries and justification requiring data from external sources i.e.
        - The traffic forecast used and, if applicable, their justification against STATFOR
        - The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
    - The local alert thresholds, if any, and their justification.
    - A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
    - The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
    - The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

A detailed list of the information to be provided in the body of the performance plan and Annex C will be found in Paragraph 3.1(d) below, showing that duplication has been avoided and workload reduced to the minimum required by the performance and charging Regulations.

Annex C forms an integral part of the performance plan and will be used to carry out the assessment of the performance plan.

The table below shows the correspondence between Annex II of EU Regulation 390/2013 and the Performance Plan template with its Annexes.

Structure of ANNEX II of the performance Regulation	Link with PRB Performance Plan template			
	Body of Performance Plan	Annex C For cost-effiency		Other annexes
		RT ref.	AI ref.	
1. INTRODUCTION	1			
1.1. Description of the situation (scope of the plan, list of air navigation service providers covered, etc.).	1.1.			
1.2. Description of the macroeconomic scenario for the reference period including overall assumptions (traffic forecast, etc.)	1.2.			
1.3. Description of the outcome of the stakeholder consultation in order to prepare the performance plan and the agreed compromises as well as the points of disagreement and the reasons for disagreement.	1.3.			Annex A
1.4. Description of the actions taken by air navigation service providers to implement the Network Strategy Plan at functional airspace block level and other guiding principles for the operation of the functional airspace block in the long term perspective..	1.4.			Annex B

1.5. List of airports submitted to the performance scheme in application of Article 1 of the Regulation, with their average number of IFR air transport movements.	1.5.			
1.6. List of exempted airports pursuant to Article 1(5) of Implementing Regulation (EU) No 391/2013 together with their average number of IFR air transport movements.				
2. INVESTMENT	2			Annex D
2.1. Description and justification of the cost, nature and contribution to achieving the performance targets of investments in new ATM systems and major overhauls of existing ATM systems, including their relevance and coherence with the European ATM Master Plan, the common projects referred to in Article 15a of Regulation (EC) No 550/2004, and, as appropriate, the Network Strategy Plan.				
2.2. The description and justification referred to in point 2.1 shall in particular:				
(i) relate the amount of the investments, for which description and justification is given following point 2.1, to the total amount of investments;				
(ii) differentiate between investments in new systems, overhaul of existing systems and replacement investments;				
(iii) refer each investment in new ATM systems and major overhaul of existing ATM systems to the European ATM Master Plan, the common projects referred to in Article 15a of Regulation (EC) No 550/2004, and, as appropriate, the Network Strategy Plan;				
(iv) detail the synergies achieved at functional airspace block level or, if appropriate, with other Member States or functional airspace blocks, in particular in terms of common infrastructure and common procurement;				
(v) detail the benefits expected from these investments in terms of performance across the four key performance areas, allocating them between the en route and terminal/airport phases of flight, and the date as from which benefits are expected;				
(vi) provide information on the decision-making process underpinning the investment, such as the existence of a documented cost-benefit analysis, the holding of user consultation, its results and any dissenting views expressed.				
3. PERFORMANCE TARGETS AT LOCAL LEVEL	3			
3.1. Performance targets in each key performance area, set by reference to each key performance indicator as set out in Annex I, Section 2, for the entire reference period, with annual values to be used for monitoring and incentive purposes:	3,1			
(a) Safety	3.1.(a)			

(i) level of effectiveness of safety management: local targets for each year of the reference period;	3.1.(a).(i)			
(ii) application of the severity classification based on the Risk Analysis Tool (RAT) methodology: local targets for each year of the reference period (percentage);	3.1.(a). (ii)			
(iii) just culture: local targets for the last year of the reference period.	3.1.(a). (iii)			
	3.1.(a). (iv) - Optional section - Additional Safety KPI(s)			
(b) Environment	3.1.(b)			
(i) description of the process to improve route design;	3.1.(b).(i) & (ii)			
(ii) average horizontal *en route* flight efficiency of the actual trajectory.				
	3.1.(b).(iii) - Optional section - Additional Environment KPI(s)			
(c) Capacity	3.1.(c)			
(i) minutes of average *en route* ATFM delay per flight;	3.1.(c).(i)			
(ii) minutes of average terminal ATFM arrival delay per flight;	3.1.(c).(ii)			
(iii) the capacity plan established by the air navigation service provider(s).	3.1.(c).(iii)			
	3.1.(c).(iv) - Optional section - Additional Capacity KPI(s)			
(d) Cost-efficiency	3.1.(d)			
(i) determined costs for *en route* and terminal air navigation services set in accordance with the provisions of Article 15(2)(a) and (b) of Regulation (EC) No 550/2004 and in application of the provisions of Implementing Regulation (EU) No 391/2013 for each year of the reference period;	3.1.(d).1.A 3.1.(d).2.A			
(ii) *en route* and terminal service units forecast for each year of the reference period;	3.1.(d).1.A 3.1.(d).2.A 3.1.(d).1.C 3.1.(d).2.C	RT 1 (5.4)		
(iii) as a result, the determined unit costs for the reference period;	3.1.(d).1.A 3.1.(d).2.A	RT 1 (5.5)		
(iv) description and justification of the return on equity of the air navigation service providers concerned, as well as on the gearing ratio and on the level/composition of the asset base used to calculate the cost of capital comprised in the determined costs;		RT 1 (3.1-3.4, 3.6)	AI 1 e)	
(v) description and explanation of the carry-overs from the years preceding the reference period;		RT 1 (3.1-3.4, 3.6)	AI 3 c), d), e)	

(vi) description of economic assumptions, including: — inflation assumptions used in the plan as compared to an international source such as the IMF (International Monetary Fund) Consumer Price Index (CPI) for the forecasts and Eurostat Harmonised Index of Consumer Price for the actuals. Justification of any deviation from these sources,	3.1.(d).1.B 3.1.(d).2.B	RT 1 (5.1-5.2)		
— assumptions underlying the calculation of pension costs comprised in the determined costs, including a description on the relevant national pension regulations and pension accounting regulations in place and on which the assumptions are based, as well as information whether changes of these regulations are anticipated,			AI 4 b)	
— interest rate assumptions for loans financing the provision of air navigation services, including relevant information on loans (amounts, duration, etc.) and explanation for the (weighted) average interest on debt used to calculate the cost of capital pre tax rate and the cost of capital comprised in the determined costs,		RT 1 (3.7)	AI 4 c)	
— adjustments beyond the provisions of the International Accounting Standards;			AI 1 Item c)	
(vii) if applicable, description in respect to the previous reference period of relevant events and circumstances set out in Article 14(2)(a) of Implementing Regulation (EU) No 391/2013 using the criteria set out in Article 14(2)(b) of Implementing Regulation (EU) No 391/2013 including an assessment of the level, composition and justification of costs exempt from the application of Article 14(1)(a) and (b) of Implementing Regulation (EU) No 391/2013;		RT 3 (3.1-3.12)	AI 3 b)	
(viii) if applicable, a description of any significant restructuring planned during the reference period including the level of restructuring costs and a justification for these costs in relation to the net benefits to the airspace users over time;		RT 3 (4.1)	AI 4 d)	
(ix) if applicable, restructuring costs approved from previous reference periods to be recovered.		RT 3 (4.1)	AI 4 e)	
3.2. Description and explanation of the consistency of the performance targets with the relevant Union-wide performance targets. When there is no Union-wide performance target, description and explanation of the targets within the plan and how they contribute to the improvement of the performance of the European ATM network.	3.1.(a).(i) 3.1.(a). (ii) 3.1.(a). (iii) 3.1.(a). (iv) 3.1.(b).(i) & (ii) 3.1.(b).(iii) 3.1.(c).(i) 3.1.(c).(ii) 3.1.(c).(iii) 3.1.(c).(iv) 3.1.(d).1.A 3.1.(d).2.A	RT 3 (4.1)	AI 4 e)	

3.3. Description and explanation of the interdependencies and trade-offs between the key performance areas, including the assumptions used to assess the trade-offs.	3,3			
3.4. Contribution of each air navigation service provider concerned to the achievement of the performance targets set for the functional airspace block in accordance with Article 5(2)(c)(ii).	3.1.(a).(i) 3.1.(a). (ii) 3.1.(a). (iii) 3.1.(a). (iv) 3.1.(b).(i) & (ii) 3.1.(b).(iii) 3.1.(c).(i) 3.1.(c).(ii) 3.1.(c).(iii) 3.1.(c).(iv)	RT 1 (All)	AI 4 a)	
4. INCENTIVE SCHEMES	4			
4.1. Description and explanation of the incentive schemes to be applied on air navigation service providers.	4,1			
5. MILITARY DIMENSION OF THE PLAN	5			
Description of the civil-military dimension of the plan describing the performance of FUA application in order to increase capacity with due regard to military mission effectiveness, and if deemed appropriate, relevant performance indicators and targets consistent with the indicators and targets of the performance plan.				
6. ANALYSIS OF SENSITIVITY AND COMPARISON WITH THE PREVIOUS PERFORMANCE PLAN	6			
6.1. Sensitivity to external assumptions.	6,1			
6.2. Comparison with previous performance plan.	6,2			
7. IMPLEMENTATION OF THE PERFORMANCE PLAN	7			
Description of the measures put in place by the national supervisory authorities to achieve the performance targets, such as:				
(i) monitoring mechanisms to ensure that the ANS safety programmes and business plans are implemented;				
(ii) measures to monitor and report on the implementation of the performance plans including how to address the situation if targets are not reached during the reference period.				

SECTION 1: INTRODUCTION

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1 - INTRODUCTION

1.1 - The situation

NSAs responsible for drawing up the Performance Plan	Belgian Supervisory Authority for Air Navigation Services (BSA-ANS), Belgium; Direction du Transport Aérien, France; Bundesaufsichtsamt für Flugsicherung, Germany; Direction de l'Aviation Civile, Luxembourg; Ministry of Infrastructure and the Environment, the Netherlands; Bundesamt für Zivilluftfahrt, Switzerland.
NSA responsible for the coordination within the FAB	FABEC Financial & Performance Committee (FPC) as responsible body of FABEC for drawing up this performance plan
List of accountable entities	- National states authorities of the 6 FABEC states - 7 ANSPs: Belgocontrol, Belgium; Direction des Services de la Navigation Aérienne (DSNA), France; DFS Deutsche Flugsicherung GmbH (DFS), Germany; Administration de la Navigation Aérienne (ANA), Luxembourg; Air Traffic Control The Netherlands (LVNL), the Netherlands; Skyguide, Switzerland; Maastricht Upper Area Control Centre (MUAC), BENELUX and Germany. - 4 MET-ANSPs: Météo France, France; Deutscher Wetterdienst (DWD), Germany; Royal Netherlands Meteorological Institute (KNMI), the Netherlands; Office Féderal de la Météorologie et de Climatologie MétéoSuisse, Switzerland.
Geographical scope	The 6 FABEC states: Belgium, France, Germany, Luxembourg, the Netherlands and Switzerland (for the calculation of the operational KPIs, the operational area of responsibility of the ANSPs has to be taken into account)

Additional comments	

1.2 - Description of the macroeconomic scenario including overall assumptions

Macroeconomic Scenario

During the last years the macroeconomic situation in Europe was strongly affected by the financial and sovereign debt crisis and the growing uncertainty on international financial markets. Currently, these tensions seem to ease due to low interest rates and an ample supply of liquidity. At the same time, permanent low interest rates pose a growing risk towards financial stability as they leave only little room for central banks monetary policy. On the other hand low capital market rates increase the threat that the search for interest yield involving higher investment risks will result in an overestimation and a further tension on the international financial markets. If only low capital market rates and therefore only small returns on investments are realised it is difficult to meet ongoing commitments especially if they guarantee a minimum return like pension funds. It is e.g. increasingly expensive to guarantee the legal obligations of pension funds. Addressing these risks it is necessary to provide what we consider a realistic picture of the macroeconomic developments in the second reference period.
The expectations on economic growth, inflation, traffic forecasts etc. used in the performance plan are based on the forecasts of the International Monetary Fund (World Economic Outlook (04/2015)) and STATFOR as well as the national sources cited below.

Economic Growth
Whereas global growth was a modest during 2014 (3.4%) and expected to slightly improve further (3.5% in 2015), largely on account of the recovery of advanced economies, the assessment for Europe is less positive. IMF expects a less optimistic but overall positive annual growth in Europe of 1.4% in 2014, 1.8% in 2015, and 1.9% for the years 2016 to 2019.
While Germany was considered as save haven since sovereign debt crises began, also its export-dependency strengthened GDP growth in 2014 (1.6%), it is expected to develop slightly under Europe-average growth rates during RP2 (2015: 1.6%; 2016: 1.7%; 2017: 1.5%; 2018: 1.3%; 2019: 1.3%). Nevertheless , German macroeconomic environment seems to be robust as it will profit further from global economic recovery and a favourable investment climate. Also private consumption is seen as stimulant for economic activity due to a further increase in wages, a constant high level of employment (unemployment rate under 5.0% over RP2) and moderate inflation rates.
For the Netherlands IMF expects a moderate growth rate of around 2% in RP2: 2015: 1.62%; 2016: 1.75%; 2017:1.83%; 2018: 1.95%; 2019: 2.05%. The April 2015 IMF WEO figures are slightly below yhese levels: 2015: 1.56%; 2016: 1.56%; 2017: 1.7%; 2018: 1.74%; 2019: 1.83%.
Belgium (based on the data of Planbureau) In 2014 the Belgian economic growth was positive (+ 1 %) and better than 0,9% in the Euro zone. The potential economic growth is expected to be 1,2% in 2015, 1,6% in 2016 and 1,6% for the period between 2017 and 2020.In the Euro zone the economic growth is expected to be better with 1,5% in 2015, 1,8% in 2016 and 1,6% for the period between 2017 and 2020.
The economy in Luxembourg grew 2.9 % in 2014. The growth rate for RP2 is estimated at 2015: 2.5%; 2016: 2.3%; 2017: 2.3%; 2018: 2.2%; 2019: 2.2%; 2020: 2.2%.
Switzerland, like the rest of most European countries, faces an economic crisis since the End of 2008. As tangible consequences the traffic dropped, the interest rates fell, but the Swiss franc strenghtened, playing the role of shelter currency. Following the anouncement of the Swiss National Bank on January 15th 2015 to drop the minimum exchange rate 1€ = 1.20 CHF the Swiss francs is even more strenghtened against EUR. The near and medium-term macroeconomic outlook for Switzerland has been considerably deteriorated since our first submission in June 2014. As a consequence Switzerland undertook changes in assumptions linked with items outside from its control (exchange rates, inflation rates).
Despite an unfavourable European economic context, France's growth rate remained positive (0.36%). In regard with the modest economic recovery in Europe, forecasted growth rate in France is greater than 1%. During next five years RP2 (2015-2019), growth rate forecasted is growing constantly: 1.16 (2015), 1.49 (2016), 1.70 (2017), 1.79 (2018), 1.86 (2019).

Inflation

Inflation is expected to develop moderately during the second reference period in Europe.From 0.029% in 2015 to 1.753% n 2019 a slight rising tendency can be seen. As mentioned above, this is due to the easing of tensions on international financial markets and the recovery of economic growth.
Based on the IMF World Economic Outlook of April 2014, annual inflation rates of 1.36% in 2015, 1.6% in 2016 and 1.7% for the last three years of RP2 are expected for Germany.
For the Netherlands IMF expected in its April 2014 WEO the following low inflation tendency: 2015: 1.00%; 2016: 1.24%; 2017: 1.44%; 2018: 1.49%; 2019: 1.51%. The April 2015 IMF WEO shows lower inflation rates in the first 3 years and comparable inflation rates in 2018 and 2019. Because of the volatility of low inflation rate the inflation rates included in the cost efficiency performance plan of the Netherlands have not been changed.
In 2014 inflation in Belgium was considerably low with 0.5% (source IMF). IMF expects inflation to remain low over the whole RP2: 2015: 0.06%; 2016: 0.92%; 2017: 1.15%; 2018: 1.36%; 2019: 1.58%.

low over the whole RP2: 2015: 0.00%; 2016: 0.92%; 2017: 1.15%; 2018: 1.36%; 2019: 1.58%.
For Luxembourg the IMF expects the inflation rate to remain (under) 2 % during RP2: 2015: 0.47%; 2016: 1.60%; 2017:1.68%; 2018: 1.87%; 2019: 2.03%.
The Swiss inflation rates forecasts for 2015-2019 were revised during Q1 2015 by the Swiss Federal Statistical Office and IMF. The inflation rates for Switzerland's RP2 2nd draft are : -1.0% (2015), 0.0% (2016), 0.5% (2017), 1.0% (2018), 1.0% (2019).
In 2014, inflation in France has reached 0.62% while it was planned 1.75% in the performance plan. This gap is due especially to the international economic context. Without external economic events, a slight economic recovery is expected during RP2 and enhanced thanks to moderate inflation rates. According to IMF forecasts in France, the following values are expected during RP2: +0.11% (2015), +0.83% (2016), +1.09% (2017), +1.24%(2018), +1.45% (2019).

Traffic volume

The presented overall assumptions have substantial influence on the demand for air navigation service provision and therefore affect the performance of the ANSPs especially in the KPAs Capacity and Cost-Efficiency. As FABEC is the busiest European FAB it is very sensitive to changes in demand compared to plan. The actual STATFOR seven-year forecast on IFR movements and service units published in February 2015 points out three scenarios for FABEC with an average annual growth rate in IFR movements during RP2 of 3.0% (high), 2.0% (base) and 0.7% (low). The number of en-route service units depends on the total number of IFR movements. Whereby the higher the weight of the aircraft and the greater the distance flown within the respective charging zone (based on the great-circle distance) the higher the number of service units. Anticipating the trend of carriers to use larger aircrafts to handle an increase in passenger numbers, the number of IFR service units develops slightly over the number of IFR flights. STATFOR presented an average annual growth rate of 3.4% (high), 2.4% (base) and 1.1% (low) in IFR service units during RP2.
The traffic forecast for Germany is based on February 2015 STATFOR low scenario with a growth rate of -0.04% in 2015, 2.0% in 2016, 0.5% in 2017, 0.9% in 2018 and 2019 respectively a plus of 559 thousand IFR service units from 2014 (12,806 TSU) to 2019 (13,365 TSU). The IFR service units designated by STATFOR include about 65,000 service units for military flights per annum. These are refunded to DFS by the OAT cost agreement and may not be used for the traffic forecast. For terminal service units an annual growth of 1.3% (2015), 1.8% (2016), 0.4% (2017), 1.0% (2018), and 1.2% (2019) is assumed. This means an increase in the total number of terminal service units from 1,316 TSU (2014) to 1,392 TSU (2019) by about 76 TSU. For the sake of completeness it should be noted that the terminal service units designed by STATFOR exclude about 6 thousand service units for VFR flights per year, that were added to identify the accurate figures.
For the Netherlands growth rates in IFR movements of 3.2% (2015), 2.5% (2016), 2.1% (2017), 2.1% (2018), and 2.2% (2019) , based on the STATFOR base scenario February 2014, are used for capacity purposes. The growth rates of en route service units are based on the STATFOR low scenario 2.6% (2015), 0.7% (2016), 0.7% (2017), 1.0% (2018), and 1.0% (2019). The resulting number of en route service units are increased by 1% in order to take account of the higher than expected actual number of service units in 2014. The number of en route service units in the revised cost efficiency performance plan is slightly above the figures in the February 2015 low scenario. A substantially higher increase in the number of terminal service units than expected occurred in 2014 (+3.5%). Due to this increase the number of service units in 2016 and 2017 have been increased with an additional 1.1%, resp. 0.4%.
Belgium and Luxembourg have used the base scenario of STATFOR forecast of February 2015 for their common revised en route cost-efficiency target. Over the second reference period this represents an increase of traffic volume of 1.3% p.a. compared to the low scenario of STATFOR of February 2014 used in the initial performance plan (2.8% versus 1.5%). For the terminal service unit forecast the two states are regarded seperately. Belgium's terminal service units rise by 2.5% (2015), 2.0% (2016), 1.8% (2017), 2.3% (2018), 2.3% (2019) from 199.8 TSU (2015) to 217.1 TSU (2019). Luxembourg's terminal service units rise according to STATFOR base case scenario by 5.1% (2015), 5.1% (2016), 3.7% (2017), 4.8% (2018), 4.2% (2019) from 40.9 TSU (2015) to 48.8 TSU (2019).
The traffic forecast for Switzerland expects the following growth rates: En-route service units: 1.8% (2015), 1.2% (2016), 1.4% (2017), 1.5% (2018), 1.6% (2019). The number of service units forecasted over RP2 increased by +3.5% compared to the 1st draft. These forecasts are rather otpimistic according to historical trend (average traffic growth from 2001 to 2014 = +0.9%). Terminal Navigation Service Units forecasts were based on STATFOR February 2015 low growth: 0.5% (2015), 1.6% (2016), 0.9% (2017), 2.1% (2018), 2.1%

based on STATFOR February 2015 low growth: 0.5% (2015), 1.6% (2016), 0.9% (2017), 2.1% (2018), 2.1% (2019). These forecasts are optimistic according to historical trend (average traffic growth from 2001 to 2014 = -0.4%).
For France growth rates in IFR movements of 0.0% (2015), 1.8% (2016), 0.1% (2017), 0.6% (2018), and 0.7% (2019) are assumed by STATFOR low case scenario February 2015. The respective growth rates of en route service units are predicted at 0.9% (2015), 2.8% (2016), 0.6% (2017), 1.2% (2018), and 1.2% (2019). In total numbers this equals a rise from 18.5 million SU (2014) to 19.7 million SU (2019). Regarding terminal service units significantly higher growth rates are assumed during RP2: 2.5% (2015), 3.4% (2016), 0.3% (2017), 1.9% (2018), and 2.2% (2019). In total numbers this equals a rise from 1.06 million SU (2015) to 1.14 million SU (2019).

The risks to the presented assumptions are basically addressed in the sensitivity analysis. Potential consequences of terrorist attacks or natural disasters are not included in the traffic forecast or elsewhere in this document.

Institutional Context

Where EUROCONTROL since the seventies of the last century has developed from a governmental safety organization into an three pillared organization (SES, Network and SESAR/R&D) with a technical and financial focus, EASA has developed from an airworthiness safety organization to a safety organization encompassing the whole domain of aviation (airworthiness, operations, ATM and aerodromes), while the EU SES packages have undoubtedly had the biggest impact. Where the SES-I package has led to more harmonization, the ultimate objective of SES-II is to increase the economic, financial and environmental performance of the provisions of the Air Navigation Services in Europe, initially of the ANSPs, by now also towards the Airports. These changes in the ANS world lead to changes in the institutional framework, both for the users and the ANSPs.
Quantum leaps in performance under the safest, more cost- and flight-efficient and environmentally friendly conditions are only achievable by using the international dimensions of ANS to the utmost. The challenge to decrease delays and to serve increasing demand can only be taken up in international cooperation be it on FAB-level or on Pan-European scale.
The goals of SESAR can only be achieved by a very large extent of international cooperation and harmonization and systems compatibility. To meet the long term targets on cost efficiency a close cooperation, if not integration between the nationally organized ANSPs has to be developed. That cooperation will inevitably lead to a further rationalization of ANS-activities. In that perspective FABEC is not only a way of cooperation but also a very important means to realize the high level political EU goals in a very complex and densely used airspace.
In line with the FABEC States Treaty, the FABEC Council governs the FABEC. In order to meet the commitments of the contracting States under this Treaty, the FABEC Council is tasked with taking decisions in order to meet the objectives of the FABEC. The Council is assisted by a number of Committees, such as: (1) The Airspace Committee: assisting in ensuring the design and the management of a seamless airspace, as well as the coordinated air traffic flow and capacity management and the flexible use of airspace; (2) The Financial and Performance Committee: assisting in the charging policy and the performance of ANSPs; (3) The National Supervisory Authorities Committees.These committees shall be composed of civil and military experts appointed by the Member States. Based on this governance structure the point of contact for this FABEC Performance Plan is going to be the chairman of the Financial and Performance Committee (FPC).
The civil and military authorities of the six FABEC Member States, including the NSAs, the civil and military ANSPs, including the MET-ANSPs are more and more operating in a rapidly changing institutional context with an ever increasing international dimension. In all Key Performance Areas this international dimension is irreversibly growing.

The institutional context on the side of the ANSPs is described as follows:

ANA Luxemburg
Ownership: State of Luxembourg (Loi du 21.12.2007).

Financing: Airport users and State.
Supervision: Direction de l'Aviation civile (Loi du 19.05.1999).

Belgocontrol
Belgocontrol is a public autonomous enterprise, wholly owned by the Belgian State.
Governed by a law and a management contract with the Belgian State.
Belgocontrol's Supervisory Board is appointed by Royal Decree.

DFS
DFS is a limited liability company governed by commercial law and public law but wholly owned by the German Federal State.
The German MoT has provided DFS with an unlimited certificate (SES). The State has designated DFS as an ATS provider for en-route and terminal.
DFS Executive Board is overseen by a Supervisory Board (SB). In the SB the German government, the staff and the military is represented.

DSNA
DSNA is a government department operating under an autonomous budget.
DSNA is designated to provide ATS in the whole French FIR and at controlled airports.
DSAC is the National Supervisory Authority providing certification to DSNA. In the context of the performance scheme and on charging issues, the function of NSA is entrusted to the Air Transport Directorate (DTA). In addition, the Cour des Comptes runs an annual audit on the finance and accounting of the DGAC special Budget. The DGAC Budget (which covers DSNA expenses) is approved by the Parliament.

LVNL
LVNL is an autonomous governmental body founded by Civil Aviation Law with its own labour conditions and profit and loss account and balance.
Equity capital is 5% of total capital.
Operating and investment loan facilities by the Ministry of Finance.

1.3 - Stakeholder consultation

Number of Meetings	20

Meeting #1	
Name of meeting	DFS Investment Programme Consultation
Date	26 February 2014
Type of event	Consultation Meeting
Level	National
Stakeholders	see Annex A
Deadline for responses	none
Main issues	DFS Investment Programme, especially iCAS (iTEC Centre Automation System), RASUM 8.33 (Radio Site Upgrade and Modernisation), MaRS (Modernisation and replacement of Surveillance Infrastructure) and Remote Tower Control (RTC)
Actions agreed upon	see Annex A
Points of disagreement and reasons	see Annex A
Additional comments	

Meeting #2	
Name of meeting	German written Pre-Consultation Performance Planning RP2
Date	24 March 2014
Type of event	Written Consultation
Level	National
Stakeholders	see Annex A
Deadline for responses	7 April 2014
Main issues	see Annex A
Actions agreed upon	see Annex A
Points of disagreement and reasons	see Annex A
Additional comments	

Meeting #3	
Name of meeting	DSNA Strategic Consultation
Date	11 April 2014
Type of event	Consultation by DSNA on DSNA's roadmap : airspace management, technical program in connection with the deployment of SESAR, operational human resources management.
Level	National
Stakeholders	Direction du Transport Aérien (French NSA for performance) Airlines representatives : IATA, AEA, Easyjet, Air France, BAR France, FNAM
Deadline for responses	
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	

Meeting #4	
Name of meeting	Swiss Stakeholder Consultation on national chapters of the Performance Plan for RP2 2015 -2019 and status report on the national Performance Plan RP1
Date	16 April 2014
Type of event	Consultation Meeting
Level	National
Stakeholders	See Annex A
Deadline for responses	Possibility for stakeholders to submit additional written comments until April 25th, final comments to the draft minutes of the meeting possible until May 23rd
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	last information requested by stakeholders at the consultation meeting was sent to the meeting participants together with the final meeting minutes

Meeting #5	
Name of meeting	Stakeholder Consultation Meeting The Netherlands (including some pre-meetings)
Date	6 May 2014
Type of event	Stakeholder Consultation Meeting The Netherlands
Level	National
Stakeholders	Users (KLM, DLH, BA) and representative organisation of users (IATA)
Deadline for responses	
Main issues	see follow up action list
Actions agreed upon	see follow up action list
Points of disagreement and reasons	see follow up action list
Additional comments	

Meeting #6	
Name of meeting	FABEC Consultation on the Performance Plan for RP2
Date	23 May 2014
Type of event	Consultation Meeting
Level	FAB
Stakeholders	see Annex A
Deadline for responses	5 June 2014
Main issues	see Annex A
Actions agreed upon	see Annex A
Points of disagreement and reasons	see Annex A
Additional comments	

Meeting #7	
Name of meeting	Common BELUX stakeholder consultation meeting on en route costs, charges and investments
Date	27 May 2014
Type of event	Consultation by the Belgian and Luxembourg NSA´s (BAS, DAC) regarding the common part of the BELUX performance plan on en route costs, cost efficiency, and charges in the common FIR and charging zone
Level	National
Stakeholders	Airline representatives (IATA, AEA, Lufthansa)
Deadline for responses	4 June 2014
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	

Meeting #8	
Name of meeting	Belgian Users Consultation Meeting
Date	27 May 2014
Type of event	The Belgian CAA/NSA consultation of users representatives on terminal cost efficiency target, terminal capacity target and subsequent financial incentive scheme.
Level	National
Stakeholders	Users representatives of IATA and AEA including the representatives of Lufthansa and British Airways.
Deadline for responses	4 June 2014 for written comments.
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	See the minutes of the consultation

Meeting #9	
Name of meeting	German national Consultation on RP2 targets
Date	5 June 2014
Type of event	Consultation Meeting
Level	National
Stakeholders	see Annex A
Deadline for responses	Possibility for stakeholders to submit additional written comments until the end of the Performance Planing process (end of June), final comments to the draft minutes of the meeting possible until 19 June 2014.
Main issues	see Annex A
Actions agreed upon	see Annex A
Points of disagreement and reasons	see Annex A
Additional comments	

Meeting #10	
Name of meeting	French Cost-efficiency consultation
Date	6 June 2014
Type of event	Consultation by DTA (French NSA for performance) regarding national parts of the FABEC performance plan regarding en route and terminal cost efficiency, national arrival ATFM delay target and relevant financial incentive scheme.
Level	National
Stakeholders	DSNA (French ANSP) Airlines representatives : IATA, FNAM, Air Canada, Air France, British Airways, KLM, Lufthansa
Deadline for responses	
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	

Meeting #11	
Name of meeting	Comité technique DGAC, item 1 of the agenda : Plan de performance RP2
Date	6 June 2014
Type of event	Consultation by DGAC of Staff representatives regarding the FABEC Performance Plan and proposed FABEC and national targets in all performance areas (safety, environment, capacity, cost efficiency) and incentive schemes.
Level	National
Stakeholders	DGAC DSNA (French ANSP) DSAC (French NSA for safety) DTA (French NSA for performances) Staff representatives : CFDT, CGT, FO, SNCTA, UNSA
Deadline for responses	
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	

Meeting #12	
Name of meeting	Luxembourg Stakeholder consultation meeting on terminal costs and targets
Date	18 June 2014
Type of event	Consultation by DAC regarding the national part of the FABEC performance plan on terminal costs, cost efficiency, and TNC related issues from Luxembourg airport perspective.
Level	National
Stakeholders	Airport User Committee (AUC) and airline representatives
Deadline for responses	30 June 2014
Main issues	Terminal costs and charges, ANSP investments, capital costs and depreciation, NSA costs, charging formula impact in comparison to current charging system
Actions agreed upon	Follow up meeting with stakeholders planned on 10 July 2014
Points of disagreement and reasons	Higher charges due to EU charging formula on light aircrafts whereas lower charges apply to heavy aircrafts
Additional comments	Meeting agreed to investigate modulation of terminal charges in accordance with Art. 16 IR (EU) 391/2013 taking into account ongoing EC studies

Meeting #13	
Name of meeting	Belgian Staff Consultation Meeting
Date	24 June 2014
Type of event	The Belgian CAAs/NSAs consultation of staff representatives on en route cost efficiency target, on terminal cost efficiency target, terminal capacity target and subsequent financial incentive scheme.
Level	National
Stakeholders	Staff representatives of Belgocontrol
Deadline for responses	24 June 2014
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	See the minutes of the consultation

Meeting #14	
Name of meeting	DSNA Strategic consultation meeting
Date	05 March 2015
Type of event	A DSNA consultation regarding updated DSNA Master Plan edition 2015, investments, technical modernization program, SESAR PCP, human ressource management and global cost efficiency.
Level	National
Stakeholders	Airlines representatives (IATA, IACA, SCARA, FNAM, BAR France, Air France, KLM, SWISS, RYANAIR, LUFTHANSA), UAF (French Airports representatives), DSNA (French ANSP), DTA (French CAA/NSA), DIRCAM (French Military) Météo-France (MET provider), Deployment Manager representative.
Deadline for responses	1st April 2015
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	See the minutes of the consultation

Meeting #15	
Name of meeting	Stakeholder Consultation Meeting The Netherlands on revised CE performance target and Chargeable Unit Rate 2016
Date	26 May 2015
Type of event	Stakeholder Consultation Meeting The Netherlands
Level	National
Stakeholders	Users (KLM-AF, DLH, BA) and representative organisation of users (IATA, BARIN), Union (Dutch Traffic Controllers' Guild)
Deadline for responses	
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	

Meeting #16	
Name of meeting	National consultation meeting
Date	29 May 2015
Type of event	The French CAAs/NSAs consultation of users representatives on traffic evolution, Budget, route and terminal cost efficiency targets, follow-up of RP1 performance plan, revision of RP2 performance plan.
Level	National
Stakeholders	Airlines representatives (SCARA, FNAM, BAR France, Air France), UAF (French Airports representatives),DGAC (French CAA), DSAC and DTA (French NSAs), DSNA (French ANSP), Météo-France (MET provider).
Deadline for responses	
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	

Meeting #17	
Name of meeting	Swiss Stakeholder Consultation on revision of the national chapters of the RP2 Performance Plan and yearly status report according to charging regulation article 9
Date	05 June 2015
Type of event	Consultation Meeting
Level	National
Stakeholders	See Annex A
Deadline for responses	19 June 2015
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	See Annex A

Meeting #18	
Name of meeting	German written Consultation concerning the national part of the Revision of the FABEC performance planning for RP 2.
Date	15 to 26 June 2015
Type of event	Written Consultation
Level	National
Stakeholders	See Annex A
Deadline for responses	26 June 2015
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	

Meeting #19	
Name of meeting	Belgian Staff Consultation Meeting on revised en route cost efficiency target
Date	22 June 2015
Type of event	The Belgian CAAs/NSAs consultation of staff representatives on revised en route cost efficiency target
Level	National
Stakeholders	Staff representatives of Belgocontrol
Deadline for responses	22 June 2015
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	See the minutes of the consultation

Meeting #20	
Name of meeting	Common BELUX stakeholder consultation meeting on revised en route costs targets
Date	22 June 2015
Type of event	Consultation by the Belgian and Luxembourg NSA´s (BAS, DAC) regarding the common part of the BELUX performance plan on en route costs, cost efficiency, and charges in the common FIR and charging zone
Level	National
Stakeholders	Airline representatives
Deadline for responses	22 June 2014
Main issues	See Annex A
Actions agreed upon	See Annex A
Points of disagreement and reasons	See Annex A
Additional comments	

1.4 - Actions to implement the Network Strategy Plan at FAB level, and other guiding principles for the operation of the FAB in the long-term perspective

Number of Actions	7

Performance management	**2015**	**2016**	**2017**	**2018**	**2019**
Planned date of entry into operation	X	X	X	X	X
Description	FABEC Performance Management Group was named Point of Contact				
Reference to NSP and evidence of compliance	SO 1 : Manage performance through 'Network-minded' decision-making Action NDOP #6 (29 Oct 2013)				
Contribution to reaching the performance targets	Synergies and simplification of CDM process with NM; alignment of Performance Plans between NM and FABEC avoid to double-count benefits, not to over-plan				
Additional comments	Monitoring of KPIs and management of performance (ex: FABEC Monthly Capacity Report)				

Development of B2B services	**2015**	**2016**	**2017**	**2018**	**2019**
Planned date of entry into operation		X	X		
Description	Development of business to business services (System Wide Information Management & others - local tools). For more Information on those services see the European Master Plan Edition 2 and the respective Local Single Sky Implementation Plans (LSSIP).				
Reference to NSP and evidence of compliance	SO 2 : Deploy interoperable and effective information management systems				
Contribution to reaching the performance targets	Automation of activities to share information between local and network levels will lead to reduction in staff needs, i.e., cost reduction.				
Additional comments					

FABEC Airspace projects	**2015**	**2016**	**2017**	**2018**	**2019**
Planned date of entry into operation	X		X	X	X
Description	FABEC FRA Step 3 : Final goal FRA Volume FABEC AD Sout-East Phase 1, 2 and 3 FABEC ATFCM/ASM Projekt Step 1&2 FABEC AD CBA Land / Central-West Step 1 and 2 Please see the ANNEX B for more information on the AD projects.				
Reference to NSP and evidence of compliance	SO 3 : Implement a seamless and flexible airspace enabling Free Routes				
Contribution to reaching the performance targets	Continuous airspace development, cross-border solutions, route network optimisation, airspace design optimisation => flight efficiency gain and cost reduction.				
Additional comments					

FABEC coordination of planning	**2015**	**2016**	**2017**	**2018**	**2019**
Planned date of entry into operation	X	X	X	X	X
Description	This activity include Datalink (Controller Pilot Data Link Communication), Network Manager Transition Plan, LSSIP & 5 Year Capacity Plan, FABEC AD projects.				
Reference to NSP and evidence of compliance	SO 4 : Plan optimum capacity and flight efficiency Decisions Capacity Planning Sub-Group (notably 24-25 March 2014)				
Contribution to reaching the performance targets	Optimum cost structure , delay reduction, increase of flight efficiency				
Additional comments	The 5 Year Capacity Plan, the LSSIP, the NM Transition Plan ensures a smooth and coordinated implementation of all important ATM systems in Europe and contribute to improve performance.				

FABEC ATFCM/ASM project	2015	2016	2017	2018	2019
Planned date of entry into operation	X	X	X	X	X
Description	SESAR WP 13.2.3 - close collaboration between DSNA-DFS-SG-MUAC FABEC ATFCM/ASM project				
Reference to NSP and evidence of compliance	SO 5 : Facilitate business trajectories and cooperative traffic management				
Contribution to reaching the performance targets	Occupancy monitoring and development of Short-term ATFCM measures leading to delay reduction and optimum use of available capacity.				
Additional comments					

A-CDM implementation	2015	2016	2017	2018	2019
Planned date of entry into operation	X	X			
Description	A-CDM airports implementation and Advanced Towers				
Reference to NSP and evidence of compliance	SO 6 : Integrate airport and network operations				
Contribution to reaching the performance targets	Brussels, Paris CDG, München, Frankfurt, Dusseldorf, Zurich are already A-CDM airports. In 2014, Amserdam, Geneva, Stuttgart and Berlin Schönefeld will become A-CDM airports.				
Additional comments	In 2015, Lyon should become A-CDM airport. In 2016, Orly and Hamburg are planned.				

Safety KPIs enhancement at FABEC level	2015	2016	2017	2018	2019
Planned date of entry into operation					X
Description	RAT methodology, just culture and safety management system in place				
Reference to NSP and evidence of compliance	SO 7 : Ensure network safety, security and robustness				
Contribution to reaching the performance targets	In order to reach the level D in all Management Objectives, some FABEC ANSPs could request the support of the NM to conduct safety culture survey.				
Additional comments					

1.5 - List of airports for RP2

List of airports submitted to the Performance and Charging Regulations						
Number of airports	89					
ICAO code	**Airport name**	**State**	**IFR air transport movements**			
			2011	**2012**	**2013**	**Average**
EBAW	ANTWERPEN/DEURNE	Belgium	17 742	14 752	14 081	15 525
EBBR	BRUSSELS/BRUSSELS-NATIONAL	Belgium	228 056	218 003	211 108	219 056
EBCI	CHARLEROI/BRUSSELS SOUTH	Belgium	43 701	48 302	49 967	47 323
EBLG	LIEGE/LIEGE	Belgium	32 466	29 074	28 502	30 014
EBOS	OOSTENDE-BRUGGE/OOSTENDE	Belgium	7 700	6 541	5 875	6 705
EDDB	BERLIN/SCHONEFELD	Germany	71 086	69 228	63 201	67 838
EDDC	DRESDEN	Germany	27 633	25 611	22 251	25 165
EDDE	ERFURT-WEIMAR	Germany	6 291	4 531	4 867	5 230
EDDF	FRANKFURT MAIN	Germany	487 020	482 167	472 704	480 630
EDDG	MUNSTER/OSNABRUCK	Germany	24 430	19 655	16 317	20 134
EDDH	HAMBURG	Germany	148 930	144 539	136 751	143 407
EDDK	KOLN/BONN	Germany	127 736	122 807	117 299	122 614
EDDL	DUSSELDORF	Germany	221 196	216 770	210 386	216 117
EDDM	MUNCHEN	Germany	407 061	395 297	379 212	393 857
EDDN	NURNBERG	Germany	57 413	53 515	51 781	54 236
EDDP	LEIPZIG/HALLE	Germany	61 956	60 376	59 438	60 590
EDDR	SAARBRUCKEN	Germany	12 148	10 231	9 794	10 724
EDDS	STUTTGART	Germany	123 891	120 053	114 179	119 374
EDDT	BERLIN-TEGEL	Germany	167 012	168 926	172 801	169 580
EDDV	HANNOVER	Germany	69 949	67 118	63 904	66 990
EDDW	BREMEN	Germany	36 686	35 338	34 821	35 615
EHAM	AMSTERDAM/SCHIPHOL	Netherlands	431 355	433 678	435 918	433 650
EHBK	MAASTRICHT/MAASTRICHT AACHEN	Netherlands	13 708	12 619	9 851	12 059
EHGG	GRONINGEN/EELDE	Netherlands	15 748	13 854	13 187	14 263
EHRD	ROTTERDAM the HAGUE AIRPORT	Netherlands	24 713	23 149	26 482	24 781
ELLX	LUXEMBOURG/LUXEMBOURG	Luxembourg	56 025	56 472	57 544	56 680
LFAQ	ALBERT BRAY	France	2 281	1 763	1 481	1 842
LFBA	AGEN LA GARENNE	France	4 456	4 677	4 911	4 681
LFBD	BORDEAUX MERIGNAC	France	57 974	56 698	56 492	57 055
LFBE	BERGERAC ROUMANIERE	France	4 970	4 103	4 872	4 648
LFBH	LA ROCHELLE ILE DE RE	France	6 345	6 693	6 266	6 435
LFBI	POITIERS BIARD	France	5 475	5 561	5 311	5 449
LFBL	LIMOGES BELLEGARDE	France	8 672	8 241	7 915	8 276
LFBO	TOULOUSE BLAGNAC	France	92 491	96 642	91 447	93 527
LFBP	PAU PYRENEES	France	12 156	12 225	11 390	11 924
LFBT	TARBES LOURDES PYRENEES	France	7 609	7 389	7 029	7 342
LFBZ	BIARRITZ BAYONNE ANGLET	France	12 650	12 949	12 634	12 744
LFCR	RODEZ AVEYRON	France	6 246	6 663	6 117	6 342
LFGJ	DOLE TAVAUX	France	2 845	3 460	3 831	3 379
LFJL	METZ NANCY LORRAINE	France	6 646	6 842	5 751	6 413
LFJR	ANGERS MARCE	France	1 995	1 892	1 630	1 839
LFKB	BASTIA PORETTA	France	13 448	13 028	14 303	13 593
LFKC	CALVI SAINTE CATHERINE	France	6 204	6 275	6 138	6 206
LFKF	FIGARI SUD CORSE	France	9 002	9 571	9 345	9 306
LFKJ	AJACCIO NAPOLEON BONAPARTE	France	14 988	14 812	16 602	15 467
LFLB	CHAMBERY AIX LES BAINS	France	7 101	6 874	6 729	6 901
LFLC	CLERMONT FERRAND AUVERGNE	France	15 568	14 678	14 715	14 987
LFLL	LYON SAINT EXUPERY	France	121 132	119 490	116 102	118 908
LFLP	ANNECY MEYTHET	France	3 674	3 504	3 204	3 461
LFLS	GRENOBLE ISERE	France	6 450	6 407	6 344	6 400
LFLX	CHATEAUROUX DEOLS	France	2 615	2 376	2 437	2 476
LFLY	LYON BRON	France	9 129	9 498	9 028	9 218
LFMD	CANNES MANDELIEU	France	14 160	13 310	13 365	13 612
LFMH	SAINT ETIENNE BOUTHEON	France	3 136	3 156	2 980	3 091
LFMI	ISTRES LE TUBE	France	6 218	3 231	3 514	4 321
LFMK	CARCASSONNE SALVAZA	France	6 270	6 106	5 928	6 101
LFML	MARSEILLE PROVENCE	France	102 038	106 933	102 903	103 958
LFMN	NICE COTE D'AZUR	France	137 572	142 449	140 249	140 090
LFMP	PERPIGNAN RIVESALTES	France	8 842	8 494	8 390	8 575
LFMT	MONTPELLIER MEDITERRANEE	France	31 890	32 161	31 489	31 847
LFMU	BEZIERS VIAS	France	5 441	5 312	5 499	5 417
LFMV	AVIGNON CAUMONT	France	6 318	6 305	5 776	6 133
LFOB	BEAUVAIS TILLE	France	25 878	26 801	27 398	26 692
LFOH	LE HAVRE OCTEVILLE	France	2 551	2 509	1 824	2 295

LFOK	CHALONS VATRY	France	3 121	3 094	3 072	3 096
LFOT	TOURS VAL DE LOIRE	France	2 702	3 197	3 006	2 968
LFPB	PARIS LE BOURGET	France	58 368	55 572	53 519	55 820
LFPG	PARIS CHARLES DE GAULLE	France	513 966	497 739	478 296	496 667
LFPN	TOUSSUS LE NOBLE	France	11 859	12 075	11 457	11 797
LFPO	PARIS ORLY	France	231 937	234 065	233 644	233 215
LFQQ	LILLE LESQUIN	France	21 767	20 715	22 997	21 826
LFRB	BREST BRETAGNE	France	15 018	15 157	14 689	14 955
LFRD	DINARD PLEURTUIT SAINT MALO	France	4 290	3 938	3 725	3 984
LFRG	DEAUVILLE NORMANDIE	France	4 052	3 599	3 738	3 796
LFRH	LORIENT LANN BIHOUE	France	7 499	7 855	6 975	7 443
LFRK	CAEN CARPIQUET	France	5 534	4 819	4 800	5 051
LFRN	RENNES SAINT JACQUES	France	16 708	15 686	15 299	15 898
LFRO	LANNION	France	1 928	1 964	1 785	1 892
LFRQ	QUIMPER PLUGUFFAN	France	3 240	3 186	3 276	3 234
LFRS	NANTES ATLANTIQUE	France	49 654	51 654	50 478	50 595
LFRZ	SAINT NAZAIRE MONTOIR	France	2 695	2 831	2 906	2 811
LFSB	BALE MULHOUSE	France	71 729	70 846	72 727	71 767
LFSL	BRIVE SOUILLAC	France	3 024	3 027	3 066	3 039
LFST	STRASBOURG ENTZHEIM	France	27 339	27 380	25 935	26 885
LFTH	HYERES LE PALYVESTRE	France	11 480	11 031	10 559	11 023
LFTW	NIMES GARONS	France	3 768	3 525	3 632	3 642
LSGG	GENEVE	Switzerland	176 096	180 627	177 646	178 123
LSZH	ZURICH	Switzerland	268 466	261 605	255 210	261 760

List of airports exempted from the Performance and Charging Regulations
Regarding a list of the airports exempted we refer to the "List of airports for the RP2 FAB Performance Plans" prepared by PRU/ PRB which contains all FABEC airports exempted from the Performance and Charging Regulations.

Additional comments

SECTION 2: INVESTMENTS

Mapping between the template for the FAB performance plan and Annex II of the performance Regulation				
Structure of ANNEX II of the performance Regulation	Link with PRB Performance Plan template			
	Body of Performance Plan	Annex C For cost-effiency		Other annexes
		RT ref.	AI ref.	
2. INVESTMENT	2			Annex D
2.1. Description and justification of the cost, nature and contribution to achieving the performance targets of investments in new ATM systems and major overhauls of existing ATM systems, including their relevance and coherence with the European ATM Master Plan, the common projects referred to in Article 15a of Regulation (EC) No 550/2004, and, as appropriate, the Network Strategy Plan.				
2.2. The description and justification referred to in point 2.1 shall in particular:				
(i) relate the amount of the investments, for which description and justification is given following point 2.1, to the total amount of investments;				
(ii) differentiate between investments in new systems, overhaul of existing systems and replacement investments;				
(iii) refer each investment in new ATM systems and major overhaul of existing ATM systems to the European ATM Master Plan, the common projects referred to in Article 15a of Regulation (EC) No 550/2004, and, as appropriate, the Network Strategy Plan;				
(iv) detail the synergies achieved at functional airspace block level or, if appropriate, with other Member States or functional airspace blocks, in particular in terms of common infrastructure and common procurement;				
(v) detail the benefits expected from these investments in terms of performance across the four key performance areas, allocating them between the en route and terminal/airport phases of flight, and the date as from which benefits are expected;				
(vi) provide information on the decision-making process underpinning the investment, such as the existence of a documented cost-benefit analysis, the holding of user consultation, its results and any dissenting views expressed.				

2 - INVESTMENTS

Number of ANSPs	7

ANA LUX

Number of capex	4

Name of capex 1	**Communication**
Description	The main aim of this investment pillar is to modernize our actual communication system (from a man-machine-procedure perspective) in accordance with EU Regulation and the ATM Masterplan enabling ANA to reach the ESSIP/LSSIP objectives and to reach the performance objectives of the Single European Sky. This is based mainly on key projects like: AMHS (ATS Message Handling System), IOP gateway which is necessary in the frame of the ASMGCS implementation. Related to this is the E-TEC project (new technical building) to ensure system redundancy and back up of ANA main technical systems and in case of contingency.
Accountable entity	ANSP (ANA)

Justification of the cost, nature and contribution		
Differentiation	*New system*	ATM Message Handling System (AMHS) , IOP Gateway are new systems. IOP Gateway will enable the exchange of data between adjacent systems and feed into existing SUR system
Replacement investment	*No*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ATM Masterplan, ESSIP COM 10, ITY-ADQ, ITY-FMTP, COM09-EC Regulation 73/2010, EC 633/2007, EC 283/2011, Eurocontrol Specification 0136
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*Yes*	Collaboration and support established with other ANSP's (Belgocontrol, MUAC, DFS) and Eurocontrol
Consultation with stakeholders	*Yes*	This is done in the frame of the User Consultation process existing in Luxemburg on a regular basis.
Decision-making process	*Yes*	Decision making process according to internal project management process with Strategic Management Team involvement and including a prioritization according to the 4 key performance areas from the performance scheme.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Reduction of system failures and bugs, higher reliability and availability of the systems, availabilty of information / data for A-SMGCS (AMHS); availability of high data quality and contigency solution (IOP)	Q4/2017	Terminal and En Route
Environment	*Yes*	Generating less noise and emissions due to optimal use of information	Q4/2017	Aerodrome / Terminal
Capacity	*No*			
Cost efficiency	*Yes*	Reduction of maintenance costs, standardization of systems, sharing of data and information via network	Q4/2017	Terminal and En Route

Name of capex 2	**Surveillance and navigation systems**
Description	The main aim of this investment pillar is to modernize our actual surveillance and navigation systems in accordance with EU Regulation and the ATM Masterplan enabling ANA to reach the ESSIP/LSSIP objectives and to reach the performance objectives of the Single European Sky.This is based mainly on key projects like the surveillance chain update, the replacement of NDB's, Direction Finders and DVOR's and the implementation of the surveillance data distribution system (SDDS) in line with existing agreements (SURNET).
Accountable entity	ANSP (ANA)

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	SUR chain requires an overhaul with the replacement of obslete systems / platforms (UNIX > LINUX), HW / SW running out of lifecycle to enable interoperability, system availability
Replacement investment	*Yes*	Replacement of NDBs / DVORs as basic navigation means SDDS replaces the current RMCDE(radar data distribution system) as an advance means for radar data exchange between States in the SURNET network. This was agreed in the SURNET agreement.
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP ITY-SPI, EC 1207/2011, ESSIP COM03 and ITY-AGVCS
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*Yes*	Collaboration and support established with other ANSP's (Belgocontrol, MUAC, DFS) and Eurocontrol
Consultation with stakeholders	*Yes*	This is done in the frame of the User Consultation process existing in Luxemburg on a regular basis.
Decision-making process	*Yes*	Decision making process according to internal project management process with Strategic Management Team involvement and including a prioritization according to the 4 key performance areas from the performance scheme.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Reduction of system failures and bugs, higher reliability and availability of the systems, availabilty of information / data for A-SMGCS (AMHS); availability of high data quality and contigency solution (IOP)	Q4/2017	En Route / Terminal
Environment	*Yes*	Generating less noise and emissions due to optimal use of information	Q4/2017	En Route / Terminal
Capacity	*Yes*	Potential increase of the capacity due to a better flow management in the air and on the ground with help of new systems like ASMGCS	Q4/2017	En Route / Terminal
Cost efficiency	*Yes*	Reduction of maintenance costs, standardisation of systems, enabling full interoperability in line with EU Regulation, enabling sharing of data and information via network	Q4/2017	En Route / Terminal

Name of capex 3	**ATC systems**
Description	The main aim of this investment pillar is to modernize our actual air traffic control system in accordance with EU Regulation and the ATM Masterplan enabling ANA to reach the ESSIP/LSSIP objectives and to reach the performance objectives of the Single European Sky. This is based mainly on key projects like ASMGCS, the modernization of the tower consoles, the implementation of CDO's, the review and adptation of our critical and sensitive area, the implemention of contingency plans for tower and approach.
Accountable entity	ANSP (ANA)

Justification of the cost, nature and contribution		
Differentiation	*New system*	Advanced Surface Movement and Guidance and Control System (A-SMGCS) implemented for safety reasons to enable safe operations and continuity of service during bad weather and visibility situations. This requires also the installation of new CWP in TWR, including screens and related other items to enable, inter alias, the provision of ground movement control.
Replacement investment	*Yes*	Current LVP procedures need to adapted follwoing an in-depth study on the critical and sensitive areas (CA/ SA)
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP AOM20, ENV01, ENV02, ATM Masterplan, ESSIP AOP04,1, AOP04,2 AOP0,3, RGD N°9 from 18 January 2013 transposing ICAO Annex 14 Vol1, ICAO Doc 7013, ESSIP HUM 03.1 The implementaton of CDOs in line with EU regulation and FABEC plans at ELLX
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*Yes*	Collaboration and support established with other ANSP's (Belgocontrol, MUAC, DFS) and Eurocontrol

Consultation with stakeholders	*Yes*	This is done in the frame of the User Consultation process existing in Luxemburg on a regular basis.
Decision-making process	*Yes*	Decision making process according to internal project management process with Strategic Management Team involvement and including a prioritization according to the 4 key performance areas from the performance scheme.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Reduction of system failures and bugs, higher reliability and availability of the systems, availabilty of information / data for A-SMGCS (AMHS); availability of high data quality and contigency solution (IOP)	Q4/2017	En Route / Terminal /Airport
Environment	*Yes*	Generating less noise and reducing fuel burn and gazeous emissions	Q4/2017	En Route / Terminal /Airport
Capacity	*Yes*	Potential increase of the capacity due to a better flow management in the air and on the ground with help of new systems like ASMGCS	Q4/2017	En Route / Terminal /Airport
Cost efficiency	*Yes*	Reduction of maintenance costs, standardisation of systems, enabling full interoperability in line with EU Regulation, enabling implememtation of ENV measures enabling fuel savings	Q4/2017	En Route / Terminal /Airport

Name of capex 4	**METEO Systems**
Description	The main aim of this investment pillar is to modernize our actual meteo system in accordance with EU Regulation enabling ANA to reach the ESSIP/LSSIP objectives and to reach the performance objectives of the Single European Sky, This is based mainly on key projects like: AWOS-ATIS upgrade, Digital-ATIS, Replacement of our wind and RVR sensors, replacement of the metgarden, installation of lightning detectors to enhance the safety, installation of cameras to better perform the meteo observation. This is necessary to enable the implementation of a full integrated briefing afterwards.
Accountable entity	NSP (ANA)

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	Digital ATIS and implementing the AWOS - ATIS system
Replacement investment	*Yes*	RVR sensors in combination with weather sensors, replacement of widn sensors and metgarden as equipment has reached end of lifecycle and is prone to failure
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ATM Masterplan, ESSIP INF 04, ICAO EUR-Doc -010
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*Yes*	Collaboration and support established with other ANSP's (Belgocontrol, MUAC, DFS) and Eurocontrol
Consultation with stakeholders	*Yes*	This is done in the frame of the User Consultation process existing in Luxemburg on a regular basis.
Decision-making process	*Yes*	Decision making process according to internal project management process with Strategic Management Team involvement and including a prioritization according to the 4 key performance areas from the performance scheme.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Reduction of system failures and bugs, higher reliability and availability of the systems, availabilty of valid and reliable information / data; increased safety on airport due toimproved lightning detection and issuing warning to airport parties (i.e. fuelservice ect)	Q4/2017	En Route / Terminal /Airport
Environment	*No*		Q4/2017	En Route / Terminal /Airport
Capacity	*Yes*	Potential increase in capacity due to higher reliability and validity of weather data	Q4/2017	En Route / Terminal /Airport
Cost efficiency	*Yes*	Reduction of maintenance costs, standardisation of systems, enabling full interoperability in line with ICAO requirements	Q4/2017	En Route / Terminal /Airport

Name of investment	Total CAPEX for the project	Planned Amount of Capital Expenditures (in national currency)					Lifecycle (Amortisation period in years)	Allocation en route / terminal ANS (%)	Planned date of entry into operation (IOC / FOC dates)
		2015	2016	2017	2018	2019			
Communication	1 283 000	335 000	0	0	0	0			
Surveillance and navigation systems	1 150 000	714 000	0	0	0	0			
ATC systems	7 320 000	380 000	4 340 000	0	0	0			
METEO Systems	2 258 000	1 335 000	0	0	0	0			
Sub-total of **main capex** above (1)	12 011 000	2 764 000	4 340 000	0	0	0			
Sub-total other Capex (2)									
Total capex (1) + (2)	12 011 000	2 764 000	4 340 000	0	0	0			

Additional comments

Belgocontrol

Number of capex	17

Name of capex 1	**Approach radars Brussels, Ostend and Charleroi**
Description	The project consists of the installation of new combined PSR/Mode S approach radars at the airports of Brussels, Ostend and Charleroi. The system at Brussels Airport was commissioned in August 2012, the one at Ostend Airport in December 2013. The Charleroi system is planned to be commissioned by mid 2016.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	Replacement + extension
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objective ITY-SPI (formerly SUR02); NSP Strategic Objective SO8 (8/2 & 8/3).
Joint investment	*No*	Collaboration with the Belgian MOD has however resulted in a decision to use the new Charleroi approach radar as a replacement for both the civil PSR at Charleroi airport as well as the military PSR/SSR at the Florennes military airbase.
Synergies achieved at FAB level or other MS	*Yes*	Collaboration with the Belgian MOD has however resulted in a decision to use the new Charleroi approach radar as a replacement for both the civil PSR at Charleroi airport as well as the military PSR/SSR at the Florennes military airbase.
Consultation with stakeholders	*No*	
Decision-making process	*Yes*	Decision making drivers haven been the ESSIP objective SUR02 w.r.t. Mode S elementary Mode S as well as the necessity to replace systems that were end of life (more than 20 years in operation).

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	PSR: detection of aircraft without (correctly) operating transponders Mode S: improved accuracy and integrity of track and flight data.	August 2012 (Brussels) December 2013 (Ostend) Mid 2016 (Charleroi)	En-route & terminal
Environment	*No*			
Capacity	*Yes*	Removal of current surveillance limitations (garbling, fruit, …) and Mode A code shortage	August 2012 (Brussels) December 2013 (Ostend) Mid 2016 (Charleroi)	En-route & terminal
Cost efficiency	*Yes*	Collaboration with the Belgian MOD has resulted in a decision to use the new Charleroi approach radar as a replacement for both the civil PSR at Charleroi airport as well as the military PSR/SSR at the Florennes military airbase.	Mid 2016.	En-route & terminal

Name of capex 2	**Upgrade Approach Radar Liège Airport**
Description	The PSR/MSSR approach radar at Liège Airport is operational since 2003. The MSSR part will be upgraded to Mode S while the primary radar will undergo hardware and software upgrades to overcome hardware obsolescences.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*No*	Extension
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objective ITY-SPI (formerly SUR02); NSP Strategic Objective SO8 (8/2 & 8/3).
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*No*	
Decision-making process	*Yes*	Decision making drivers haven been the ESSIP objective SUR02 w.r.t. Mode S elementary Mode S as well as the necessity to overcome hardware obsolescences.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	PSR: detection of aircraft without (correctly) operating transponders Mode S: improved accuracy and integrity of track and flight data.	2016	En-route/Terminal
Environment	*No*			
Capacity	*Yes*	Removal of current surveillance limitations (garbling, fruit, …) and Mode A code shortage	2016	En-route/Terminal
Cost efficiency	*No*			

Name of capex 3	**A-SMGCS at Liège Airport and at Charleroi Airport**
Description	The Belgian CAA has made it mandatory to install ground radars at the airports operating under low visibility conditions. The Liège and Charleroi Airport Authorities have taken the principal decision to install a A-SMGCS level 2 system.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	Extension
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	AO - 0201
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	Consultation with the Airport Authorities

Decision-making process	*Click to select*	The Airport Autorities have taken the decicion to install a S-SMGCS level 2 system rather than a SMR-only based on the expected capacity gains under low visibility circumstances.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	The system will contain safety nets e.g. to detect runway incursions.	2016/2017	Airport
Environment	*No*			
Capacity	*Yes*	The system will allow to increase the capacity levels in particular under low visibility conditions.	2016/2017	Airport
Cost efficiency	*No*			

Name of capex 4	**A-SMGCS2 at the Brussels Airport**
Description	The current A-SMGCS system has been installed and commissioned in various phases between 2003 and 2006. At least the hardware will be end of life by 2017 - 2018. That is why a major overhaul (new SMRs, new central processing hardware, potential software upgrade, gradual replacement MLAT-antennes) is planned in the time frame 2017-2019 and beyond.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objective AOP 4,1 & AOP 4,2 (pre-requisite for PCP AF2); NSP Strategic Objective SO8 (8/3)
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*No*	
Decision-making process	*Yes*	The main driving factor in this project is the need to replace end of life equipment (hardware).

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	Current levels will be maintained.		
Environment	*No*			
Capacity	*No*	Current levels will be maintained.		
Cost efficiency	*No*			

Name of capex 5	**New Surveillance Layer (WAM and/or ADS-b)**
Description	By the end of RP2, a project to add a new surveillance layer will start. This is necessary to keep the appropriate level of redundancy, anticipating the planned decommissioning of the en-route Mode-S radars and to cater for (planned) outages of the approach-radars. The actual scope and technological choices remain to be made and will depend a.o. on the revised contents of the SPI-IR.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objective ITY-SPI; NSP Strategic Objective SO8 (8/3)
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*No*	
Decision-making process	*No*	Europe-wide consultation is ongoing in the frame of the revision of SPI-IR.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Click to select*	To be further analyzed	2020 and beyond	En-route/Terminal
Environment	*Click to select*	To be further analyzed	2020 and beyond	En-route/Terminal
Capacity	*Click to select*	To be further analyzed	2020 and beyond	En-route/Terminal
Cost efficiency	*Click to select*	To be further analyzed	2020 and beyond	En-route/Terminal

Name of capex 6	**ILS 07L at Brussels Airport**
Description	An ILS 07L at EBBR would permit to maintain the capacity with easterly winds combined with one of the following circumstances: low layer of clouds, bad visibility and de-icing.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	Extension
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	EUR ATM MP: AO-0502 (Improved operations in low vis conditions).
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	Consultation of the Airport Authorities:
Decision-making process	*Yes*	A joint ANSP-Airport analysis led to the decision.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	An ILS on RWY 07L will allow to avoid the application of crossed runway operations (01 for landing, 07R for take-off).	2015	Terminal/Airport
Environment	*No*			
Capacity	*Yes*	Capacity improvement under low visibility conditions	2015	Terminal/Airport
Cost efficiency	*No*			

Name of capex 7	**ILS 05R - 23L at Liège Airport**
Description	This project entails the replacement of ILS equipment that is end of life where the new ILS-05R to be installed will be a Cat. III ILS in stead of Cat. I now.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	Replacement + extension
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	EUR ATM MP: AO-0502 (Improved operations in low vis conditions).
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	The decision to replace the ILS and to uplift the Cat. of the ILS05R was jointly taken with the Airport Authorities and the most important operator on the airport.
Decision-making process	*Yes*	The decision to replace the ILS and to uplift the Cat. of the ILS05R was jointly taken with the Airport Authorities and the most important operator on the airport.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*			
Environment	*No*			
Capacity	*Yes*	The airport capacity will be improved as a result of the availability of a Cat.III landing aid at all times (both runway ends will be Cat.III equipped).	2015/2016	Terminal/Airport
Cost efficiency	*No*			

Name of capex 8	**ILS at the Brussels, Liège, Ostend, Charleroi and Antwerp Airports**
Description	This project covers the replacement of various ILS which will reach the end of their scheduled operational lifetime.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	
Common project	*No*	

Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Click to select*	To be planned
Decision-making process	*Click to select*	To be planned

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Click to select*	Current levels will be maintained		Terminal/Airport
Environment	*Click to select*	Current levels will be maintained		Terminal/Airport
Capacity	*Click to select*	Current levels will be maintained		Terminal/Airport
Cost efficiency	*Click to select*	Current levels will be maintained		Terminal/Airport

Name of capex 9	**VOR/DME**
Description	14 DVOR-beacons and 12 DME beacons are reaching the end of their operational lifetime. This project covers the replacement of approximately 4 DBOR-beacons and all 12 DME-beacons, in line with the current international navigations infrastructure strategies (i.e. DME will remain part of the ground navigation infrastructure, a gradual reduction of DVOR is anticipated).
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	EUR ATM MP: BTNAV-0212 (PBN IR); NSP Strategic Objective SO8 (8/4)
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	In the frame of the Belgian PBN-implementation plan that is being developed, consultation with stakeholders about the ground infrastructure to be kept in place, is conducted.
Decision-making process	*Yes*	In the frame of the Belgian PBN-implementation plan that is being developed, consultation with stakeholders about the ground infrastructure to be kept in place, is conducted. The output will be an important decision making element.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*			
Environment	*No*			
Capacity	*No*			
Cost efficiency	*Yes*	A reduction in ground infrastructure (DVOR) is to be expected as a result of the implementation of PBN.	2017 and beyond	En-route/terminal.

Name of capex 10	**Renewal of part of the air-ground-air radio infrastructure**
Description	One of the chains of the main air-ground-air radio equipment has reached the end of its operational lifetime. This equipment has been installed in the early 90ties; it is not 8,33 kHz compliant. The large majority of the back-up radio's is not 8,33 kHz compliant. Therefore, in order to be compliant with the 8,33 I.R., its replacement is required by 2018 at the latest.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	EUR ATM MP: ITY-AGVCS2; NSP Strategic Objective SO8 (8/1).
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	Cooperation with MOD will be sought should it probe useful to share radiosites.
Consultation with stakeholders	*No*	
Decision-making process	*Click to select*	Decision making drivers: equipment end of life. Implementing Rule: ITY-AGVCS

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Click to select*	Current levels will be maintained		En-route/Terminal/Airport
Environment	*Click to select*	Current levels will be maintained		En-route/Terminal/Airport
Capacity	*Click to select*	Current levels will be maintained		En-route/Terminal/Airport
Cost efficiency	*Click to select*	Current levels will be maintained		En-route/Terminal/Airport

Name of capex 11	**Voice Communication Switch: IP-upgrade and hardware replacement**
Description	In line with ESSIP-objective COM11, the Voice Communication Switch will have to be extended/upgraded with the IP-functionality. It is anticipated that parts of the hardware of the communication switch may need replacement during the RP2-time frame as the system has been commissioned in 2007.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	Replacement + extension
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objective COM11
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*No*	
Decision-making process	*Yes*	The upgrade is the response to the requirements in the European regulatory framework

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Click to select*	Current levels will be maintained		En-route/terminal/airport
Environment	*Click to select*	Current levels will be maintained		En-route/terminal/airport
Capacity	*Click to select*	Current levels will be maintained		En-route/terminal/airport
Cost efficiency	*Click to select*	Current levels will be maintained		En-route/terminal/airport

Name of capex 12	**ATM automation system: permanent evolution**
Description	Investments are planned to keep the functionality and the performance of the automation system in line with the Belgocontrol operational requirements as well as with the European regulatory requirements in the PCP/Masterplan/… Further analysis of the European regulatory requirements will be necessary in order to further define the implementation plan.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	Replacement + extension
Common project	*Yes*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Click to select*	CM 0201
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Click to select*	To be planned
Decision-making process	*Click to select*	To be planned

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Click to select*	Current levels will be maintained		
Environment	*Click to select*	Current levels will be maintained		
Capacity	*Click to select*	Current levels will be maintained		
Cost efficiency	*Click to select*	Current levels will be maintained		

Name of capex 13	**Weather sensing**
Description	Various weather sensor equipment (weather radar, wind measurement, pressure measurement, RVR and cloud ceiling-measurement,…) will be end of life during RP2. Hardware replacement will thus be necessary. At the occasion of the hardware replacement, a software upgrade will be performed as well in order to adapt to evolving user requirements and evolving international regulation: ICAO/WMO & European regulations (e.g. SWIM).
Accountable entity	ANSP/MET

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	

Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Click to select*	AO-0501, 0601, 0602, 0603 DCB-0207, 0301, 0302 IS-0101
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*No*	
Decision-making process	*Yes*	Replacement of end of life hardware.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Click to select*	Current levels will be maintained		Terminal/Airport
Environment	*Click to select*	Current levels will be maintained		Terminal/Airport
Capacity	*Click to select*	Current levels will be maintained		Terminal/Airport
Cost efficiency	*Click to select*	Current levels will be maintained		Terminal/Airport

Name of capex 14	**Simulator Hardware**
Description	Various parts of the radar- and tower simulator hardware will be end of life during RP2. Hardware replacement is planned as well as the necessary adaptations to the software to bring it in line with the new software.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	Replacement + extension
Common project	*No*	N.A.
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Click to select*	N.A.
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*No*	
Decision-making process	*Yes*	Replacement of end of life hardware.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Click to select*	N.A.		
Environment	*Click to select*	N.A.		
Capacity	*Click to select*	N.A.		
Cost efficiency	*Click to select*	N.A.		

Name of capex 15	ATM infrastructure of the new control tower at Charleroi Airport
Description	The construction of a new control tower at Charleroi Airport is planned in order to ensure that the controllers' line of sight remains coherent with the ongoing and planned airport extentions and adaptations.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	Extension
Common project	*Yes*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	Alignment with CP, EUR ATM MP and NSP where required.
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Click to select*	Consultation with the Airport Authorities
Decision-making process	*Click to select*	Airport Extention - Visibility of the complete Airport Surface

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Adequate visibility of the complete movement area is necessary to guarantee the required safety level.	2016	Airport
Environment	*No*			
Capacity	*Yes*	Adequate visibility of the complete movement area is necessary to guarantee the required safety level.	2016	Airport
Cost efficiency	*No*			

Name of capex 16	Telecommunications and IT infrastructure
Description	The telecommunications and IT-infrastructure is under constant evolution in order to keep it in line with the user requirements and the technological permanently
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	replacement + extension
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*Yes*	RADNET: 4-states project
Synergies achieved at FAB level or other MS	*Yes*	The international data- and voice communication network (RAPNET) is a 4-States (Benelux, Germany) undertaking.
Consultation with stakeholders	*No*	
Decision-making process	*Yes*	For RAPNET: 4-States coördination bodies.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>

Safety	*Click to select*	N.A.		
Environment	*Click to select*	N.A.		
Capacity	*Click to select*	N.A.		
Cost efficiency	*Click to select*	N.A.		

Name of capex 17	**Upgrade of the Belgocontrol WAN**
Description	The current Belgocontrol will be upgraded in order to keep it in line with the user requirements and the evolution of the different technological aspects (lines from telecom providers and equipments, but also evolution of the ATM applications more and more IP ready).
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	No real synergies at FAB level eventhough the technology that is being considered is the same for different ANSP (see capex 16).
Consultation with stakeholders	*No*	
Decision-making process	*Click to select*	Equipment end-of-life; CBA

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Click to select*	N.A.		
Environment	*Click to select*	N.A.		
Capacity	*Click to select*	N.A.		
Cost efficiency	*Click to select*	N.A.		

Name of investment	Total CAPEX for the project	Planned Amount of Capital Expenditures (in national currency)					Lifecycle (Amortisation period in years)	Allocation en route / terminal ANS (%)	Planned date of entry into operation (IOC / FOC dates)
		2015	2016	2017	2018	2019			
Approach radars Brussels, Ostend and Charleroi	10 203 180	3 467 800	320 000	0	300 000	300 000	8	61% - 39%	2012 (Brussels) 2013 (Ostende) 2015 (Charleroi)
Upgrade Approach Radar Liège Airport	2 200 000	220 000	1 980 000	0	0	0	8	61% - 39%	2016
A-SMGCS at Liège Airport and at Charleroi Airport	10 350 000	3 000 000	7 050 000	100 000	100 000	100 000	8	0% - 100%	2016 (Liège) 2016 (Charleroi)
A-SMGCS2 at the Brussels Airport	5 500 000	0	60 000	900 000	2 550 000	1 990 000	8	0% - 100%	2018/2019
New Surveillance Layer (WAM and/or ADS-b)	5 000 000	0	0	0	0	2 500 000	8	96% - 4%	2020
ILS 07L at Brussels Airport	1 865 260	1 708 090	157 180	0	0	0	8	57% - 43%	2015
ILS 05R - 23L at Liège Airport	3 124 000	1 268 300	1 194 900	353 400	0	0	8	57% - 43%	2015/2016
ILS at the Brussels, Liège, Ostend, Charleroi and Antwerp Airports	15 300 000	0	0	0	1 700 000	1 700 000	8	57% - 43%	2018-2027
VOR/DME	7 394 900	1 040 000	2 288 000	1 456 000	1 456 000	0	8	69% - 31%	2016 - 2018
Renewal of part of the air-	3 462 710	1 640 280	210 000	792 500	222 500	550 000	8	63% - 37%	2015-2019
Voice Communication Switch: IP-upgrade and hardware replacement	2 000 000	0	1 000 000	0	300 000	700 000	8	80% - 20%	2016-2019
ATM automation system:	23 762 820	2 542 850	2 400 000	4 965 000	4 665 000	2 000 000	8	68% - 32%	Ongoing
Weather sensing	2 300 000	120 000	1 080 000	1 000 000	0	100 000	8	48% - 52%	2017-2018
Simulator Hardware	850 000	375 000	225 000	225 000	0	0	8	64% - 36%	2015-2018
ATM infrastructure of the new control tower at Charleroi Airport	1 000 000	0	1 000 000	0	0	0	8	23% - 77%	2016
Telecommunications and IT infrastructure	2 328 170	538 000	348 000	190 000	168 000	243 000	4	74% - 26%	Ongoing
Upgrade of the Belgocontrol WAN	587 000	125 000	0	0	0	0	4	65% - 35%	2015
Sub-total of **main capex** above (1)	97 228 040	16 045 320	19 313 080	9 981 900	11 461 500	10 183 000			
Sub-total other Capex (2)	33 329 480	4 647 960	2 961 030	3 054 640	4 433 330	6 461 040			
Total capex (1) + (2)	130 557 520	20 693 280	22 274 110	13 036 540	15 894 830	16 644 040			

Additional comments

DFS

Number of capex	19

Name of capex 1	**iCAS programme (iTEC Centre Automation System)**
Description	The iCAS system foreseen for 2016 ff is the latest ATS system under development by the DFS which will replace all existing ATS systems P1/ATCAS and P1/VAFORIT for use in control centres of both Lower and Upper Airspace over Germany. iCAS Program is aimed at the development, deployment and commissioning of this uniform ATS System iCAS for operational use at all DFS Air Traffic Control Centres. iCAS Phase I aims at the replacement of the ATS System P1/VAFORIT at UAC Karlsruhe before its end of life in 2018. iCAS Phase II aims at the commissioning of iCAS in control centres of Lower Airspace in Bremen (2018-2020), Munich (2019-2021) and Langen (2020-2022). iCAS Program pursues following objectives: - Re-placement of ATS System P1/VAFORIT at UAC Karlsruhe before end of its lifecycle in 2018; - Harmonization of the ATS Systems at all DFS Control Centres to allow for improvements in software development and maintenance organization; - Provide new ATS system platform and tools for the implementation of future-oriented ATS operational concepts; - Collaboration and cost sharing with other ANSPs in the iCAS implementation; - Harmonization of ATS-System between FABEC partners (e.g. LVNL); - Compliance with European Interoperability Standards as requested by the EU regulations for SES; - Support development of future standards of European Air Traffic Management within SESAR JU
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	Phase I: replacement of P1/VAFORIT at UAC Karlsruhe (only technical replacement with identical functionality) Phase II: new system at UAC Bremen, Munich and Langen
Replacement investment	*Yes*	Partial.
Common project	*Yes*	AF # 6 "Initial Trajectory Sharing"
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	IR: **IR** (EU) No. 552/2004 supplemented by IR (EU) No. 1070/2009, IR (EU) No. 1032/2006 supplemented by IR (EU) No. 30/2009, IR (EU) No. 1033/2006 supplemented by IR (EU) No. 428/2013, IR (EU) No. 633/2007supplemented by IR (EU) No. 283/2011, IR (EU) No. 1079/2012, IR (EU) No. 29/2009, IR (EU) No. 1206/2011, IR (EU) No. 1207/2011 **IDP:** 2012-EU-40004-P **ATM MP:** AOM 20 (AOM-0504, AOM-0801), ATC12 (CM-0202, CM-0203), ATC15 (TS-0305), ITY-AGDL (AUO-0301), ITY-COTR (CM-0201), ITY-FMTP (CTE-C11b) **NSP: SO 4/1, SO 5/1, SO 10**
Joint investment	*Yes*	Phase I and II: iTEC International Cooperation with AENA, NATS and LVNL aiming at a joint development of iCAS components Phase II: DFS and LVNL Cooperation aiming at a common iCAS development for use in Lower Airspace
Synergies achieved at FAB level or other MS	*Yes*	Improvement of technical convergence of ATS systems in FABEC and other memberstates
Consultation with stakeholders	*Yes*	As presented in the DFS Investment Programme Consultation dated 26 February 2014. DFS has assessed Phase II and revised the data for capex 1.
Decision-making process	*Yes*	Both Phases of the iCAS Programm are subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	+ Trajectory based traffic control and the improved planning accuracy enable earlier and more effective management of traffic already prior to entering the controlled area. Additionally the support by integrated Controller Tools increase situational awareness of air traffic controllers. Potential conflicts can be resolved at an earlier stage. Increased situational awareness enables air traffic controllers to manage an increasing amount of traffic at least at the same level of safety.	2018 ff (for Bremen) 2019 ff (for Munich)	En-route
Environment	*Yes*	+ Effective support by Controller Tools and the precise Trajectories based prediction enables as more flexible routing. Especially for Lower Airspace improved vertical and horizontal profiles can be implemented which leads to a reduction of emissions. In the upper airspace, however, no significant improvement in the route flight efficiency is expected since routes are already optimized.	2018 ff (for Bremen) 2019 ff (for Munich)	En-route
Capacity	*Yes*	+ The improved support of air traffic controllers by Support Systems and tools reduces the workload in several areas, leading to an increase in capacity especially at peak times.	2018 ff (for Bremen) 2019 ff (for Munich)	En-route
Cost efficiency	*Yes*	+ Harmonization of ATS systems in all control centers of DFS will reduce effort and cost of system operation and maintenance. In addition, development cost will be shared by cooperation with other ANSPs (LVNL, NATS, AENA).	2018 ff	En-route

Name of capex 2	**Programme P2**
Description	The system P2 will ensure the lifecycle of the currently used ATCAS system, the main ATS component of radar and flight data processing and display system of the control centres in Langen, Munich and Bremen (depending on the iCAS milestone) and will thus counteract the corporate risk of malfunctions of operational ATS control centre systems. - For Munich, alternative solutions to the prolonged use of ATCAS were investigated to retain the opportunity of the early introduction of iCAS at the Munich Control Centre. - For the Munich P2 project, it is planned to implement P2i (i=interim) at the end of 2016 / beginning of 2017 as originally scheduled. - For the Bremen P2 project, it is planned to introduce iCAS Phase II at the end of 2018 / beginning of 2019 without taking the interim step of introducing P2. - The introduction of P2 in Langen will remain scheduled for the end of 2015 / beginning of 2016.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	- Porting ATCAS software to Intel-compatible hardware and the Linux operating system: P1/ATCAS --> P2/ATCAS (the functionality of P2 is similar to that P1/ATCAS) - New hardware, consoles and introduction of positive-contrast display (in lower airspace)
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	**NSP:** SO 4/1
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.

Decision-making process	*Yes*	The investment is subject to a strict decision DFS-internal making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		
Environment	*No*	0 No effects.		
Capacity	*No*	0 No effects.		
Cost efficiency	*Yes*	- A new system software, operating software and a hardware change, including expansion and renovation of the operation room as well as the creation of floor space for technical systems, became necessary to keep up operations. This has led to an increase in operating costs in the operational phase.	2015 ff	En-route

Name of capex 3	**RASUM 8.33 (Radio Site Upgrade and Modernisation)**
Description	The purposes of the DFS project RASUM 8.33 are - to fulfil the requirements of the European Commission Regulation 1079/2012 and - to realize major construction and infrastructure measures in connection with a programme to obtain additional real property for existing as well as for new radio sites.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	IR: IR (EU) No. 1079/2012 **ATM MP:** ITY-AGVCS2 (CTE-C5) **NSP:** SO 8/1
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	As presented in the DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict decision DFS-internal making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		
Environment	*No*	0 There is an indirect effect insofar as due to the introduction of the reduced channel spacing, airspace structures may be optimised, thus contributing to reducing delays. Any decrease of in-flight delays reduces fuel consumption and thus contributes to environmental protection (reduction of carbon dioxide emissions).		
Capacity	*No*	0 The introduction of the 8.33 kHz channel spacing in lower airspace is to eliminate or reduce the already existing shortage of frequencies in the aeronautical radio band as a limiting factor in airspace structure and thus caters for future air traffic growth.		

Cost efficiency	*Yes*	- As an assumption for the tooling of the terrestrian radio communication stations with 8,33 compatible radio transceiver are extensive construction and infrastructure actions required (new construction with previous purchase of land, redevelopment of existing buildings).	2020 ff	En-route / Terminal

Name of capex 4	**MaRS (Modernisation and Replacement of Surveillance Infrastructure)**
Description	The projects main goal is the migration of the present Radar towards a modern surveillance infrastructure. In this context some important requirements are: - Receiving of aircraft-on-board-data with Mode S and/or ADS/B with nationwide coverage - Fulfilling the operational requirements - Reducing the life cycle and maintenance costs - Additional cost benefits due to reduced power consumption and air conditioning, smaller buildings and towers with modern surveillance systems.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	IR: **IR** (EU) No. 1206/2011, IR (EU) No. 1207/2011 **ATM MP:** SUR02, SUR04 **NSP: SO 8/3, SO 8/4**
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	As presented in the DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		
Environment	*No*	0 No effects.		
Capacity	*No*	0 The surveillance infrastructure provided by MaRS will reduce the signal update rate of the radar sensors from 12 seconds to 4 seconds. As a result, separation and monitoring tasks of the team of controllers will be more effective because deviations from the flight path and implementation of clearances can be detected earlier. This, in turn, offers potential for an increase in air traffic growth. Due to the Mode S support, the allocation of a transponder code is distinctly less complex and a clear identification is ensured (unique 24 bit address instead of 1200), there is no error risk because of manually setting the A code at the transponder resulting in one less potential error source. In addition, by implementing MaRS the technical preconditions are created to minimise route distances and reduce separation distances in the long-term.		

Cost efficiency	*Yes*	- The savings to be achieved in maintenance and operating costs do not correspond to the required investments for the renewal and modernisation of the surveillance infrastructure in RP2.	2020 ff	En-route

Name of capex 5	**Product management iCAS (iTEC Centre Automation System)**
Description	Life Cycle Management of the ATS System iCAS which is scheduled to be commissioned first at UAC Karlsruhe by end of 2016 / beginning of 2017 (ref. to capex 1). Life cycle management covers standard maintenance activities to ensure business continuity for all Control Centers operating iCAS and to implement new software releases that provide additional functional capabilities allowing to improve performance.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*Yes*	AF # 6 "Initial Trajectory Sharing"
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	**IR:** IR (EU) No. 552/2004 supplemented by IR (EU) No. 1070/2009, IR (EU) No. 1032/2006 supplemented by IR (EU) No. 30/2009, IR (EU) No. 1033/2006 supplemented by IR (EU) No. 428/2013, IR (EU) No. 633/2007supplemented by IR (EU) No. 283/2011, IR (EU) No. 1079/2012, IR (EU) No. 29/2009, IR (EU) No. 1206/2011, IR (EU) No. 1207/2011 **IDP:** 2012-EU-40004-P **ATM MP:** AOM 20 (AOM-0504, AOM-0801), ATC12 (CM-0202, CM-0203), ATC15 (TS-0305), ITY-AGDL (AUO-0301), ITY-COTR (CM-0201), ITY-FMTP (CTE-C11b) SESAR Step 1: CM-0205, CM-0301, CM-0303 SESAR Step 2: AUO-0203-B, AUO-0204-B **NSP:** SO 4/1, SO 10
Joint investment	*Yes*	- iTEC International Cooperation with AENA, NATS and LVNL aiming at a joint development of core iCAS components - DFS and LVNL Cooperation aiming at a common iCAS development for use in Lower Airspace
Synergies achieved at FAB level or other MS	*Yes*	Improvement of technical convergence of ATS systems in FABEC
Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The implementation of new iCAS software releases is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	+ Improvement in planning and conflict detection (Benefits will be assessed i.a.w. new iCAS software releases that will be specified during RP2.)	2017 - 2019	En-route
Environment	*Yes*	+ Improvement in trajectory calculation (Benefits will be assessed i.a.w. new iCAS software releases that will be specified during RP2.)	2017 - 2019	En-route
Capacity	*Yes*	+ Reduction of controller work load (Benefits will be assessed i.a.w. new iCAS software releases that will be specified during RP2.)	2017 - 2019	En-route
Cost efficiency	*Yes*	+ Improvement in maintenance and ATCO allocation (Benefits will be assessed i.a.w. new iCAS software releases that will be specified during RP2.)	2017 - 2019	En-route

Name of capex 6	**ILS (Instrument Landing System)**
Description	Replacement of ILS components after end of life cycle.
Accountable entity	ANSP

Justification of the cost, nature and contribution

Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	**IR: IR** (EU) No. 552/2004 **NSP:** SO 8/3
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		
Environment	*No*	0 No effects.		
Capacity	*No*	0 No effects.		
Cost efficiency	*No*	0 No effects.		

Name of capex 7	**Digital networks**
Description	Lifecycle management of network components: Replacement after end of life cycle, extension of existing network components.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	Overhaul and extention of existing network systems.
Replacement investment	*Yes*	
Common project	*Yes*	AF # 5 "iSWIM Functionality"
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	**IR:** IR (EU) No. 633/2007 **NSP:** SO 8/4
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		
Environment	*No*	0 No effects.		
Capacity	*No*	0 No effects.		

Cost efficiency	*No*	0 No effects.		

Name of capex 8	**En-route navigation**
Description	Replacement of NDB and VOR components after end of life cycle.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	**IR: IR** (EU) No. 552/2004
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		
Environment	*No*	0 No effects.		
Capacity	*No*	0 No effects.		
Cost efficiency	*No*	0 No effects.		

Name of capex 9	**BaBola (bundling of all activities for an advanced ground situation system at international airports)**
Description	At the international Airports at Köln/Bonn (CGN), Düsseldorf (DUS) and Stuttgart (STR), there is to implement an A-SMGCS Level 2 (Phoenix-Ground-Situation-Display) including the necessary infrastructure (e.g. Sensor technology, Power, Data, HMI). Therefore three coordinated projects with a common Definition-Phase and a common Planning-Phase will be executed.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	At the located Airports the existing Ground Situation Display with one primary Sensor (ASDE) will be replaced by an A-SMGCS Level 2 within a SMR and a MLAT Sytem and a new HMI and Tracker.
Replacement investment	*Yes*	
Common project	*Yes*	AF# 2 "Airport Integration and Througput Functionalities"
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	**IR: IR** (EU) No. 552/2004 **NSP:** SO 6/6
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	

Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	+ Through improvement of the Ground Situation Display there will be an increase of safety in the handling of airport traffic, especially under bad weather conditions or darkness. With the Runway Incursion Monitoring Function (RIM) and given alerts, Runway Incursions will be nearly precluded.	Köln/Bonn 11/2017 Düsseldorf 04/2018 Stuttgart 11/2018	Terminal
Environment	*No*	0 No effects.		
Capacity	*Yes*	+ An improved Ground Situation Display enables a more easy and faster situational awareness for the air traffic controler, especially under bad weather conditions or darkness. Less nessecary regulations lead to a higher Slot-Adherence.	Köln/Bonn 11/2017 Düsseldorf 04/2018 Stuttgart 11/2018	Terminal
Cost efficiency	*Yes*	- For the implementation of A-SMGCS Level 2 it is nessecary to invest more in new sensor technology.	Köln/Bonn 11/2017 Düsseldorf 04/2018 Stuttgart 11/2018	Terminal

Name of capex 10	**VAFORIT (Very Advanced Flight Data Processing Operational Requirement Implementation)**
Description	Life Cycle Management of the ATS system P1/VAFORIT that is in operational use at UAC Karlsruhe. Life Cycle Management covers standard maintenance activities to ensure business continuity at UAC Karlsruhe. The implementation of additional functional capabilities is not planned during RP2 since the ATS system iCAS is going to replace P1/VAFORIT by end of 2016 / beginning of 2017 (ref. to capex 1).
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*Yes*	AF # 6 "Initial Trajectory Sharing"
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	**IR: IR** (EU) No. 552/2004 supplemented by IR (EU) No. 1070/2009, IR (EU) No. 1032/2006 supplemented by IR (EU) No. 30/2009, IR (EU) No. 1033/2006 supplemented by IR (EU) No. 428/2013, IR (EU) No. 633/2007supplemented by IR (EU) No. 283/2011, IR (EU) No. 1079/2012, IR (EU) No. 29/2009, IR (EU) No. 1206/2011, IR (EU) No. 1207/2011 **ATM MP:** ATC12 (CM-0202, CM-0203), ATC15 (TS-0305), ATC17 (CM-0201), ITY-AGDL (AUO-0301), ITY-COTR (CM-0201), ITY-FMTP (CTE-C11b) **NSP:** SO 4/1, SO 5/1
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No functional enhancement planned for P1/VAFORIT during RP2.		

Environment	*No*	0 No functional enhancement planned for P1/VAFORIT during RP2.		
Capacity	*No*	0 No functional enhancement planned for P1/VAFORIT during RP2.		
Cost efficiency	*No*	0 No functional enhancement planned for P1/VAFORIT during RP2.		

Name of capex 11	**Technical centre on the campus in Langen**
Description	Building (13.000 sqm.) for new Test and Reference IT-Infrastructure of ATM Systems (P2, iCAS, Vaforit) for lower and upper airspace and admin. IT-Systems. Actually there is no space in the existing buildings for the new systems.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		
Environment	*No*	0 No effects.		
Capacity	*No*	0 No effects.		
Cost efficiency	*No*	0 No effects.		

Name of capex 12	**Value added network services in data communication (procurement of a new network for radar data provision)**
Description	Lifecycle management of network components: Replacement after end of life cycle, extension of existing network components.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	Overhaul and extention of existing network systems.
Replacement investment	*Yes*	
Common project	*Yes*	AF # 5 "iSWIM Functionality"
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	**IR:** IR (EU) No. 552/2004, IR (EU) No. 633/2007, IR (EU) No. 29/2009 **NSP:** SO 8/3

Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		
Environment	*No*	0 No effects.		
Capacity	*No*	0 No effects.		
Cost efficiency	*No*	0 No effects.		

Name of capex 13	**Control centre simulators**
Description	Maintenance of the central and decentral simulators as well as further development of the simulator software: Investments thus relate to the life-cycles of SimSys Langen, SimSys Karlsruhe, SimSys Munich, NEWSIMs of the Academy and the JOINT system. As well included are enhancements of the simulator software to adapt to new functionalities.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	Maintenance and replacement investments for simulators which are not ATC systems.
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		
Environment	*No*	0 No effects.		
Capacity	*No*	0 No effects.		
Cost efficiency	*Yes*	- Maintenance costs	2015-2019	En-route

Name of capex 14	**Transmitters, receivers, antennas**
Description	Replacement of radios and antennas during the whole life cycle.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	**NSP:** SO 8/4
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		
Environment	*No*	0 No effects.		
Capacity	*No*	0 No effects.		
Cost efficiency	*No*	0 No effects.		

Name of capex 15	**Intercom system 2 (GS2)**
Description	The intercom system provides an intercom functionality for instant communication between TWR and Approach controller. The current intercom system will reach its end of life during the next years. With this project the current intercom will be replaced during the next years.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	**NSP:** SO 8/3
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		

Environment	*No*	0 No effects.		
Capacity	*No*	0 No effects.		
Cost efficiency	*Yes*	- With regard to the new investment in GS_2 as a replacement of the old system.	2017 ff	En-route / Terminal

Name of capex 16	**A-SMGCS (Advanced Surface Movement Guidance and Control System)**
Description	A-SMGCS MUC: Integration of new runway and taxiways in existing A-SMGCS Level II system. The future planned project includes the integration and calibration of a new surface movement radar and the expansion of the existing MLAT system with additional multilateration remote units. A-SMGCS BER: Implementation of an A-SMGCS Level II system in new TWR BER (Berlin Schönefeld / Brandenburg) which includes two surface movement radars and a MLAT system with thirty-eight multilateration remote units around the coverage area of the airport. A-SMGCS HAM: Commissioning of an A-SMGCS Level II system, with two surface movement radar systems (ASMI 18x and dual frequency radar system) and a multilateration system with twenty-four multilateration remote units around the coverage area of the airport. A-SMGCS new TWR FRA: A-SMGCS (Level II) software and hardware upgrade in new TWR Frankfurt, with commissioning of a third surface movement radar system and additional multilateration sensors around the coverage area of the new fourth runway. The complete system includes three surface movement radars, forty-five multilateration remote units, data fusion, nine controller-working positions and a maintenance control & monitoring subsystem.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	
Common project	*Yes*	AF# 2 "Airport Integration and Througput Functionalities"
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	IR: IR (EU) No. 552/2004 **ATM MP:** AOP04.2 **NSP:** SO 6/6
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		
Environment	*No*	0 No effects.		
Capacity	*No*	0 No effects.		
Cost efficiency	*No*	0 No effects.		

Name of capex 17	**Remote Tower Control (RTC)**
Description	The natural view out of the control tower will be no longer applicable. The visual surveillance will be provided by a reproduction of the "Out of The Window (OTW)" view by using visual information capture and/or other sensors. With its Remote Tower Control (RTC) project, DFS aims to cut costs in the long term by using new technologies and procedures and by optimizing staff scheduling and making it more efficient. Main objective is: Step-by-step relocation of aerodrome control service from the airports of Saarbrücken (SCN), Erfurt (ERF) and Dresden (DRS) to a Remote Tower Centre in Leipzig (LEJ).
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	**IR: IR** (EU) No. 552/2004, IR (EU) No. 1207/2011 **ATM MP:** SDM-0201 Remotely Provided Air Traffic Service for Single Aerodrome
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	As presented in the DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 After commissioning, "Remote Tower Control" will not have any impact on safety figures.		
Environment	*No*	0 No effects.		
Capacity	*No*	0 No effects.		
Cost efficiency	*Yes*	+ • Reducing costs in the provision of aerodrome control services by using human resources more efficiently and pooling operational, technical and administrative support functions. • Reducing operating and maintenance costs by using uniform infrastructure and harmonising the ATM technology for the aerodrome control towers to be relocated.	2019 ff	Terminal / Airport

Name of capex 18	**TOPAS 2016**
Description	Replacement of DFS IT Client infrastructur (PC, notebook, monitor, server for business support systems) based on microsoft technology. Allocation of technology-optimised and cost-effective IT-workplaces and the infrastructure for operational support systems (OSS) and business support systems (BSS) for the endorsement of an efficient and expeditious execution of business processes. The objective is to implement new technology- and service-processes, to improve cost effectiveness, to expedite standardisation and to optimise the portfolio.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	

Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		
Environment	*No*	0 No effects.		
Capacity	*No*	0 No effects.		
Cost efficiency	*No*	0 No effects.		

Name of capex 19	**Overhaul academy**
Description	Fire safety engineering improvements and technical upgrade in the Academy and guesthouse.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	DFS Investment Programme Consultation dated 26 February 2014.
Decision-making process	*Yes*	The investment is subject to a strict DFS-internal decision making process.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*	0 No effects.		
Environment	*No*	0 No effects.		
Capacity	*No*	0 No effects.		
Cost efficiency	*No*	0 No effects.		

Name of investment	Total CAPEX for the project	Planned Amount of Capital Expenditures (in national currency)					Lifecycle (Amortisation period in years)	Allocation en route / terminal ANS (%)	Planned date of entry into operation (IOC / FOC dates)
		2015	2016	2017	2018	2019			
iCAS programme (iTEC Centre Automation System)	314 609 969	45 242 847	50 495 174	51 217 664	50 173 341	17 589 251	3 - 8	100% R	Phase I 2016 Phase II 2018/2022
Programme P2	51 813 212	4 900 730	1 786 770	734 000	1 290 500	0	3 - 15	100% R	In the year of the investments. Software Migration 2015
RASUM 8.33 (Radio Site Upgrade and Modernisation)	68 732 285	11 290 120	11 461 635	7 183 399	4 116 346	4 107 762	3 - 25	79% R / 21 % T	2014 - 2019
MaRS	139 741 000	2 600 000	2 200 000	6 915 000	1 422 000	15 386 000	15 - 25	100% R	2014 - 2019
Product management iCAS (iTEC Centre Automation System)	36 700 000	0	3 500 000	7 400 000	7 400 000	8 400 000	3 - 8	100% R	In the year of the investments.
ILS (Instrument Landing System)	51 845 810	3 061 000	6 120 000	3 234 000	6 484 000	4 890 000	3 - 15	100% T	2014 - 2019
Digital networks	47 626 068	1 890 400	2 995 000	2 750 000	2 750 000	2 750 000	3 - 8	75% R / 20% T / 5% Others	2014 - 2019
En-route navigation	19 040 264	2 750 000	2 550 000	2 500 000	2 577 000	2 500 000	8 - 17	100% R	2014 - 2019
BaBola	13 075 000	4 535 000	3 960 000	3 300 000	1 280 000	0	8	100% T	Köln-Bonn 2017, Düsseldorf 2017/2018, Stuttgart 2018
VAFORIT	35 696 443	5 045 000	3 760 000	2 102 400	0	0	2 - 5	100% R	In the year of the investments.
Technical centre on the campus in Langen	59 028 208	8 005 000	1 720 000	0	0	0	15 - 40	75% R / 20% T / 5% Others	2015
Value added network services in data communication	34 258 196	1 920 000	1 920 000	1 920 000	1 920 000	1 920 000	8	75% R / 20% T / 5% Others	2013 - 2016
Control centre simulators	10 460 720	1 812 184	1 420 693	1 303 857	1 517 555	1 549 565	3 - 8	100% R	In the year of the investments.
Transmitters, receivers, antennas	25 276 783	2 196 831	1 515 000	1 500 000	1 500 000	1 500 000	8 - 15	79% R / 21 % T	2014 - 2019
Intercom system 2 (GS2)	7 358 695	2 047 000	2 917 695	1 487 200	346 800	0	8	57% R / 39% T / 4% Others	2014 - 2017
A-SMGCS	14 531 580	0	650 000	4 300 000	1 750 000	0	3 - 25	100% T	2008 - 2018
Remote Tower Control (RTC)	7 907 907	4 050 731	36 500	2 008 664	0	0	8 - 15	100% T	Saarbrücken 2016, Erfurt 2016 and Dresden 2018
TOPAS 2016	5 500 000	40 000	3 640 000	1 820 000	0	0	4	75% R / 20% T / 5% Others	2015 - 2017
Overhaul academy	17 694 067	4 280 000	7 050 000	5 200 000	0	0	8 - 25	75% R / 20% T / 5% Others	2013 - 2017
Sub-total of **main capex** above (1)	960 896 208	105 666 843	109 698 467	106 876 184	84 527 542	60 592 578			
Sub-total other Capex (2)		29 057 992	25 949 258	40 768 174	66 617 886	61 381 410			
Total capex (1) + (2)	960 896 208	134 724 835	135 647 725	147 644 358	151 145 428	121 973 988			

Additional comments
The Renovation of Munich Branch is removed, because the project was stopped. It is unknown, whether the project will be realised or in which range (new construction, extension, renovation or overhaul).

DSNA

Number of capex	14

Name of capex 1	**4-FLIGHT**
Description	4-FLIGHT is DSNA's response to SESAR's objective. It is a new ATM system, based on open architecture, incorporating advanced interoperability standards. 4-FLIGHT integrates COFLIGHT, the new Flight Data processing System, which supports i4D and business trajectory. 4-FLIGHT also integrates Java HMI, an innovative system designed from ergonomic studies, and advanced ATC tools in an electronic environment. Planning for 2014 is : Installation of operational validation prototypes in the two pilot centers of Reims and Aix. This phase will allow: a first hands on operation by controllers and maintenance engineers; direct participation in the first "large scale" operational assessments of the SESAR programme; building on a real pre-operational system.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	4-FLIGHT is the heart of the modernisation of French ATM system. It will allow putting into service a new generation complete control system.
Replacement investment	*Yes*	The French FDPS (Flight Data processing System), named CAUTRA, can no longer support evolutions leaded by SESAR.
Common project	*Yes*	PCP ATM Functionnalities : AF4, AF5, AF6
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objectives : AOM21, FCM04, ITY-COTR, ATC15, ATC17, ITY-AGDL, ATC12, FCM03 Link with NSP : SO5
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*Yes*	4-FLIGHT will have the ability to be inter-operated without break-up within an integrated operational environment such as FABEC.
Consultation with stakeholders	*Yes*	Customers are consulted at least once a year. Last consultation on technical strategy took place on 5th March 2015.
Decision-making process	*Yes*	CBA (27 Jully 2010) ; DSNA programm review before launch (2011)

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Some enhancement through reduction in controller workload. Reduction of human error. Prevention of overloads Through the delivery of standard and unambiguous messages (entailing significant error and fatigue reduction), the provision of a communications back up and the possibility of immediate message retrieval, data link communications are a major safety enhancement. Early and systematic conflict detection (5 minutes time look ahead, thanks to the provision of ATC Monitoring Tools, like the Tactital Controler Tool (TCT), and thanks to mode S enhanced surveillance) and conformance monitoring enabled by ground based automated tools will reduce the need for tactical interventions. Conformance monitoring reduces the risk of the impact of controllers and pilots errors.	early 2017	En-route/Terminal/Airport
Environment	*Yes*	Reduction in emissions through use of more optimal routes. Reduction in holdin and in low-level vectoring by applying delay management at an early stage of flight, has a positive environmental effect in termes of noise and fuel usage.	early 2017	En-route

Capacity	*Yes*	Capacity increased through the better airspace utilisation to enhance productivity and reduce controller workload. Better use of the available network capacity. Capacity increased through supression of flight ATFM regulations thanks to local ATFCM measures with the same ATC sector manning. Increased capacity through both reduction of voice congestion and increase in controller efficiency. Capacity gain is expected, regarding the ratio of equipped flights. Reduction of tactical controller workload, and better sector team productivity, compared to the conventional systems without automated support will open potential for significant increase. Improved airport/TMA capacity.	early 2017	En-route
Cost efficiency	*Yes*	Saving in route distances as well as better fuel efficiency through increased use of preferred flight profiles and improved sectorization. Reduction of flight delays. More efficient planning and operational decision making. Early conflict detection will enable smoother flight patterns, without frequent and sudden control interventions. This will have a moderate influence on airline costs. Moderate benefits for ANSPs due to better deployment of the ATCO workforce, reduced workload per aircraft and workload distribution. Reduced costs through reduction in delays, reduction in low-level holding operations and reduction in low-level tactical vectoring for delay purposes. Data link is a cost-effective capacity increase enabler through sector productivity increase and delay cost savings. ANSPs savings derived from staff cost avoidance. Aircraft operators will benefit of en route cost savings and reduction of delays.	early 2017	En-route

Name of capex 2	**COFLIGHT**
Description	COFLIGHT is a new generation automatic flight plan processing system. It will be the core of 4-FLIGHT. Launched in 2002, in cooperation with the Italian ANSP ENAV, it is built by a THALES-SELEX consortium. It represents an operational and technological breakthrough. It is based on 4D modelling of flights wich allows for the implementation of new operational concepts (FUA, free route) and IOP exchanges. It is an essential brick for building future SESAR structures. Its Gate to Gate tracks forecast capacity will make it a major part of the European air traffic control systems.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	COFLIGHT will be able to provide a remote flight data service to other customers, like Skyguide in application of its virtual centre model.
Replacement investment	*Yes*	The French FDPS (Flight Data processing System), named CAUTRA, can no longer support evolutions leaded by SESAR.
Common project	*Yes*	PCP ATM Functionnalities : AF3, AF4, AF6
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objectives : FCMO3, ITY-COTR, ITY-AGDL, ATC17, ATC12, ITY-ADQ Link with NSP : SO5
Joint investment	*Yes*	Development whith ENAV
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	Customers are consulted at least once a year. Last consultation on technical strategy took place on 5th March 2015.
Decision-making process	*Yes*	COFLIGHT Agreement including financial annex (9 May 2007)

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Prevention of overloads Reduction of human error. Through the delivery of standard and unambiguous messages (entailing significant error and fatigue reduction), the provision of a communications back up and the possibility of immediate message retrieval, data link communications are a major safety enhancement. Early and systematic conflict detection and conformance monitoring enabled by ground based automated tools will reduce the need for tactical interventions, conformance monitoring reduces the risk of the impact of controllers and pilots errors.	early 2017	En-route / Terminal /Airport
Environment	*No*	N/A		
Capacity	*Yes*	Better use of the available network capacity. Reduction of controller workload. Increased capacity through both reduction of voice congestion and increase in controller efficiency. Reduction of tactical controller workload, and better sector team productivity, compared to the conventional systems without automated support will open potential for capacity increase.	early 2017	En-route / Terminal /Airport
Cost efficiency	*Yes*	Reduction of costs induced by delays. More efficient planning and operational decision making. Data link is a cost-effective capacity increase enabler through sector productivity increase and delay cost savings. ANSPs savings derived from staff cost avoidance. Aircraft operators will benefit of en route cost savings and reduction of delays. Early conflict detection will enable smoother flight patterns, without frequent and sudden control interventions. This will have a moderate influence on airline costs. Moderate benefits for ANSPs due to better deployment of the ATCO workforce, reduced workload per aircraft and workload distribution.	early 2017	En-route / Terminal /Airport

Name of capex 3	**CSSIP**
Description	This project intends to implement a new telecommunication infrastructure, based on IP protocols for voice digital conversion The CssIP program will allow DSNA to have a national network of next generation telecommunications called RENAR IP. It will provide all voice and data exchanges for the air traffic control purposes. Connected to PENS, it will exchange data with various international networks and simplify the interoperability of systems and applications between adjacent ANSPs.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	DSNA is extensively modernising its technical communications system to cope with technological obsolescence.
Replacement investment	*Yes*	DSNA will have its national network of next generation telecommunications
Common project	*Yes*	PCP ATM Functionnalities : AF4, AF6 A dual telecom architecture, outlined in SESAR PCP, will ensure consistent availability with the future operational and services requirements to support (SWIM)
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objectives : ITY-AGDL, AOP05, COM9, COM10, COM11, ITY-FMTP, AOP04.1, AOP4.2
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*Yes*	This project is compliant with FABEC's operational needs,and respects the regulatory context, especially FMTP and SPI regulations

Consultation with stakeholders	*Yes*	Customers are consulted at least once a year. Last consultation on technical strategy took place on 5th March 2015.
Decision-making process	*Yes*	Framework sheet (2 August 2010)

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Through the delivery of standard and unambiguous messages (entailing significant error and fatigue reduction), the provision of a communications back up and the possibility of immediate message retrieval, data link communications are a major safety enhancement. The more effective airside and landside operations management, improved situational awareness of all actors and resulting reduced congestion has a positive effect on safety.	early 2016	En-route / Terminal /Airport
Environment	*No*			
Capacity	*Yes*	Increased capacity through both reduction of voice congestion and increase in controller efficiency. Enhanced airport capacity through optimal use of airside and landside facilities and services, better use of airport and ATFM slots. Maintained or improved by providing enhanced signalisation functions. Prerequisite of dynamic sectorisation through dynamic allocation of voice resources.	early 2016	En-route / Terminal /Airport
Cost efficiency	*Yes*	More cost efficient as X.25 maintenance costs are increasing while TCP/IP costs are lower. Use of de-facto COTS messaging systems will reduce the cost of messaging services and support any kind of message format including the exchange of new binary data. Reduced costs by reusing Internet off the shelf technologies that can be based on standard hardware.	early 2016	En-route / Terminal /Airport

Name of capex 4	**ERATO**
Description	ERATO is a stripless system designed in an all-electronic environment with innovative MTCD functionalities. After an initial operational assessment performed successfully in the pilot centers of Brest and Bordeaux, the next steps will be: - 2015-2016: implementation in Brest and Bordeaux. This will be the introduction of a “stripless" system in France. - From 2018, progressive integration in the 4 - FLIGHT system whose human/machine interface already includes some concepts
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	ERATO integrates innovative functions for conflict resolution
Replacement investment	*Yes*	
Common project	*Yes*	PCP ATM Functionnalities : AF3
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objectives : ITY-AGDL, ATC12
Joint investment	*Yes*	Development whith ENAV
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	Customers are consulted at least once a year. Last consultation on technical strategy took place on 5th March 2015.
Decision-making process	*Yes*	ERATO Framework sheet (4 November 2005)

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Early and systematic conflict detection and conformance monitoring enabled by ground based automated tools will reduce the need for tactical interventions, conformance monitoring reduces the risk of the impact of controllers and pilots errors. the system help the ATCOs to perform their analyse and decide what to do, hence reduce the risk of error.	early 2016	En-route
Environment	*Yes*	Erato is an enabler for direct routing, time and consumption (fuel) saving for the airlines.	early 2016	En-route
Capacity	*Yes*	Reduction of tactical controller workload, and better sector team productivity, compared to the conventional systems without automated support will open potential for capacity increase. Increased capacity through increase in controller efficiency.	early 2016	En-route
Cost efficiency	*Yes*	Early conflict detection will enable smoother flight patterns, without frequent and sudden control interventions. This will have a moderate influence on airline costs. Moderate benefits for ANSPs due to better deployment of the ATCO workforce, reduced workload per aircraft and workload distribution. Data link ERATO is a cost-effective capacity increase enabler through sector productivity increase and delay cost savings. ANSPs savings derived from staff cost avoidance. Aircraft operators will benefit of en route cost savings and reduction of delays.	early 2016	En-route

Name of capex 5	**EVOL CAUTRA DataLink**
Description	In consultation with the airlines and the Network Manager of Eurocontrol (which provides overall program management at the European level) DSNA has developed a revised plan for the progressive service entry of Data-link: - End of 2014: Initial phase for operational "IOC: Initial Operational Capabilities " for managing communications by Data-link (transfer frequencies); - 2016-2018: implementation of full Data-Link functions (FOC: Full Operational Capabilities) by adding the 4-FLIGHT system of clearance management, which will allow DSNA to benefit from a stripless environment and to limit investments on the environment, which will be replaced by 4-FLIGHT implementation.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	Development of IP ground-ground network, and new air-ground sub-network (VDL2)
Replacement investment	*No*	
Common project	*Yes*	PCP ATM functionnalities : AF6
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objectives : ITY-COTR, ITY-AGDL, ATC12, AOP05, ITY-ADQ
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	Customers are consulted at least once a year. Last consultation on technical strategy took place on 5th March 2015. Two workshops were held about Data Link implementation topic with airlines and Network Manager (9th April 2013, 24th June 2013)
Decision-making process	*Yes*	"Data Link inside CAUTRA" framework sheet (8 October 2012)

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>

Safety	*Yes*	Reduction of human error. Through the delivery of standard and unambiguous messages (entailing significant error and fatigue reduction), the provision of a communications back up and the possibility of immediate message retrieval, data link communications are a major safety enhancement. Early and systematic conflict detection and conformance monitoring enabled by ground based automated tools will reduce the need for tactical interventions, conformance monitoring reduces the risk of the impact of controllers and pilots errors. The more effective airside and landside operations management, improved situational awareness of all actors and resulting reduced congestion has a positive effect on safety	early 2018	En-route / Terminal /Airport
Environment	*No*			
Capacity	*Yes*	Reduction of controller workload. Increased capacity through both reduction of voice congestion and increase in controller efficiency. Reduction of tactical controller workload, and better sector team productivity, compared to the conventional systems without automated support will open potential for capacity increase. Enhanced airport capacity through optimal use of airside and landside facilities and services, better use of airport and ATFM slots	early 2018	En-route / Terminal /Airport
Cost efficiency	*Yes*	More efficient planning and operational decision making. Data link is a cost-effective capacity increase enabler through sector productivity increase and delay cost savings. ANSPs savings derived from staff cost avoidance. Aircraft operators will benefit of en route cost savings and reduction of delays. Punctuality improvements for all Stakeholders will reduce operating costs.	early 2018	En-route / Terminal /Airport

Name of capex 6	**SYSAT**
Description	The SYSAT program is suitable for systems at control towers and regional approach centers. They may be satellites of the 4-FLIGHT system but must meet specific needs such as advanced management of VFR flights, from ground circulation to landing, takeoff, and the interface with airport systems. The SYSAT program will aim to purchase an existing industrial system and adapt it to the technical environment of DSNA. Given its operational complexity, specific elements are needed for Paris-CDG. A SESAR operational assessment is taking place at CDG. The results will allow completing the definition of the specific CDG “tower and ground” modernisation project, within the SYSAT program or as a complement to it. The SYSAT program will take into account the basic elements retained by the PCP in the context of SESAR deployment, in order to incorporate them into relevant platforms at an appropriate time.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	An existing industrial system will be purchased and adapted to the technical environment of DSNA.
Replacement investment	*Yes*	
Common project	*Yes*	PCP ATM Functionnalities : AF1, AF2
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objectives : ITY-COTR, FCM03, AOP05, SAF11, AOP04.1, AOP4.2
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	

Consultation with stakeholders	*Yes*	Customers are consulted at least once a year. Last consultation on technical strategy took place on 5th March 2015.
Decision-making process	*Yes*	SYSAT framework sheet (28 November 20011 ; revised 30 April 2013)

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Reduction of human error. Prevention of overloads. The more effective airside and landside operations management, improved situational awareness of all actors and resulting reduced congestion has a positive effect on safety. Significant, through reduced risk of incidents and accidents on runways.	early 2020	Terminal /Airport
Environment	*No*			
Capacity	*Yes*	Reduction of controller workload. Better use of the available network capacity. Enhanced airport capacity through optimal use of airside and landside facilities and services, better use of airport and ATFM slots. Indirect through prevention of delay problems caused by runways excursion incidents.	early 2020	Terminal /Airport
Cost efficiency	*Yes*	More efficient planning and operational decision making. Reduction of costs induced by delays. Punctuality improvements for all Stakeholders will reduce operating costs. Concerning runway safety, the prevention of accidents is a highly cost-effective measure and the application is based upon the implementation of existing ICAO provisions	early 2020	Terminal /Airport

Name of capex 7	**PBN**
Description	Performance Based Navigation. Includes studies for RNAV procedures and implementation of GALILEO ground stations ICAO Assembly resolved that (resolution 37-11) states complete a PBN implementation plan to achieve : - implementation of RNAV and RNP operations - implementation of approach procedures with vertical guidance (APV) (Baro-VNAV and/or augmented GNSS) - implementation of straight-in LNAV-only procedures in some cases
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	
Common project	*Yes*	PCP ATM Functionnalities : AF1
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objectives : NAV10
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	A PBN coordination committee is organised on a regular basis.
Decision-making process	*Yes*	PBN COPIL, NAV CODIR

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>

Safety	*Yes*	Reduction in CFIT occurrences. Improved pilot situation awareness and reduced crew workload.	early 2017	Terminal /Airport
Environment	*No*			
Capacity	*Yes*	Provides a procedure with potential to enhance capacity due to lower minima than can be achieved through conventional NPA.	early 2017	Terminal /Airport
Cost efficiency	*Yes*	Improved operation for runways with only conventional NPA fallback during PA system outages	early 2017	Terminal /Airport

Name of capex 8	**FDS**
Description	Safety nets, as STCA (Short Term Conflict Alert), MSAW (Minimum Safe Altitude Warning), APW (Area Proximity warning), RWSL (Runway Status Light), COSNET. COSNET will be the 4-FLIGHT's safety net composant. In order to enable transition to 4-FLIGHT, COSNET must be deployed prior to 4-FLIGHT. RWSL is a fully automatic, advisory safety system designed to reduce the number and severity of runway incursions and thus prevent runway accidents while not interfering with airport operations. RWSL is designed to be compatible with existing procedures and is comprised of Runway Entrance Lights (RELs), Takeoff Hold Lights (THLs), and NEW Runway Intersection Lights (RILs)
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	
Common project	*Yes*	PCP ATM Functionnalities (related to RWSL) : AF2
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objectives : AOP04.2, ITY-ADQ
Joint investment	*Yes*	Development with DFS, concerning COSNET
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	Customers are consulted at least once a year. Last consultation on technical strategy took place on 5th March 2015.
Decision-making process	*Yes*	framework sheet

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	The systematic presentation of potentially hazardous conflicts or infringements of runway and restricted areas will help ensure the safety of aerodrome operations.	early 2016	En-route / Terminal /Airport
Environment	*No*			
Capacity	*No*			
Cost efficiency	*Yes*	More efficient control of aerodrome surface traffic, leading to a reduction in delay and fuel burn. Reduction of incidents & accidents on manoeuvring area.	early 2016	En-route / Terminal /Airport

Name of capex 9	**NVCS (new Voice Communication System)**
Description	NVCS is a major project concerning the renewal of the telephone and radio systems ARTEMIS, which handle all operational voice communications for DSNA ACC. This future system is a full IP system , in line with SESAR's objective. The contract has been signed after a cooperation agrement between The Direction des Services de la Navigation Aérienne (DSNA) and the Maastricht Upper Area Control centre (MUAC), partners in the Functional Airspace Block Europe Central (FABEC) organisation. The DSNA and the MUAC recognised that it was operationally, technically and financially highly desirable, that the DSNA and the MUAC put in place the same VCS Common Product in the future; ensuring consistency with the European Commission SES regulation, in-line with the declaration of intention of the member states of FABEC as well as the FABEC ANSP agreement signed at the end of 2008.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	full IP system
Replacement investment	*Yes*	Replacement of ageing radio-telephone chain in ACC, in partnership with FABEC counterparts
Common project	*Yes*	in discussion to be integrated in the AF3 PCP ATM functionnaly
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objectives : COM11
Joint investment	*Yes*	Joint investment with MUAC
Synergies achieved at FAB level or other MS	*Yes*	FABEC counterparts
Consultation with stakeholders	*Yes*	Customers are consulted at least once a year. Last consultation on technical strategy took place on 5th March 2015.
Decision-making process	*Yes*	N-VCS cooperation Agreement, 27/07/2009

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Maintained or improved	early 2018	En-route / LFPG Airport
Environment	*No*			
Capacity	*Yes*	Maintained or improved by providing enhanced signalisation functions. Prerequisite of dynamic sectorisation through dynamic allocation of voice resources.	early 2018	En-route / LFPG Airport
Cost efficiency	*Yes*	Reduced costs by reusing Internet off the shelf technologies that can be based on standard hardware.	early 2018	En-route / LFPG Airport

Name of capex 10	**A-SMGCS**
Description	Advanced Surface Movement Guidance and Control System. Intends to improve security for ground movements. An A-SMGCS differs from an SMGCS in that it may provide a full individual service over a much wider range of weather conditions, traffic density and aerodrome layouts. A-SMGCS are to use common modules in all circumstances. The modules to be used in any particular circumstance are determined by the specific requirements of each aerodrome. The main benefits to be accrued from the implementation of an A-SMGCS will be associated with low visibility surface operations. But significant improvements in aerodrome capacity can also be achieved under good visibility conditions.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	
Common project	*Yes*	PCP ATM Functionnalities : AF2
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objectives : AOP04.1, AOP4.2
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	Customers are consulted at least once a year. Last consultation on technical strategy took place on 5th March 2015.
Decision-making process	*Yes*	CBA in 2006

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Improved situational awareness for aerodrome controllers, particularly during periods of reduced visibility and darkness will enhance safe operations. The systematic presentation of potentially hazardous conflicts or infringements of runway and restricted areas will help ensure the safety of aerodrome operations.	early 2016	Airport
Environment	*Yes*	Reduction of noise and emissions.	early 2016	Airport
Capacity	*Yes*	Ability to maintain traffic throughput during periods when aerodrome traffic cannot be observed visually by aerodrome controllers, through the use of surveillance information and appropriate procedures. Ability to maintain traffic throughput during periods when aerodrome traffic cannot be observed visually by aerodrome controllers, through the use of A-SMGCS Level 2 safety net combined with improved surveillance information of A-SMGCS Level 1 and appropriate procedures.	early 2016	Airport
Cost efficiency	*Yes*	More efficient control of aerodrome surface traffic, leading to a reduction in delay and fuel burn. Reduction of incidents & accidents on manoeuvring area.	early 2016	Airport

Name of capex 11	**CDM / AMAN / DMAN / XMAN / collaborative NOP (Network Operation Planning)**
Description	Airport CDM is about partners (airport operators, aircraft operators/ground handlers, ATC and the Network Operations) working together more efficiently and transparently in the way they work and share data. The Airport CDM project aims to improve the overall efficiency of operations at an airport, with a particular focus on the aircraft turn-round and pre-departure sequencing process. One of the main outputs of the CDM process will be more accurate Target Take Off Times which can be used to improve en route and sector planning of the European ATM Network. This is being achieved through implementation of a full set of Departure Planning Information messages (DPIs) sent to Network Operations. The advantages for the network will start to multiply as more and more airports implement A-CDM. Tools for Collaborative Decision Making : CPDS (Collaborative Pre-Departure Sequence), DMAN (Departure Manager), AMAN (Arrival manager)
Accountable entity	ANSP/Airport

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	
Common project	*Yes*	PCP ATM Functionnalities : AF1, AF4, AF2
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objectives : AOP05, ATC15, ATC 07.1, FCM04, FCM05 Link with NSP : SO6, SO2, SO5
Joint investment	*Yes*	Collaborative investment with Airport authorities
Synergies achieved at FAB level or other MS	*Yes*	XMAN : FABEC project in Core Area for the top 5 airports
Consultation with stakeholders	*Yes*	Customers are consulted at least once a year. Last consultation on technical strategy took place on 5th March 2015. Joint strategy with Airport authorities and airspace users is defined at LFPG.
Decision-making process	*Yes*	CDM at CDG Roadmap, 2006 CDG2020 Roadmap, end of 2014

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	The more effective airside and landside operations management, improved situational awareness of all actors and resulting reduced congestion has a positive effect on safety.	early 2017	Terminal /Airport
Environment	*Yes*	Reduction in holding and in low-level vectoring, by applying delay management at an early stage of flight, has a positive environmental effect in terms of noise and fuel usage.	early 2017	Terminal /Airport

Capacity	*Yes*	Enhanced airport capacity through optimal use of airside and landside facilities and services, better use of airport and ATFM slots. Improved airport/TMA capacity.	early 2017	Terminal /Airport
Cost efficiency	*Yes*	Punctuality improvements for all Stakeholders will reduce operating costs. Reduced costs through reduction in delays, reduction in low-level holding operations and reduction in low-level tactical vectoring for delay purposes. Reduced reactionary costs due to better anticipation.	early 2017	Terminal /Airport

Name of capex 12	**AIS**
Description	AIS consists in the provision of aeronautical information. AIM “Aeronautical Information Management” allows a more dynamic management of AIS, built on numerical data whose quality is guaranteed (ADQ Regulation in Europe). ICAO has defined a three-phased roadmap for the transition from AIS to AIM and DSNA relies on the NOPIA system to support this evolution, as much as eTOD (electronic Terrain and Obstacle data)
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	NOPIA is the new French global AIM system, enabling AIP provision, eAIP generation, automatic data exchange with DSNA external entities, and automatic date export from IFR procedures design tools.
Replacement investment	*Yes*	NOPIA has replaced former "PIANO" system, which aimed at providing French AIP, and some other ancillary systems. Solutions for the replacement of NOTAM & PIB systems (Pre-flight Information Bulletin) are currently under assessment
Common project	*Yes*	PCP ATM Functionnalities : AF5
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objectives : ITY-AGDL, ITY-ADQ, ATC12, SAF11 Implementing rule : ADQ-IR Link with NSP : SO2,
Joint investment	*Yes*	Eurocontrol has a centralised database (EAD) whose management is entrusted to a private company, “groupEAD” (subsidiary of DFS, AENA and the Frequentis group), which develops and maintains the system, and provide resulting services.
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*No*	
Decision-making process	*No*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Significant, through reduced risk of incidents and accidents on runways. Improved consistency, reliability and integrity.	early 2015	En-route / Terminal /Airport
Environment	*No*			
Capacity	*Yes*	Indirect through prevention of delay problems caused by runways excursion incidents.	early 2015	En-route / Terminal /Airport
Cost efficiency	*Yes*	Concerning runway safety, the prevention of accidents is a highly cost-effective measure and the application is based upon the implementation of existing ICAO provisions. Avoidance of repair, correction and re-work activities at data provider and data user level as a necessary step towards the implementation of system wide information management.	early 2015	En-route / Terminal /Airport

Name of capex 13	**Airspace projects**
Description	Implementation of airspace segmentation changes on the controller working position
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*Yes*	PCP ATM Functionnalities : AF3
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	ESSIP objectives : AOM21, ITY-ADQ
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*Yes*	
Consultation with stakeholders	*Yes*	Customers are consulted at least once a year. Last consultation on technical strategy took place on 5th March 2015.
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Some enhancement through reduction in controller workload.	repetitive activities	En-route / Terminal
Environment	*Yes*	Reductions in emissions through use of more optimal routes.	repetitive activities	En-route
Capacity	*Yes*	Increased through reduction in conflict points, and specialization of routes and sectors to enhance productivity and reduce controller workload.	repetitive activities	En-route
Cost efficiency	*Yes*	Savings in route distances in some States as well as better fuel efficiency through increased use of preferred flight profiles and improved sectorisation.	repetitive activities	En-route

Name of capex 14	**MCO et Evol NAV / COM / ATM**
Description	Includes costs related to operational maintenance for NAV/COM/ATM devices Maintaining technical equipment in operational condition (MCO) is essential to continue to have a required level of optimal safety especially in a period of on-going optimisation of technical workforce management
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	The maintenance operations, the modernisation of ATM/CNS /NAV systems, whose objectives are of lower priority, are the object of "case by-case" decisions according to operational gains brought, and their contribution to priority programs
Replacement investment	*Yes*	
Common project	*Yes*	PCP ATM Functionnalities : AF1, AF5, AF6
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	SAF11, COM11, ITY-FMTP, NAV10
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	Customers are consulted at least once a year. Last consultation on technical strategy took place on 5th March 2015.
Decision-making process	*Yes*	ATM CODIR

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Significant, through reduced risk of incidents and accidents on runways. Reduction in CFIT occurrences. Improved pilot situation awareness and reduced crew workload.	repetitive activities	En-route / Terminal /Airport
Environment	*No*			En-route / Terminal /Airport
Capacity	*Yes*	Indirect through prevention of delay problems caused by runways excursion incidents. Maintained or improved by providing enhanced signalisation functions. Prerequisite of dynamic sectorisation through dynamic allocation of voice resources. Provides a procedure with potential to enhance capacity due to lower minima than can be achieved through conventional NPA.	repetitive activities	En-route / Terminal /Airport
Cost efficiency	*Yes*	Concerning runway safety, the prevention of accidents is a highly cost-effective measure and the application is based upon the implementation of existing ICAO provisions. Reduced costs by reusing Internet off the shelf technologies that can be based on standard hardware. Improved operation for runways with only conventional NPA fallback during PA system outages	repetitive activities	En-route / Terminal /Airport

Name of investment	Total CAPEX for the project	Planned Amount of Capital Expenditures (in national currency)					Lifecycle (Amortisation period in years)	Allocation en route / terminal ANS (%)	Planned date of entry into operation (IOC / FOC dates)
		2015	2016	2017	2018	2019			
4-FLIGHT	547 000 000	78 750 000	85 770 000	84 960 000	78 810 000	50 200 000	4	95,00%	from 2017 to 2021
COFLIGHT	185 000 000	6 300 000	0	0	0	0	4	80,00%	from 2017 to 2020
CSSIP	81 000 000	4 571 000	1 265 000	200 000	0	0	8	80,00%	from 2015 to 2017
ERATO	109 000 000	4 500 000	0	0	0	0	8	100,00%	from 2015 to 2016
EVOL CAUTRA DataLink	266 000 000	3 800 000	2 200 000	2 200 000	650 000	650 000	8	80,00%	IOC : 2015 FOC : 2019
SYSAT	78 000 000	3 040 000	6 400 000	14 400 000	15 120 000	16 680 000	8	0,00%	from 2018 to 2021
PBN	n/a	150 000	150 000	150 000	150 000	150 000	8	70,00%	end of 2016
FDS	15 000 000	475 000	175 000	175 000	180 000	180 000	8	40,00%	end of 2015
NVCS (new Voice Communication System)	72 000 000	4 490 000	8 948 000	9 578 000	7 600 000	10 200 000	8	96,00%	from 2017 to 2021
A-SMGCS	26 000 000	1 516 500	1 908 000	1 476 000	2 460 000	3 240 000	8	0,00%	from 2015 to 2017
CDM / AMAN / DMAN / XMAN / collaborative NOP (Network Operation Planning)	39 000 000	3 440 000	4 000 000	4 800 000	5 520 000	7 080 000	8	62,00%	end of 2015
AIS	n/a	300 000	320 000	300 000	300 000	300 000	8	80,00%	from 2013 to 2014
Airspace projects	n/a	800 000	800 000	800 000	800 000	800 000	8	70,00%	repetitive activities
MCO et Evol NAV / COM / ATM	n/a	16 179 000	20 622 000	21 274 000	20 400 000	20 400 000	8	60,00%	repetitive activities
Sub-total of **main capex** above (1)	1 418 000 000	128 311 500	132 558 000	140 313 000	131 990 000	109 880 000			
Sub-total other Capex (2)		48 955 500	61 707 810	64 673 900	57 060 000	47 010 000			
Total capex (1) + (2)	1 418 000 000	177 267 000	194 265 810	204 986 900	189 050 000	156 890 000			

Additional comments
"Sub-total other Capex" above, consists of : real estate, civil engineering, and maintaining structures in operational condition. No data available regarding PBN, AIS, Airspace projects and MCO due to on-going nature of project. Mentionning an average lifecycle for those "other capex" would not be relevant.

LVNL

Number of capex	7

Name of capex 1	**Replacement AAA**
Description	The AAA-system (FDP) is the core of the LVNL support system for operational services. AAA allows the processing of flight plan- and radar data, it handles the display of relevant information on the operational workstations and it includes warning- (safety nets) and planning functions such as an Arrival Manager for planning of inbound traffic to Schiphol.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	In the preparation of the business case LVNL evaluates several options for the replacement of AAA. At this stage the most preferred option is to replace AAA by the iTEC based Centre Operation System (iCAS) of DFS. On 8th March 2011, LVNL signed a partnership with DFS and LVNL has joined DFS in the development of iTEC. The iCAS partnership aims at the development and deployment of iCAS within LVNL ATC Centre and al four DFS ATC Centres during the period 2015-2024 in which operational cut-over at LVNL is planned for 2020. This standardization of systems allows LVNL to share the development costs and to reduce future maintenance costs. In doing so LVNL retains access to a state of the art ATS system-environment for its services.
Replacement investment	*Yes*	The support by the AAA-computer hardware manufacturer ends in 2013. Operational use of the system until 2020 is considered to be possible due to maintenance by third parties. Thereafter a major software modification will be necessary to allow AAA function on new hardware. Timely replacement of AAA avoids a costly "rehosting" of the AAA-software. Furthermore the current AAA-system will not be able to comply with new SESAR requirements.
Common project	*Yes*	Replacement is essential to deploy the ATM functionalities: (a) Extended Arrival Management and (e) Initial System Wide Information Management (f) Initial Trajectory Information Sharing.
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	A new Concept of Operations (CONOPS) is in development within the SES ATM Research (SESAR) program in Europe. Central topic in this CONOPS is the introduction of 4D trajectory based operations. This concept will be introduced around 2020. AAA (or its replacement) will have to support this concept. Compared with the current state (functionality) of AAA, this will require significant and expensive changes in AAA. AAA will no longer meet future operational requirements at a cost-efficient level. Enabler for implementation SESAR concept. Facilitates multiple operational improvements: e.g. 4D contract and improved operability. The replacement of AAA with iCAS will enable numerous key elements of SESAR. 1. Trajectory based operations (AOM-0504) and connecting to the NOP will become possible (DCB-0102, DCB-0201). 2. The new arrival manager and inbound planning, as part of the AAA replacement, will be prepared for trajectory based operations in the TMA like P-RNAV SID's, RNP-based approaches, etc. (AOM-0602, AOM-0703, TC-0102, TS-0305). 3. Dynamic sectorization (AOM-0205, AOM-0802) will be introduced. The joint development of ICAS with neighbouring ANSPs will even create better possibilities for cross-border sectorization (AOM0401). There will be support for data link communication between controllers and pilots (AUO-0301).
Joint investment	*Yes*	On 8th March 2011, LVNL signed a partnership with DFS and LVNL has joined DFS in the development of iTEC.
Synergies achieved at FAB level or other MS	*Yes*	European legislation, to create a Single European Sky (SES) requires increasingly stringent demands on the ATS system. This applies particularly to the Flight Data Processing system (FDP), the core of and Air Traffic Services system (ATS). Development costs and procurement of a fully compliant FDP-system can no longer be carried by an individual ANSP. Within Europe, two consortia have been formed to develop a European FDP (eFDP). Within FABEC it is foreseen that for cost-effectiveness a convergence of technical systems is needed to provide the ultimate "common maintenance" of "common systems". For the core of AAA, the Flight Data Processing system will eventually be provided by two products: iTEC and CoFLight, based on the standard specifications of eFDP. Within this framework LVNL will ultimately have to make the transition to eFDP.
Consultation with stakeholders	*Yes*	Multiple consultations in 2013 and 2014. A multi actor working group is organised to develop the business case replacement AAA.
Decision-making process	*Yes*	Decision based on business case is made Q4 2014 or Q1 2015

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	The replacement of AAA guarantees continuity of LVNL service. It also means that LVNL will be able to achieve the long-term FABEC performance targets and will continue to comply with the SES (SESAR) requirements. In particular, the implementation of 4D trajectory-based operations and multi-sector planning will ultimately increase the VEM (SEEC targets) performances. Additionally, the substitution of AAA will give LVNL a cost-efficient way to comply to the specific requirements of Mainport Schiphol and to meet VEM (SEEC) demands.	2020+	En-route
Environment	*Yes*		2020+	En-route
Capacity	*Yes*		2020+	En-route
Cost efficiency	*Yes*		2020+	En-route

Name of capex 2	**Expansion facilities**
Description	Due to various internal and external developments, amongst others the need for more space for the (migration towards a) new ATC system iCAS, the intended CIV/MIL colocation and cooperation and the outcome of a Contingency study, the present ATC Center and its infrastructure need to be expanded.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	Expansion of the LVNL facilities is considered necessary. The intended civil military colocation requires additional working positions both for operational staff and support staff. In addition the centralisation of training activities of the civil and military ATCO training requires additional facilities for training staff, trainees and simulators. Other drivers are the replacement of AAA and Contingency reasons. A second OPS room is considered necessary to mitigate business continuity risks during the migration towards the successor of the current AAA-system. Several options are being reviewed and the final decision will be based on a business case adressing the costs, benefits and risks.
Replacement investment	*No*	n/a
Common project	*No*	n/a
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	Enabler for AAA replacement, see [Replacement AAA description 'Other investment'] and civili/military colocation and cooperation
Joint investment	*No*	Costs/investments related to the military requirements will be born by the military.
Synergies achieved at FAB level or other MS	*No*	Synergies are expected with the intended CIV/MIL cooperation
Consultation with stakeholders	*Yes*	LVNL user consultation meeting April 17th, 2014 and Dutch stakeholder consultation meeting May 6th, 2014
Decision-making process	*Yes*	Part of the AAA replacement decision and decision making process with regard to civili/military colocation

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Enabler for future benefits: replacement AAA, CIV/MIL cooperation, Contingency.	2017+	En-route/terminal
Environment	*Yes*		2017+	En-route/terminal
Capacity	*Yes*		2017+	En-route/terminal
Cost efficiency	*Yes*		2017+	En-route/terminal

Name of capex 3	**Replacement TAR4**
Description	Maintain the necessary level of situational awareness in the terminal manoeuvring area Schiphol. One of the terminal approach radars Schiphol is end of life and needs to be replaced (combined primary – and Mode-S radar).
Accountable entity	ANSP

Justification of the cost, nature and contribution

Differentiation	*New system*	New (combined primary – and Mode-S radar) terminal approach radar at Schiphol airport.
Replacement investment	*Yes*	Replacement of current terminal approach radar.
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	The mode-A/C radar TAR-4 will be replaced by a modern mode-S radar. With a mode-S radar it becomes possible to retrieve flight status information via datalink (AUO-0301). The improved quality of surveillance data enables improvement of arrival management (TS-0102, TS-0305). Eurocontrol guidelines (Radar Surveillance in En-Route Airspace and major terminal areas) commission primary radar coverage in high density TMAs.
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	Alternative use of military MPR (medium power range radar) is not covering low levels and performance wise not applicable. Usage of military MASS radars is not applicable due to their availability figures (not 24/7).
Consultation with stakeholders	*Yes*	LVNL user consultation meeting April 17th, 2014 and Dutch stakeholder consultation meeting May 6th, 2014
Decision-making process	*Yes*	Several option regarding the location of de TAR are being reviewed. A formal appraisal of the investement proposal is expected in 2014.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Surveillance is a crucial enabler for providing Air Traffic Services at current and future service levels. If the terminal approach radar is not replaced on time, the risk of system failure will increase. With the loss of the required level of situational awareness controllers have to revert to backup systems. In such a situation capacity restrictions could be applied.	2016	En-route
Environment	*Yes*		2016	En-route
Capacity	*Yes*		2016	En-route
Cost efficiency	*No*			

Name of capex 4	**Last resort Air-Ground, Ground-Ground Voice Communication**
Description	The last resort air-ground communication system is at its end-of- life and needs to be replaced. This system is used when the nominal communication system is not available. The replacement of the current nominal system is in process [ref. Replacement VCS planned in to operation 2015]. The reasons for replacing the fallback system are: • End-of-life of air-ground emergency sets • Additional requirements (e.g. more frequencies)
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	Replacement of fallback systems
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	Fallback ground-air and ground-ground voice communication is indispensable in critical events (DCB-0207). European Masterplan LoC #5, Capability Level 0 8.33kHz above FL195, Capability Level 2 8.33kHz below FL195 Recommendations of the European Working Group Cross Border Communications (CroBoCom)
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*Yes*	The system specification will be defined in co-operation with the Deutsche Flugsicherung (DFS).
Consultation with stakeholders	*Yes*	LVNL user consultation meeting April 17th, 2014 and Dutch stakeholder consultation meeting May 6th, 2014
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>

Safety	*Yes*	Communication between the ground and aircraft and between controllers is essential for providing air traffic services. This communication relies on the availability of a voice communication system (VCS). The last resort will be used in unplanned situations wherein the main VCS and Back up VCS are not available, A reliable Last resort increases the safety of the operation as, in case of emergency, a controlled decrease of capacity is possible and essential.	2016	En-route/terminal
Environment	*Yes*		2016	En-route/terminal
Capacity	*Yes*		2016	En-route/terminal
Cost efficiency	*No*			

Name of capex 5	**Maintenance investments**
Description	In order to maintain the current level of service provision and to be able to realise beforementioned projects several investments are needed with respect to the ATM system and buildings and infrastructure. These investments are necessary replacements by new systems and overhaul of existing systems and infrastructure. The most important maintenance orientated investments are: - replacement of the MLT field units Schiphol (2017 | €1.700) - midlife upgrade SMR1 and SMR3 Schiphol (2016 | €1.400) - replacement TAR1 Schiphol (2018 | €1.000) - replacement cable infrastructure and glass fiber, no-break, cooling/heating, etc. (2015 | €2.107)
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	Both new systems and overhaul of existing systems
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	LVNL user consultation meeting April 17th, 2014 and Dutch stakeholder consultation meeting May 6th, 2014
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Maintain current level of service provision and enable realisation of beforementioned projects providing future benefits.	2015-2019+	En-route/terminal
Environment	*Yes*		2015-2019+	En-route/terminal
Capacity	*Yes*		2015-2019+	En-route/terminal
Cost efficiency	*No*			

Name of capex 6	**Replacement EHAM/EHRD TWR system**
Description	The TWR-system is the core of the LVNL support system for operational services at Schiphol and Rotterdam - The Hague airport. The TWR-system allows the processing of flight plan- and radar data, it handles the display of relevant information on the operational workstations and it includes warning- (safety nets) and planning functions such as a Departure Manager for planning of outbound traffic to Schiphol. It is also a source for the necessary information to the stakeholders at Schiphol Airport. The system consists of an Operational system (about 33 workstations) and a Test system (9 workstations) and a TWR system in the simulator environment (8 workstations). The Operational system supports workstations at Schiphol Airport (three Towers, a simulator and test system) and Rotterdam - The Hague Airport (both Tower and Approach). The Simulator/Test system is a duplicate of the operational system. For Simulation purposes it is supplemented with the necessary simulation and test features to fulfill the initial and recurrent training of operational staff and for testing system modifications. The replacement is necessary because the system (dating from 1997) is end of life and needs to be upgraded with Electronic Flight Strips and new and current standard interfaces.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	
Common project	*Yes*	Replacement is essential to deploy the ATM functionality (b) Airport Integration and Throughput
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	The following improvement steps from the EU Masterplan: AO-0102, AO-0208, AO-0603, DCB-0302, IS-0101, IS-0102, IS-0204.
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*Yes*	Synergie is expected to be reached in the context of our joint Collaborative Decision Making efforts togethers with our stakeholders amongst which Amsterdam Airport Schiphol and users. The replacement of the Tower System should be considered as part of the CDM system support voor Amsterdam Airport Schiphol
Consultation with stakeholders	*Yes*	
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*			Terminal
Environment	*No*			Terminal
Capacity	*No*			Terminal
Cost efficiency	*No*			

Name of capex 7	**Hardware replacement AAA**
Description	AAA-hardware is replaced app every 5 year. Depending on the outcome of the planned investment decision by the end of 2014 / beginning 2015 with respect to the AAA-replacement an additional hardware replacement could be necessary to extent the usefull life of the system in order to safeguard a seamless operation untill a complete replacement will take place-
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	Replacement of hardware
Replacement investment	*Yes*	Replacement of hardware
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	No new functionality will be added to the current system
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	No new functionality will be added to the current system
Consultation with stakeholders	*Yes*	In the course of the stakeholder consultations regarding the replacement of AAA
Decision-making process	*Yes*	This is one of the options which will be patr iof the business case AAA/replacement

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Safequard current performance levels	2017 and beyond	En-route
Environment	*Yes*		2017 and beyond	En-route
Capacity	*Yes*		2017 and beyond	En-route
Cost efficiency	*Yes*		2017 and beyond	En-route

Name of investment	Total CAPEX for the project	Planned Amount of Capital Expenditures (in national currency)					Lifecycle (Amortisation period in years)	Allocation en route / terminal ANS (%)	Planned date of entry into operation (IOC / FOC dates)
		2015	2016	2017	2018	2019			
Replacement AAA	82 423	19 611	24 706	14 300	17 565	723	20	100%R-0%T	2020
Expansion facilities	21 500		11 000	10 500			20	90%R-10%T	2017
Replacement TAR4	8 631	4 001	2 200				15	100%R-0%T	2017
Last resort Air-Ground, Ground-Ground Voice Communication	3 960	1 632	1 932				15	55%R-45%T	2016
Maintenance investments	n/a	2 390	2 826	2 444	3 776	2 807	n/a	n/a	2015-2019+
Replacement EHAM/EHRD TWR system	8 000	2 500	2 400	3 100			10	0%R-100%T	2017
Hardware replacement AAA	5 000			5 000			3	100%R-0%T	2017
Sub-total of **main capex** above (1)	129 514	30 134	45 064	35 344	21 341	3 530			
Sub-total other Capex (2)		6 836	2 370	1 101	630	8 470			
Total capex (1) + (2)	129 514	36 970	47 434	36 445	21 971	12 000			

Additional comments
The decision for the AAA replacement, expansion of the LVNL building will be made in Q4 2014 or Q1 2015 based upon the business case results. This decision will be made after the performance plan for RP2 is filed for approval.

MUAC

Number of capex	12

Name of capex 1.1	**Voice Systems : New VCS System (N-VCS)**
Description	This project consists of the development and commissioning of a new Voice Communication System at MUAC, compliant with the FABEC CONOPS. The current primary Voice Communication System (VCS) came into operation at Maastricht UAC (MUAC) in 1996, almost 20 years ago. The standards and communication protocols in the area of voice communications have undergone significant changes over the last years and will continue to evolve. The current VCS will not be able to support these new protocols and standards. The VCS hardware in service at MUAC is also obsolete and the costs of maintenance are expected to increase in the coming years. Performance assessment: • cost-savings through partnership in procurement and maintenance; • ensure continuation of service, at least at current capacity levels (Primary VCS failure leads to 50% Capacity reduction); • safety will increase because of the improved reliability of the VCS system; • cost efficiency will be improved by enhanced functionalities. • compliance with VOIP regulation MUAC and DSNA decided to launch a common procurement procedure in August 2009. The contract was signed in April 2011 and the start of the commissioning is due for Q1 2015. Economic lifetime is 15 years.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*Yes*	DSNA and MUAC share the cost of a common product.
Synergies achieved at FAB level or other MS	*Yes*	Based on FABEC specs, the N-VCS is procured in a common project with DSNA.
Consultation with stakeholders	*Yes*	MCG / Four States
Decision-making process	*Yes*	MCG approval for the cooperation agreement with the French DSNA for the N-VCS was obtained in October 2009. The PC approved the cooperation agreement in December 2009. The contract with Frequentis for the delivery of the N-VCS was approved by the MCG in March 2011, subsequently the PC approved in April 2011.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	- maintain very high reliability figures - provide better geographical distribution of Tx and Rx radios resulting in improved radio coverage	as from 2015	En-route
Environment	*No*			
Capacity	*Yes*	where the current system has reached its limits in terms of capacity, the NVCS can be extended to at least 2x the initially deployed capacity	as from 2015	En-route
Cost efficiency	*Yes*	The cost for the common NVCS product are shared between DSNA and MUAC.	as from 2015	En-route

Name of capex 1.2	**Voice Systems : Antenna Towers**
Description	The building of two additional transmitter antenna towers is planned in 2014-2015. In 2016, the existing antenna and transmitter infrastructure on the roof of the main building will be removed.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	MCG / Four States
Decision-making process	*Yes*	EUROCONTROL Financial and Contract Regulations apply.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Redundancy policy (at least two physically separated radio stations for each operational frequency). Solves the vulnerability issue currently existing in the Brussels sector Group (the main VCS radio transmitters of all Brussels sector frequencies are in one single location);	as from 2015	En-route
Environment	*No*			
Capacity	*Yes*	Obsolescence avoidance (radios and antennae systems). Allows maintenance activities on the transmitter antennas without the mandatory switching to Backup VCS operations during the maintenance activity;	as from 2015	En-route
Cost efficiency	*No*		as from 2015	En-route

Name of capex 1.3	**Voice Systems : B-VCS replacement**
Description	The current backup Voice Communication System (B-VCS) came into operation at Maastricht UAC (MUAC) in 2008. With an expected economic lifetime of around 15 years, the replacement should be initiated by the end of this decade. Performance assessment: • potential cost-savings through partnership in procurement and maintenance (to be assessed at the initiation of the project); • safety will increase because of the improved reliability of the B-VCS system; • capacity will be improved by enhanced functionalities and an increase in the number of supported CWPs.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*Yes*	
Common project	*No*	

Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	Currently no plans. Opportunity to be assessed at the initiation of the project (2018)
Synergies achieved at FAB level or other MS	*No*	Currently no plans. Opportunity to be assessed at the initiation of the project (2018)
Consultation with stakeholders	*Yes*	MCG / Four States
Decision-making process	*Yes*	EUROCONTROL Financial and Contract Regulations apply.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	avoidance of obsolescenece. Improved reliability.	as from 2020	En-route
Environment	*No*			
Capacity	*Yes*	avoidance of obsolescenece. Increased capacity.	as from 2020	En-route
Cost efficiency	*No*			

Name of capex 2.1	**New Generation ATM: Radio Direction Finder System (RDFS)**
Description	Implementation of an array of state-of-the art RDF equipment to provide the position information of aircraft radio transmissions to the controller working positions.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	MCG / Four States
Decision-making process	*Yes*	EUROCONTROL Financial and Contract Regulations apply.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Reduction in the number of operational incidents generated by call sign confusion, read-backs from wrong aircraft or crossed transmissions. In general, it improves ATCO situational awareness.	2015	En-route
Environment	*No*			
Capacity	*No*			
Cost efficiency	*Yes*	ATCO productivity gains because of reduced monitoring time leading to an overall reduction of workload.	2015	En-route

Name of capex 2.2	New Generation ATM : CWP maintenance improvements
Description	Although based on 20 years old software technology, the current CWP was able to accommodate important functional evolutions and demonstrated that is capable to sustain operational functionality foreseeable at least for the medium term future (next 5 years). There is no immediate danger of obsolescence or a risk that operational requirements could not be met in the coming years. However, the current technology limits functional improvements and constrains the productivity of the development teams. To improve the mntainability of the current CWP software two technological improvement streams are planned: - redesign and streamlining of the CWP automatic regression test environment, focussing both on time to develop and time to run, and - rejuvenation of the CWP source code and development environment
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*No*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	MCG / Four States
Decision-making process	*Yes*	EUROCONTROL Financial and Contract Regulations apply.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*			
Environment	*No*			
Capacity	*Yes*	Ensures the capability to implement HMI changes/improvements to support the future conops functionality for the forseable future.	as from 2016	En-route
Cost efficiency	*Yes*	estimated cost reduction in SW maintenance of 300 k€/year.	as from 2016	En-route

Name of capex 2.3	New Generation ATM : New generation small-console
Description	The current CWP consoles have been designed at the beginning of the 90's and have suffered little ergonomy improvements since that period. Modern hardware, display and IT technologies in general allow for the design of a lighter/smaller working position with improved ergonomy. An study will be performed to proposed the best design solution followed by a replacement of the current consoles.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	

Consultation with stakeholders	*Yes*	MCG / Four States
Decision-making process	*No*	EUROCONTROL Financial and Contract Regulations apply.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Provides an efficient and ergonomic working environment, conducive of increased safety and productivity.	as from 2019	En-route
Environment	*Yes*	Allows to re-group equipment in dedicated areas (equipment rooms) and results in optimal cooling (reduction of costs and positive impact on the environment);	as from 2019	En-route
Capacity	*Yes*	Facilitates an extension of the number of controller working positions in the OPS Room;	as from 2019	En-route
Cost efficiency	*Yes*	Reduces the costs linked to physical re-deployments in the OPS room;	as from 2019	En-route

Name of capex 2.4	**New Generation ATM : Rationalisation of the IT infrastructure**
Description	The MUAC ATM infrastructure has evolved from its birth in the early 70's from a monolithic architecture consolidated onto one middleware, operating system (RTSX) and hardware platform (IBM mainframe) into an open system with distributed processing architecture (Unix/Linux based). This modernisation process has been performed in steps based on major functional components (e,g: LAN,CWP, FDPS) and has resulted in the proliferation of hardware and software platforms. In the past years several projects (including the running FDPS2.0) have been launched to address this issue and to take advantage of state of the art technologies such as "virtualization". This process is expected to continue in the following years bringing further efficiencies in terms of maintenance costs.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*No*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	MCG / Four States
Decision-making process	*Yes*	EUROCONTROL Financial and Contract Regulations apply.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*			
Environment	*No*			
Capacity	*No*			
Cost efficiency	*Yes*	cost reduction in maintenance of SW and HW.	2017	En-route

Name of capex 2.5	**New Generation ATM : FDPS convergence**
Description	One of the long term objectives of FABEC is to ensure the convergence of technical systems leading to economies of scale, synergies in maintenance and eventually facilitating a common operational concept. The MUAC FDPS platform has been developed starting from the requirements of the European FDP project (eFDP) which served as well as the basis for the two major co-operation projects iTEC and COFLIGHT which are still in the development phase. MUAC is evolving its operational FDPS platform in SESAR in view of introducing the new interoperability concept based on the Flight Object mechanism (part of the initial SWIM) to allow information exchange between systems of different ANSPs. At the same time, MUAC has initiated a study to identify the impact of architectural changes required to facilitate this future convergence of systems in FABEC with the aim of reducing future development and maintenance cost while preserving the advanced characteristics of the MUAC operational concept.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*No*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*Yes*	If realised (subject of CBA assessment) , this project could lead to long term economies of scale in terms of reducing maintenance and future development costs.
Consultation with stakeholders	*Yes*	MCG / Four States
Decision-making process	*Yes*	EUROCONTROL Financial and Contract Regulations apply.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*			
Environment	*No*			
Capacity	*No*			
Cost efficiency	*Yes*	reduction of maintenance and development costs	TBD	En-route

Name of capex 2.6	**New Generation ATM : UFS Implementation**
Description	The current MUAC fallback facilities are supported by two sub-sytems: the Maastricht Fallback System (MFS) providing radar, reduced flight plan information and a separate HMI and the Ultimate Fallback Facility (UFF) which is just a paper print-outof flights list in case of a catrastophic failure. A series of simulations to measure the impact of various fallback scenarios on controller performance (including safety) have been performed inlcuding a third layer called Ultimate Fallback System (UFS) which provided mono radar tracks with modeS information (no flight plan information). The implementation of the UFS layer will improve safety and capacity at a very resonable cost.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*No*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	MCG / Four States
Decision-making process	*Yes*	EUROCONTROL Financial and Contract Regulations apply.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Improved safety during the transition and under fallback conditions (UFS and UFF).	2016	En-route
Environment	*No*			
Capacity	*Yes*	The levels of performance achievable under UFS, especially the assurance of separation, are clearly significantly higher than those of the current UFF leading to increased capacity under fallback conditions.	2016	En-route
Cost efficiency	*No*			

Name of capex 3	**ATFCM/ASM**
Description	The ATFCM/ASM Project aims to establish a coherent and maintainable set of tools meeting the operational requirements focused on system support for strategic, pre-tactical and tactical ATFCM/ASM and production planning processes. The ATFCM products to be improved or developed can be classified into 3 categories: - PPS: The Production Planning System for the strategic and pre-tactical planning phases. Its main components are TZ (TimeZone), SPT (Statistical Prediction Tool), OPS Roster Tool (ORT) and the New Duty Assigner which improves the OPS rostering process by more effective tool's support, includes new rules agreed with social partners and increases the overall rosters' flexibility. - iFMP (integrated Flow Mangement Position; formerly named TMS) integrates traffic prediction tools, sector configuration management and other analytical tools into one coherent system with a customised Human-Machine Interface (HMI) to improve the effectiveness of the Tactical Capacity Management (TCM) process. The iFMP/TMS is being developed incrementally in levels and steps. The same platform is also used support SESAR validations in the area of Complexity Management and dDCB. - It supports the implementation of advanced STAM (Short Term ATFCM Measures) and improve the interoperability with NM systems via B2B services. - ASM (Airspace Management) tools, activities are mainly related to the integration of the EUROCONTROL LARA tool with N-FDPS for SESAR and local operational validation and operational usage
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	
Common project	*Yes*	AF 3 - Flexible Airspace Management and Free Route and AF 4 - Network Collaborative Management
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	MCG / Four States
Decision-making process	*Yes*	MCG approval of TMS contract in January 2010, PC approval in March 2010. The amendment was approved by the MCG in November 2012 and the PC in January 2013.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	improved flight safety due to system support for sharing data between all involved partners (e.g. Activation Status of Military Areas);	as from 2014 (LARA)	En-route
Environment	*Yes*	minimum disturbance to the requested AO profile by avoiding the need for regulation and more efficent use of segregated airspace.	as from 2015 (iFMP)	En-route
Capacity	*Yes*	improvements in efficiency and capacity through better planning of the resources needed to cope with the evolution of the traffic demand;	as from 2015 (iFMP)	En-route
Cost efficiency	*Yes*	improvements in efficiency and capacity through better planning of the resources needed to cope with the evolution of the traffic demand;	as from 2015 (iFMP)	En-route

Name of capex 4	SESAR Compliant ATM
Description	The N-FDPS and its Advanced HMI were put into service in MUAC on 12 December 2008. The system is compliant with the eFDP specifications of April 2000 which also served as inputs to systems being currently developed, like iTEC and Co-flight. It was the first eFDP compliant Trajectory-based system fielded in the Core area of Europe. Like the other ANSPs operating in the FABEC area, MUAC needs to evolve its ATM systems (MADAP) in order to deploy the operational concepts and technology being validated during the SESAR Development Phase, and enforced in the Deployment Phase by the emerging SES II requirements (the future Pilot Common Project and Deployment Manager mechanisms). To facilitate the transition and reduce overall costs MUAC is participating to the pre operational validations conducted as part of the SESAR development phase in areas which were carefully selected because of the added value to the MUAC Operations Room and globally to the European network: Those activities have been regrouped in two main streams: • Trajectory Management Framework (TMF) which includes: - Air-Ground interoperability - initial Trajectory Information Sharing, - Ground-Ground interoperability – initial SWIM implementation; **and** • - Flow and Capacity Management (FCM) including: - Complexity management and Dynamic Demand and Capacity balancing, - Airspace management tools (CIVMILCO) and network support, and - the corresponding Interactions and interfaces with the NM tools. MUAC has budgeted to field the Operational Improvement in the start of the Deployment Phase window identified in the ATM Master Plan (IOC, Initial Operational Capability). MUAC has actively participated in the definition of the PCP and envisages participating in the PCP implementation, wherever possible in cooperation with FABEC ANSPs, in the following areas: Extended AMAN, Flexible Airspace Management and Free Route, Network Collaborative Management, iSWIM and Initial Trajectory Information Sharing. MUAC will participate as well in the definition and execution of SESAR Very Large Demonstrations (VLDs) as a preparatory step in view of deployment in partnership with industry and FABEC ANSPs. Performance assessment: The performance objectives are documented in the deliverables of the SESAR Definition Phase and the proposed “Pilot Common Project” supporting the implementation of the European Air Traffic Management Master Plan.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*No*	
Common project	*Yes*	AF1, AF3, AF4, AF5, AF6
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	in line with IDP and Master Plan
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*Yes*	Coordination is being done at FABEC level to synchronize SESAR and FABEC projects; e.g: XMAN (linked to AF1), FRA (linked to AF3) and Flight Object Interoperability (linked to AF5)
Consultation with stakeholders	*Yes*	MCG / Four States
Decision-making process	*Yes*	EUROCONTROL Financial and Contract Regulations apply.

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	as described in the MP and PCP	as from 2018	En-route and Terminal
Environment	*Yes*	as described in the MP and PCP	as from 2018	En-route and Terminal
Capacity	*Yes*	as described in the MP and PCP	as from 2018	En-route and Terminal
Cost efficiency	*Yes*	as described in the MP and PCP	as from 2018	En-route and Terminal

Name of capex 5	**Building and Infrastructure**
Description	Construction of a multi-purpose building project started in 2012 and aims to consolidate room requirements into one easily accessible building. The new building has a surface area of 2185 m2 for functional rooms. Including connections to the other buildings and non-functional rooms, the total building surface area amounts to 3443 m2. The new building has been commissioned in April 2014 and is planned for usage as from September 2014.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	Meeting additional space requirements in the office working environment.
Replacement investment	*No*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	MCG / Four States
Decision-making process	*Yes*	MCG approval (04.06.2012)

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*			
Environment	*No*			
Capacity	*No*			
Cost efficiency	*No*			

Name of investment	Total CAPEX for the project	Planned Amount of Capital Expenditures (in national currency)					Lifecycle (Amortisation period in years)	Allocation en route / terminal ANS (%)	Planned date of entry into operation (IOC / FOC dates)
		2015	2016	2017	2018	2019			
Voice Systems	15 087 000	1 312 000	1 306 000	400 000	1 000 000	2 000 000	15 Years	100% R	See detailed justifications
New Generation ATM	52 284 000	8 577 000	9 410 000	9 100 000	8 970 000	7 535 000	12 Years	100% R	See detailed justifications
ATFCM / ASM	4 633 000	400 000	450 000	450 000	450 000	450 000	12 Years	100% R	See detailed justifications
SESAR Compliant ATM	13 254 000	150 000	2 200 000	3 200 000	3 475 000	4 025 000	12 Years	100% R	See detailed justifications
Building and Infrastructure	21 637 000	2 253 000	1 330 000	1 531 000	1 291 000	1 265 000	50 Years	100% R	See detailed justifications
Sub-total of **main capex** above (1)	106 895 000	12 692 000	14 696 000	14 681 000	15 186 000	15 275 000			
Sub-total other Capex (2)	9 148 000	1 846 000	1 152 000	697 000	683 000	664 000			
Total capex (1) + (2)	116 043 000	14 538 000	15 848 000	15 378 000	15 869 000	15 939 000			

Additional comments

Skyguide

Number of capex	11

Name of capex 1	**FDP GVA ACC & TWR**
Description	Objective is to upgrade the Flight Data Processing system from Geneva with state of the art system. It will bring additional functionalities in order to improve trajectory prediction, system coordination with adjacent centres with the aim to go towards full interoperabilty with our partners.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	ARCH 0303 : Technical Specification for Flight Data Processing Interoperability (Trajectory Management) ER APP ATC 82 : Enhance FDP to use SBT/SMT, RBT/RMT
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	Enabler --> ARCH 0303 : Technical Specification for Flight Data Processing Interoperability (Trajectory Management)
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*			
Environment	*No*			
Capacity	*Yes*	Interoperability	31/12/2019	60% En-route ; 40% Terminal/Airport
Cost efficiency	*No*			

Name of capex 2	**NETWORK Evolutions**
Description	Lifecycle short tracks of LAN network elements; Network Security Elements and WAN PDH network elements
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*No*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	Enabler
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	

Consultation with stakeholders	*Yes*	
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Enabler for actual and future Services	31/12/2019	50% En-Route, 50% Approach
Environment	*No*			
Capacity	*Yes*	Enabler for actual and future Services	31/12/2019	50% En-Route, 50% Approach
Cost efficiency	*Yes*	Enabler for actual and future Services	31/12/2019	50% En-Route, 50% Approach

Name of capex 3	**Virtual Center 1**
Description	Implement harmonised stripless HMI and procedures for ACC for obtaining the capability to operate from one location at low traffic conditions. The initiative contains the following parts: “Stripless CH” (SLCH), “Controller Pilot Data Link Communication” (CPDLC), “Mode S enhanced”, “screen clean-up” (SCUP) and “Combined operations @ Low Traffic Conditions” (COP@LTC).
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*No*	
Common project	*Click to select*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	CM-0202 : Automated Assistance to ATC Planning for Preventing Conflicts in En Route Airspace CM-0203 : enhance conformance monitoring tools by using Mode S EHS Data CM-0404 : enhance Tactical Conflict Detection / Resolution support tools by using Mode S EHS data CM-0201 : Automated Assistance to Controller for Seamless Coordination, Transfer and Dialogue AUO-0301 : Voice Controller Pilot Communication En Route complemented by Datalink ATC17 Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer - 12/2018 ITY-COTR Implementation of ground-ground automated co-ordination processes - 02/2015 ATC12 Implement automated support for conflict detection and conformance monitoring - 12/2016 ITY-AGDL Initial ATC air-ground data link services above FL-285 - 02/2015
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Enhanced monitoring and conflict detection tools	31/12/2017	100% En Route
Environment	*No*			
Capacity	*Yes*	More efficient coordination enabled	31/12/2017	100% En Route
Cost efficiency	*Yes*	Removal of Strip distribution, printers / no more strip handllers needed / Centralized Controlling during low traffic conditions	31/12/2017	100% En Route

Name of capex 4	**Smart Radio**
Description	Skyguide and Skyguide National operate around 700 radios in Switzerland to ensure ATC Air-Ground voice communications. This project is required to fulfil regulation EU 1079/2012 for 8.33-kHz Radio channel spacing below FL 195 and provides VoIP and SiT (Simultaneous Transmission) detection capability. (Replacement)
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	Enabler
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Possibility to start an R&D project in order to detect USiT and fulfill the BFU 439 safety recommendation	31/12/2021	50% En-Route, 50% Approach
Environment	*No*			
Capacity	*No*			
Cost efficiency	*Yes*	A new Swiss-wide RCMS and reduced electricity consumption will lead to operating costs savings in the future. Enabler for a Swiss-wide real time supervision (support Level 1a and 1b)	31/12/2021	50% En-Route, 50% Approach

Name of capex 5	**PSR Replacement**
Description	The two existing PSR (Geneva 1 PSR and Holberg 1 PSR) have reached their end of life. The need for a replacement of these PSRs was confirmed in an in depth study in 2013 considering operational, safety and regulatory aspects.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	AO-0102 : Automated Alerting of Controller in case of Runway incursion or intrusion into restricted areas AO-0201 : Enhance Ground Controller Situation Awareness in all weather conditions AOP04.1 Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level1 - 12/2011 AOP04.2 Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level 2 - 12/2017
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	

Consultation with stakeholders	*Yes*	
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*		31/12/2017	85% En-route; 15% Terminal/Airport
Environment	*No*			
Capacity	*Yes*		31/12/2017	85% En-route; 15% Terminal/Airport
Cost efficiency	*Yes*		31/12/2017	85% En-route; 15% Terminal/Airport

Name of capex 6	**SAMAX**
Description	SAMAX: Multilateration (MLAT) & Surface Movement Radar (SMR) & Evolution. Objective is to upgrade the A-SMGCS systems from Geneva and Zurich airports with state of the art MLAT and SMR systems. Performance monitoring will also be improved.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*No*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	AO-0102 : Automated Alerting of Controller in case of Runway incursion or intrusion into restricted areas AO-0201 : Enhance Ground Controller Situation Awareness in all weather conditions AOP04.1 Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level1 - 12/2011 AOP04.2 Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level 2 - 12/2017
Joint investment	*Yes*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	by upgrading A-SMGCS system, safety will be maintained	31/12/2019	100% Terminal/Airport
Environment	*Yes*	ground movements management improvement will have positive impact on environment	31/12/2019	100% Terminal/Airport
Capacity	*Yes*	improved system and detection will be enabler to improve capacity	31/12/2019	100% Terminal/Airport
Cost efficiency	*Yes*		31/12/2019	100% Terminal/Airport

Name of capex 7	**VCS TWR/APP ZRH**
Description	Replacement of radios in TWR/APP ZHR (voice communication systems)
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	

Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*No*	
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	
Decision-making process	*No*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Ensures furture Services	31/12/2017	100% Approach
Environment	*No*			
Capacity	*Yes*	Ensures furture Services	31/12/2017	100% Approach
Cost efficiency	*Yes*	Ensures furture Services	31/12/2017	100% Approach

Name of capex 8	**XMAN FABEC**
Description	XMAN FABEC objective is to extend Arrival Management procedures across FIR borders with the help of upgraded AMAN systems and to provide information to adjacent ATS units. This involves the 5 biggest hubs in Europe and includes also Zürich airport as well. XMAN procedures will also permit to improve Continuous Descent Operations. Implementation of XMAN functionalities are planned in several steps
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	
Common project	*Yes*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	TS-0305 : Arrival Management extended to En-route Airspace ATC15 Implement, in En-Route operations, information exchange mechanisms, tools and procedures in support of Basic AMAN operations - 12/2017
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*Yes*	Part of common FABEC programme for cross-border implementation of XMAN concept
Consultation with stakeholders	*Yes*	
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	Predictability is increased	31/12/2019	70% En-route ; 30% Terminal/Airport
Environment	*Yes*	Improve flight profile therefore have positive impact on environmental	31/12/2019	70% En-route ; 30% Terminal/Airport
Capacity	*Yes*	Trajectory prediction will be enhanced, therefore optimising traffic flows towards airports. Capacity could then be increased.	31/12/2019	70% En-route ; 30% Terminal/Airport

Cost efficiency	*Yes*	Flight efficiency is increased, therefore cost efficiency too	31/12/2019	70% En-route ; 30% Terminal/Airport

Name of capex 9	**Flex Secto CH VISTA/EMTEL**
Description	Be compliant with EUROCAE, ICAO, Eurocontrol and FABEC VCB strategy by implementing an ATM VoIP network and its interfaces on Frequentis systems.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	Enabler: CTE-C8 : Digital voice/VoIP ground telephony
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*			
Environment	*No*			
Capacity	*No*			
Cost efficiency	*No*			

Name of capex 10	**AMAN for GVA**
Description	Objective is to implement an Arrival Manager in GVA. it is important to improve the efficiency in the management of the flows towards Geneva airport and neighbouring airports. A state of the art Arrival Manager system will contribute to this improvement.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	TS-0102 : Basic Arrival Management supporting TMA improvements ATC07.1 Implement arrival management tools 12/2015 ESSIP objective ATC-15
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	

Consultation with stakeholders	*Yes*	
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	AMAN implementation is expected to be the appropriate solution to face current complexity issues in TMA.	31/01/2016	50% En-route ; 50% Terminal/Airport
Environment	*Yes*	by optimising initial approach, approach and landing, AMAN will have an positive impact on flight / cost efficiency and environment	31/01/2016	50% En-route ; 50% Terminal/Airport
Capacity	*Yes*	AMAN implementation may have a positive and significant impact on capacity by optimising arrival sequence	31/01/2016	50% En-route ; 50% Terminal/Airport
Cost efficiency	*Yes*	Optimised Arrival Management techniques and procedures significantly contribute to flight efficiency therefore to aviation value chain	31/01/2016	50% En-route ; 50% Terminal/Airport

Name of capex 11	**FRA (FABEC initiative)**
Description	The main objective of Free Route Airspace implementation is to offer opportunities for the users to improve efficiency of plannable direct routes/trajectories within FABEC airspace and between FABEC and neighbouring FABs in a first stage and a full free route aispace where the users will be able to plan their preferred trajectory in second stage.
Accountable entity	ANSP

Justification of the cost, nature and contribution		
Differentiation	*New system*	
Replacement investment	*No*	
Common project	*Yes*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	AOM-500 : Direct Routing for flights both in cruise and vertically evolving for cross ACC boarders in high/very high complexity environment AOM-501 : Free Routing for flights both in cruise and vertically evolving in low to medium complexity environment AOM21 Implementation of Free Route Airspace - 12/2017
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*Yes*	Part of common FABEC programme for cross-border implementation of Free Route Airspace concept
Consultation with stakeholders	*Yes*	
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*No*			
Environment	*Yes*	airspace users will be able to plan preferred optimal trajectories therefore increase flight efficiently thus having positive impact on environment	31/12/2018	100% En-route
Capacity	*Yes*	Flexible Use of Airspace shall be improved with Free Route concept, therefore capacity may increase due to better planning	31/12/2018	100% En-route
Cost efficiency	*Yes*	Optimised trajectories significantly contribute to flight and cost efficiency therefore to aviation value	31/12/2018	100% En-route

Name of investment	Total CAPEX for the project	Planned Amount of Capital Expenditures (in national currency)					Lifecycle (Amortisation period in years)	Allocation en route / terminal ANS (%)	Planned date of entry into operation (IOC / FOC dates)
		2015	2016	2017	2018	2019			
FDP GVA ACC & TWR	19 500 000	1 500 000	4 500 000	5 000 000	4 500 000	4 000 000	15	60% En-route; 40% Airport/Terminal	31/12/2019
NETWORK Evolutions	16 170 000	1 600 000	3 530 000	3 630 000	3 730 000	3 680 000	8	50% En-route, 50% Airport/Terminal	31/12/2019
Virtual Center 1	15 301 500	9 893 500	4 838 500	456 500	56 500	56 500	10	100% En-route	31/12/2017
Smart Radio	13 631 000	3 562 000	2 468 000	4 453 000	1 958 000	1 190 000	20	50% En-route, 50% Airport/Terminal	31/12/2021
PSR Replacement	7 329 500	3 319 500	3 290 000	720 000	0	0	15	85% En-route ; 15% Airport / Terminal	31/12/2017
SAMAX	6 405 500	890 000	1 172 000	621 000	1 318 500	2 404 000	12	100% Airport/Terminal	31/12/2019
VCS TWR/APP ZRH	2 118 000	0	1 130 000	988 000	0	0	10		31/12/2017
XMAN FABEC	2 100 000	300 000	300 000	500 000	500 000	500 000	10	70% En-route, 30% Airport/Terminal	31/12/2019
Flex Secto CH VISTA/EMTEL	2 090 000	1 670 000	320 000	100 000	0	0	10		31/12/2017
AMAN for GVA	2 020 000	670 000	1 350 000	0	0	0	10	50% En-route, 50% Airport/Terminal	31/12/2016
FRA (FABEC initiative)	1 200 000	0	400 000	400 000	400 000	0	10	100% En-route	31/12/2018
Sub-total of **main capex** above (1)	87 865 500	23 405 000	23 298 500	16 868 500	12 463 000	11 830 500			
Sub-total other Capex (2)	212 134 500	36 595 000	36 701 500	43 131 500	47 537 000	48 169 500			
Total capex (1) + (2)	300 000 000	60 000 000	60 000 000	60 000 000	60 000 000	60 000 000			

Additional comments
The CAPEX list attached discloses all a) LSSIP related initiatives b) all PCP related initiatives c) all FABEC initiatives d) 10 biggest changes out of which the stakeholders have been consulted on April 16 2014. Virtual Center 1 encompassed Datalink (CPDLC), Enhanced mode S, Stripless, Combined operations at low traffic conditions (cop@ltc). Positive ROI for VC1 mainly thanks to delay savings, but also throughout operational savings. VC1 is a pre-requisite to achieve local delay targets.

MET (DWD)

Number of capex	3

Name of capex 1	**ASDUV_E**
Description	As part of the project ASDUV_E the automatic system is used for Data collection and dissemination (ASDUV) replaced at the international airports in Germany until 2016. In 2013 the pilot system in Hamburg-Fuhlsbüttel was put into operation. The new system was und will be put in operation gradually at the remaining international airports in the following phase of the surface installation.
Accountable entity	MET Germany

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	not a common project of SESAR deployment
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	in line with ICAO Annex 3
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	
Decision-making process	*No*	provision is mandatory

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*	contributing		
Environment	*No*			
Capacity	*Yes*			
Cost efficiency	*Yes*			

Name of capex 2	**SESAR WP 11.2/SESAR Deployment**
Description	SESAR WP 11.2 Project: Conceptual planing of methods to integrate MET into ATM. Development and demonstration of MET prototypes for ATM user. SESAR Deployment: Implenentation of systems with demonstrated maturity based on ATM Masterplan, Engagement in SESAR Deployment Manager and Implementation Projects
Accountable entity	

Justification of the cost, nature and contribution		
Differentiation	*Click to select*	
Replacement investment	*No*	
Common project	*Yes*	Project in cooperation wit EUMETNET consortium
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Click to select*	
Joint investment	*Yes*	

Synergies achieved at FAB level or other MS	*Yes*	in case of deployment
Consultation with stakeholders	*Yes*	
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*			
Environment	*Yes*			
Capacity	*Yes*			
Cost efficiency	*Yes*			

Name of capex 3	**RVR_E**
Description	The German weather service exchanges the RVR (Runway Visual Range) to necessary visual-range sensors at the 16 international traffic airports. This is necessary since the devices previously used type Skopograph has achieved their maximum lifetime and there is no support from the manufacturer for repair or replacement. In contrast to the previous type of sensor, a new method is used for visibility determination (forward scattering instead of transmission).
Accountable entity	MET Germany

Justification of the cost, nature and contribution		
Differentiation	*Overhaul of existing system*	
Replacement investment	*Yes*	
Common project	*No*	
Other investment (in line with interoperability Regulations, the IDP, Master Plan essentials or the NSP)	*Yes*	in line with ICAO Annex 3
Joint investment	*No*	
Synergies achieved at FAB level or other MS	*No*	
Consultation with stakeholders	*Yes*	
Decision-making process	*Yes*	

KPA	Impact	Expected benefits per KPA	Date of expected benefits	Area <En-route/ Terminal/ Airport/ Phases of flight>
Safety	*Yes*			
Environment	*No*			
Capacity	*Yes*			
Cost efficiency	*Yes*			

Name of investment	Total CAPEX for the project (Expenditure)	Planned Amount of Capital Expenditures (in national currency)					Lifecycle (Amortisation period in years)	Allocation en route / terminal ANS (%)	Planned date of entry into operation (IOC / FOC dates)
		2015	2016	2017	2018	2019			
ASDUV_E	5 543 500	912 000	404 000				10	71%/19%	gradual up to the year 2016
SESAR WP 11.2/SESAR Deployment	1 811 000	514 000	174 000	177 000	180 000	183 000		71%/19%	2024/2025
RVR_E	4 713 500	422 000	141 500	508 000	870 500	350 000	10	71%/19%	gradual up to the year 2019
Sub-total of **main capex** above (1)	12 068 000	1 848 000	719 500	685 000	1 050 500	533 000			
Sub-total other Capex (2)									
Total capex (1) + (2)	12 068 000	1 848 000	719 500	685 000	1 050 500	533 000			

Additional comments

SECTION 3: PERFORMANCE TARGETS

Mapping between the template for the FAB performance plan and Annex II of the performance Regulation				
Structure of ANNEX II of the performance Regulation	Link with PRB Performance Plan template			
	Body of Performance Plan	Annex C For cost-effiency		Other annexes
		RT ref.	AI ref.	
3. PERFORMANCE TARGETS AT LOCAL LEVEL	3			
3.1. Performance targets in each key performance area, set by reference to each key performance indicator as set out in Annex I, Section 2, for the entire reference period, with annual values to be used for monitoring and incentive purposes:	3.1			
3.2. Description and explanation of the consistency of the performance targets with the relevant Union-wide performance targets. When there is no Union-wide performance target, description and explanation of the targets within the plan and how they contribute to the improvement of the performance of the European ATM network.	3.1.(a).(i) 3.1.(a). (ii) 3.1.(a). (iii) 3.1.(a). (iv) 3.1.(b).(i) & (ii) 3.1.(b).(iii) 3.1.(c).(i) 3.1.(c).(ii) 3.1.(c).(iii) 3.1.(c).(iv) 3.1.(d).1.A 3.1.(d).2.A	RT 3 (4.1)	AI 4 e)	
3.3. Description and explanation of the interdependencies and trade-offs between the key performance areas, including the assumptions used to assess the trade-offs.	3.3			
3.4. Contribution of each air navigation service provider concerned to the achievement of the performance targets set for the functional airspace block in accordance with Article 5(2)(c)(ii).	3.1.(a).(i) 3.1.(a). (ii) 3.1.(a). (iii) 3.1.(a). (iv) 3.1.(b).(i) & (ii) 3.1.(b).(iii) 3.1.(c).(i) 3.1.(c).(ii) 3.1.(c).(iii) 3.1.(c).(iv)	RT 1 (All)	AI 4 a)	

SECTION 3.1.(a): SAFETY KPA

Mapping between the template for the FAB performance plan and Annex II of the performance Regulation				
Structure of ANNEX II of the performance Regulation	Link with PRB Performance Plan template			
	Body of Performance Plan	Annex C For cost-effiency		Other annexes
		RT ref.	AI ref.	
(a) Safety	3.1.(a)			
(i) level of effectiveness of safety management: local targets for each year of the reference period;	3.1.(a).(i)			
(ii) application of the severity classification based on the Risk Analysis Tool (RAT) methodology: local targets for each year of the reference period (percentage);	3.1.(a). (ii)			
(iii) just culture: local targets for the last year of the reference period.	3.1.(a). (iii)			
	3.1.(a). (iv) - Optional section - Additional Safety KPI(s)			

3 - PERFORMANCE TARGETS AT LOCAL LEVEL

3.1 - Key Performance Areas

3.1.(a) - Safety

3.1.(a).(i) - Safety KPI #1: Level of Effectiveness of Safety Management

		2015 Target	2016 Target	2017 Target	2018 Target	2019 Target
Union-wide targets at State level		-	-	-	-	C
Union-wide targets at ANSP level	For Safety Culture MO	-	-	-	-	C
	For all other MOs	-	-	-	-	D
FAB level	**Regulatory authorities**	4A Max, not OcRep	0 A, OcRep C	Min 14/38C	Min 19/38 C	C
	Description of the consistency between local and Union-wide targets	Intermediate targets have been set as follows: In 2015 at FABEC level, a maximum of 4 level A answers in total and over the 6 States may remain, whereas no more level A should be found in any safety occurrence reporteing related study area. In 2016, no more level A answers shall be provided amongst the 6 States, whereas the safety occurrence reporting related study areas should have reached at least the level C. In 2017, all FABEC States shall have achieved the level C in at least 14 of their 38 respective study areas. In 2018, all FABEC States should have achieved the level C in at least 19 of their 38 respective study areas.				
	Detailed justification in case of inconsistency	Not applicable				
	ANSPs (for Safety Culture MO)	C	C	C	C	C
	ANSPs (for all other Mos)	C	C	C	C	D
	Description of the consistency between local and Union-wide targets	Targets are at least at the same level as the EU wide targets for 2019 ensuring de facto consistency.				
	Detailed justification in case of inconsistency	Not applicable				

Select Number of States >>	6

National level	***Belgium***	4A Max, not OcRep	0 A, OcRep C	Min 14/38C	Min 19/38 C	C
	France	4A Max, not OcRep	0 A, OcRep C	Min 14/38C	Min 19/38 C	C
	Germany	4A Max, not	0 A, OcRep C	Min 14/38C	Min 19/38 C	C
	Luxembourg	4A Max, not	0 A, OcRep C	Min 14/38C	Min 19/38 C	C
	Netherlands	4A Max, not	0 A, OcRep C	Min 14/38C	Min 19/38 C	C
	Switzerland	4A Max, not	0 A, OcRep C	Min 14/38C	Min 19/38 C	C

Select Number of ANSPs **for Safety Culture MO** >>	7

National level	***ANA LUX***	C	C	C	C	C
	Belgocontrol	C	C	C	C	C
	DFS	C	C	C	C	C
	DSNA	C	C	C	C	C
	LVNL	C	C	C	C	C
	MUAC	C	C	C	C	C
	SKYGUIDE	C	C	C	C	C

Select Number of ANSPs **for all other MOs** >>	7

National level	***ANA LUX***	C	C	C	C	D
	Belgocontrol	C	C	C	C	D
	DFS	C	C	C	C	D
	DSNA	C	C	C	C	D
	LVNL	C	C	C	C	D
	MUAC	C	C	C	C	D
	SKYGUIDE	C	C	C	C	D

Additional comments
In 2013, the 7 FABEC ANSPs committed themselves to reach the level C in all Management Objectives by the end of 2014.

3.1.(a).(ii) - Safety KPI #2: Application of the severity classification based on the Risk Analysis Tool (RAT) methodology

Ground Score		2015 Target	2016 Target	2017 Target	2018 Target	2019 Target
Union-wide targets	SMIs	-	-	>= 80%	-	100%
	RIs	-	-	>= 80%	-	100%
	ATM-S	-	-	>= 80%	-	100%

FAB level	SMIs	25%	50%	>=80%	>=80%	100%
	RIs	25%	50%	>=80%	>=80%	100%
	ATM-S	25%	50%	>=80%	>=80%	100%
Description of the consistency between local and Union-wide targets		Targets are the same as the EU wide targets ensuring de facto consistency.				
Detailed justification in case of inconsistency		Not applicable				

Select Number of ANSPs >>	7

National level	***ANA LUX***	SMIs	25%	50%	>=80%	>=80%	100%
		RIs	25%	50%	>=80%	>=80%	100%
		ATM-S	25%	50%	>=80%	>=80%	100%
	Belgocontrol	SMIs	25%	50%	>=80%	>=80%	100%
		RIs	25%	50%	>=80%	>=80%	100%
		ATM-S	25%	50%	>=80%	>=80%	100%
	DFS	SMIs	25%	50%	>=80%	>=80%	100%
		RIs	25%	50%	>=80%	>=80%	100%
		ATM-S	25%	50%	>=80%	>=80%	100%
	DSNA	SMIs	25%	50%	>=80%	>=80%	100%
		RIs	25%	50%	>=80%	>=80%	100%
		ATM-S	25%	50%	>=80%	>=80%	100%
	LVNL	SMIs	25%	50%	>=80%	>=80%	100%
		RIs	25%	50%	>=80%	>=80%	100%
		ATM-S	25%	50%	>=80%	>=80%	100%
	MUAC	SMIs	25%	50%	>=80%	>=80%	100%
		RIs	25%	50%	>=80%	>=80%	100%
		ATM-S	25%	50%	>=80%	>=80%	100%
	Skyguide	SMIs	25%	50%	>=80%	>=80%	100%
		RIs	25%	50%	>=80%	>=80%	100%
		ATM-S	25%	50%	>=80%	>=80%	100%

Additional comments
For occurrences within the scope defined in the Commission Implementing Decision of 11 March 2014 setting the Union-wide performance targets for the air traffic management network and alert thresholds for the second reference period 2015-19. It is important to understand that the ATM Ground part is NOT linked with any potential responsibility of the ANSP in the events. It is aimed to identify the contribution or non-contribution of the ATM ground component in the occurrences. Therefore it shall be clear that ALL occurrences required by the Performance Scheme Regulations IR (EU) No. 691/2010 or IR (EU) No. 390/2013 i.e. ALL Separation Minima infringement, ALL Runway Incursions with the severity A to C shall have an ATM ground part and an ATM airborne part completed, and ALL ATM Specific Technical Events with severity AA to C shall have an ATM ground part completed.

Overall Score		2015 Target	2016 Target	2017 Target	2018 Target	2019 Target
Union-wide targets	SMIs	-	-	>= 80%	>= 80%	>= 80%
	RIs	-	-	>= 80%	>= 80%	>= 80%
	ATM-S	-	-	>= 80%	>= 80%	100%

FAB level	SMIs	25%	50%	>= 80%	>= 80%	>= 80%
	RIs	25%	50%	>= 80%	>= 80%	>= 80%
	ATM-S	25%	50%	>= 80%	>= 80%	100%
Description of the consistency between local and Union-wide targets		Targets are the same as the EU wide targets ensuring de facto consistency.				
Detailed justification in case of inconsistency		Not applicable				

Select Number of States >>	6

National level	***Belgium***	SMIs	25%	50%	>= 80%	>= 80%	>= 80%
		RIs	25%	50%	>= 80%	>= 80%	>= 80%
		ATM-S	25%	50%	>= 80%	>= 80%	100%
	France	SMIs	25%	50%	>= 80%	>= 80%	>= 80%
		RIs	25%	50%	>= 80%	>= 80%	>= 80%
		ATM-S	25%	50%	>= 80%	>= 80%	100%
	Germany	SMIs	25%	50%	>= 80%	>= 80%	>= 80%
		RIs	25%	50%	>= 80%	>= 80%	>= 80%
		ATM-S	25%	50%	>= 80%	>= 80%	100%
	Luxembourg	SMIs	25%	50%	>= 80%	>= 80%	>= 80%
		RIs	25%	50%	>= 80%	>= 80%	>= 80%
		ATM-S	25%	50%	>= 80%	>= 80%	100%
	Netherlands	SMIs	25%	50%	>= 80%	>= 80%	>= 80%
		RIs	25%	50%	>= 80%	>= 80%	>= 80%
		ATM-S	25%	50%	>= 80%	>= 80%	100%
	Switzerland	SMIs	25%	50%	>= 80%	>= 80%	>= 80%
		RIs	25%	50%	>= 80%	>= 80%	>= 80%
		ATM-S	25%	50%	>= 80%	>= 80%	100%

Additional comments
For occurrences within the scope defined in the Commission Implementing Decision of 11 March 2014 setting the Union-wide performance targets for the air traffic management network and alert thresholds for the second reference period 2015-19. It is important to understand that the ATM Ground part is NOT linked with any potential responsibility of the ANSP in the events. It is aimed to identify the contribution or non-contribution of the ATM ground component in the occurrences. Therefore it shall be clear that ALL occurrences required by the Performance Scheme Regulations IR (EU) No. 691/2010 or IR (EU) No. 390/2013 i.e. ALL Separation Minima infringement, ALL Runway Incursions with the severity A to C shall have an ATM ground part and an ATM airborne part completed, and ALL ATM Specific Technical Events with severity AA to C shall have an ATM ground part completed.

3.1.(a).(iii) - Safety KPI #3: Just Culture

		2019 Target
FAB level	**Regulatory authorities**	Have you established a common FAB approach in certain areas for Just Culture improvements?
		YES
		If YES, please specify details and level of presence. If NO, please specify any impediments, intent for common FAB approach.
		1) There will be a clearly identified Just Culture policy, endorsed by the relevant Ministries or aviation authorities and made public. 2) The States will require a Just Culture policy in Air Navigation Service Providers. 3) The States will ensure that relevant staff working in the competent authority is trained on Just Culture elements. For that purpose, the NSAs will prepare with the ANSPs the modules and the training courses on Just culture in order to deliver as soon as possible to the staff this training and to have a common FABEC approach on Just Culture promotion.
	ANSPs	Have you established a common FAB approach in certain areas for Just Culture improvements?
		YES
		If YES, please specify details and level of presence. If NO, please specify any impediments, intent for common FAB approach.
		1) There will be an explicit Just Culture policy in all 7 FABEC ANSPs formally endorsed by their respective management and staff representatives and made public. 2) The 7 FABEC ANSPs will ensure that Subject Matter Experts are involved in the determination of 'unacceptable behaviour'. 3) In the case of self-reported occurrences, Just Culture policy will ensure fair treatment of the reporter in accordance with the principles of the Just Culture. 4) The 7 FABEC ANSPs will provide legal support for its own staff in case of prosecution / legal action related to a safety occurrence. 5) The 7 FABEC ANSPs will establish a well known stress management system. 6) The 7 FABEC ANSPs will ensure that actions are taken in respect to staff after an occurrence to preserve in full the pay and benefits of the staff member concerned until the end of the investigation. 7) The ANSP will ensure that relevant staff working in the ANSP is trained on Just Culture elements. For that purpose, the ANSPs will prepare with the NSAs the modules and the training courses on Just culture in order to deliver as soon as possible to the staff this training and to have a common FABEC approach on Just Culture promotion.

Number of States	6

National level	***Belgium***	What actions have you undertaken to optimise Just Culture?
		Just Culture elements have been incorporated in a Royal Decree.
	France	What actions have you undertaken to optimise Just Culture?
		Some Just Culture elements have been included in training of authority staff.
	Germany	What actions have you undertaken to optimise Just Culture?
	Luxembourg	What actions have you undertaken to optimise Just Culture?
		A national working group has been set up to ensure implementation of the FABEC Just Culture targets.
	Netherlands	What actions have you undertaken to optimise Just Culture?
		Besides the SSP1 actions already in place, specific and concrete actions (for the States and the ANSP as well) improving the Just Culture will be included in the SSP2.

	Switzerland	What actions have you undertaken to optimise Just Culture?
		i. set up two bodies to "draw the line" in terms "acceptability of behaviour". These bodies contain members of the following domains: licence holder, management, associations and the safety department; *ii. move from a paradigm of "disclosing all data" to "make best use of data and regulate its use".*

Number of ANSPs	7

National level	***ANA LUX***	What actions have you undertaken to optimise Just Culture?
		ANA LUX continues to provide feedback and support to staff based on occurrence reports in a no-blame culture. People are and will be trained and CISM practices will be improved. ANSP will give full support to initiatives at State level to improve just culture.
	Belgocontrol	What actions have you undertaken to optimise Just Culture?
	DFS	What actions have you undertaken to optimise Just Culture?
	DSNA	What actions have you undertaken to optimise Just Culture?
	LVNL	What actions have you undertaken to optimise Just Culture?
	MUAC	What actions have you undertaken to optimise Just Culture?
	Skyguide	What actions have you undertaken to optimise Just Culture?

Additional comments

SECTION 3.1.(b): ENVIRONMENT KPA

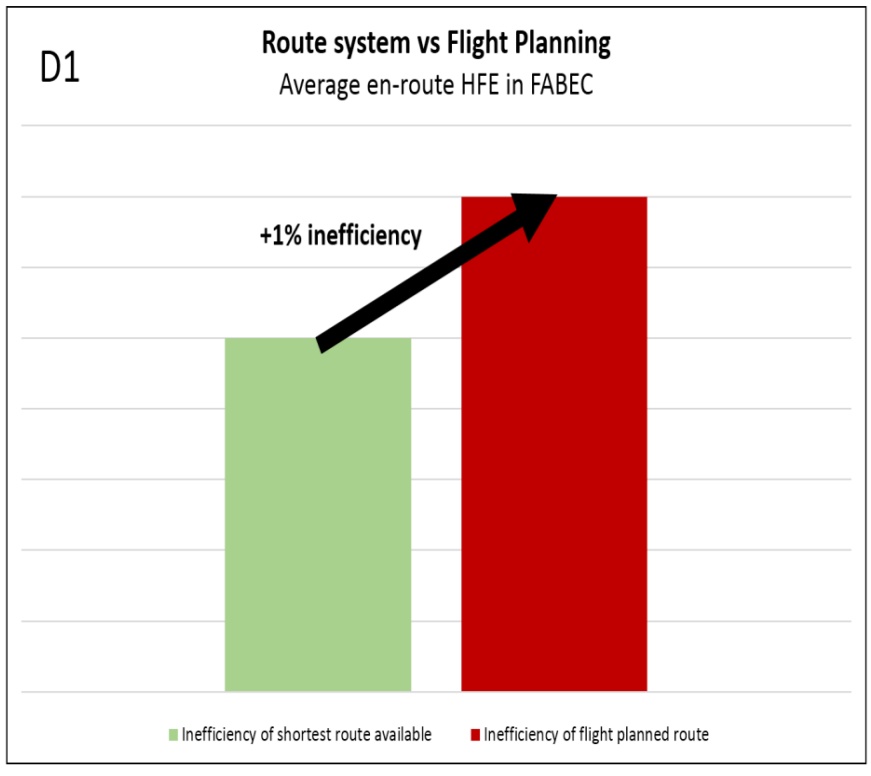
Mapping between the template for the FAB performance plan and Annex II of the performance Regulation				
Structure of ANNEX II of the performance Regulation	Link with PRB Performance Plan template			
	Body of Performance Plan	Annex C For cost-effiency		Other annexes
		RT ref.	AI ref.	
(b) Environment	3.1.(b)			
(i) description of the process to improve route design;	3.1.(b).(i) & (ii)			
(ii) average horizontal *en route* flight efficiency of the actual trajectory.				
	3.1.(b).(iii) - Optional section - Additional Environment KPI(s)			

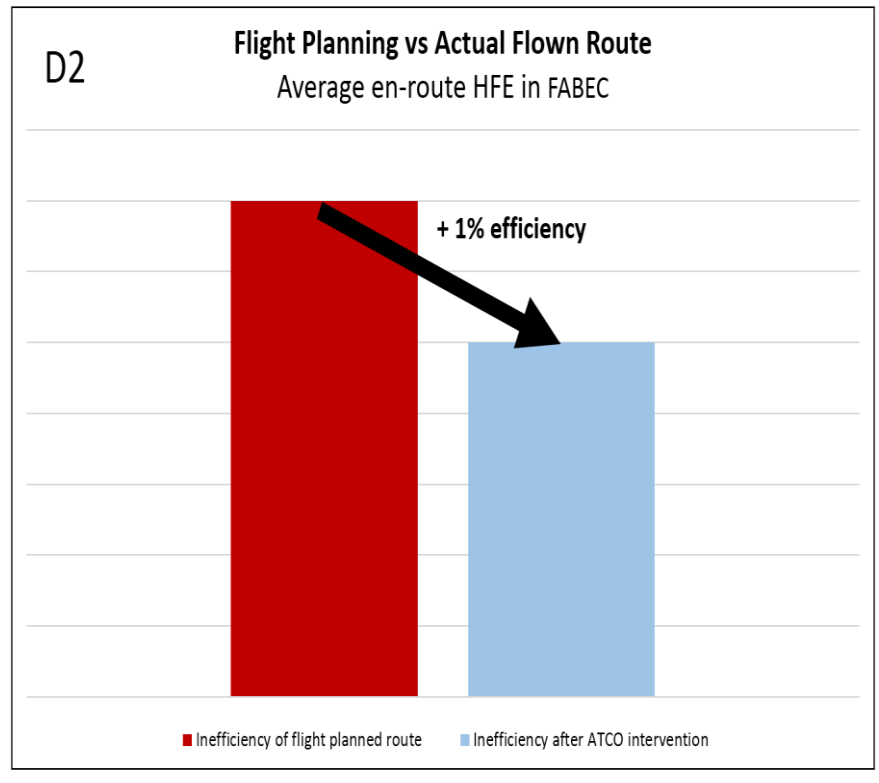
3.1.(b) - Environment

3.1.(b).(i) & (ii) - Environment KPI #1: Horizontal en route flight efficiency (KEA)

	2015 Value	2016 Value	2017 Value	2018 Value	2019 Target
Union-wide targets	-	-	-	-	2,60%
FAB reference values	3,30%	3,22%	3,14%	3,05%	2,96%
FAB level	3,30%	3,22%	3,14%	3,05%	2,96%
Description of the consistency between FAB targets and FAB reference values	FABEC values and 2019 target are consistent with the reference values.				
Detailed justification in case of inconsistency	N/A				
ANSP contribution to local targets	Main ANSP contributions to local targets are listed in the box below and consist in implementing major air space design projects during RP2 timeframe.				

Description of the process to improve route design
The KEA indicator improved in the ongoing RP1 by 0.04 percentage points to a level of 3.5% horizontal en-route flight in-efficiency. Assuming a gradual improvement to 2019, the KEA-performance would arrive at 3.26%. Local ANSP analyses have shown, that flight efficiency is already very good for a dense and complex airspace such as FABEC. Nevertheless, the reference values anticipate an improvement nearly 3x times the size (0.6 p.p.) up to 2019. This would be an improvement never seen before in the last decade in Europe and will be challenging to achieve in an airspace as dense and complex as FABEC. The KEA indicator is only a proxy for the real performance of ANSPs, as the KEA performance for example is strongly influenced by the quality of flight planning and the civil-flight-transparency of military exercise areas. Unfortunately, comprehensive data required to identify the various contributions of stakeholders on FABEC level are not available yet. Only for 2013, with the help of EUROCONTROL's Directorate Network Management, FABEC was able to analyze that the route system provided by the ANSPs allow for 1% less inefficiency than airspace users utilize by their flight planning (see diagramm D1). The impact that military exercise areas have on civil users flight efficiency accounts for approx. 0.25-0.30 p.p. while the ad hoc improvement by Air traffic controllers in the tactical flight phase accounts for ca.1% (see diagramm D2). FABEC undertakes several cross-border projects to improve en-route flight efficiency to provide a mutual benefit for airspace users in-line with the Network Strategic Objectives: A) FABEC Project South-East Phase 1-3, contributing to Strategic Objective (SO) 5 “Facilitate business trajectories by cooperative traffic management” B) FABEC Project Free Route Airspace Step 1-3, contributing to SO 3 “Implement a de-fragmented and flexible airspace enabling Free Routes” C) FABEC Project Cross-border Arrival Management, contributing to SO 6 “Integrate airport and network operations” D) FABEC CBA Land Central West Phase 1 and 2 contributing to SO 5 and contributing to SO 3. E) FABEC Project Air Traffic Flow and Capacity Management / Air Space Management, contributing to SO4 “Plan optimum capacity and flight efficiency” and SO5. More detailed description of those FABEC projects is given in the Annex B.





Additional comments
In addition to that, FABEC ANSPs have their own local projects and initiatives constantly refining the airspace structure to local needs and European network demands. Furthermore, FABEC ANSPs pro-actively contribute to various expert workgroups for the iterative improvement of the European air traffic service route network. In-line with the European Route Network Improvement Plan (ERNIP) FABEC experts for example contribute to the work of the Route Network Development Sub-Group (RNDSG) with a direct impact on the en-route flight efficiency.

SECTION 3.1.(c): CAPACITY KPA

Mapping between the PRB FAB performance plan template and the Annex II of EU Regulation 390/2013				
Structure of ANNEX II of Regulation 390/2013	Link with PRB template			
	Level 1' FAB PP	Level2' FAB PP - Annex C		FAB PP Other annexes
		RT ref.	AI ref.	
(c) Capacity	3.1.(c)			
(i) minutes of average *en route* ATFM delay per flight;	3.1.(c).(i)			
(ii) minutes of average terminal ATFM arrival delay per flight;	3.1.(c).(ii)			
(iii) the capacity plan established by the air navigation service provider(s).	3.1.(c).(iii)			
	3.1.(c).(iv) - Optional section - Additional Capacity KPI(s)			

3.1.(c) - Capacity

3.1.(c).(i) - Capacity KPI #1: En route ATFM delay per flight

	2015 Value	2016 Value	2017 Value	2018 Value	2019 Target
Union-wide targets	0,50	0,50	0,50	0,50	0,50
FABEC reference values	0,43	0,42	0,42	0,42	0,43
FABEC Targets (All delay causes)	0,48	0,49	0,42	0,42	0,43
Description of the consistency between FAB targets and FAB reference values	FABEC and ANSPs Reference values have been defined in a strict top-down approach by the Network Manager (based on MECA model) as a way to contribute adequately and consistently at FABEC level to the achievement of the Union wide target set at 0,5 min/flight. FABEC January 2017 revised targets have been set also taking into account the bottom up planning of FABEC ANSPs, discussion with stakeholders and some considerations that are described and justified in the following tables. It is important to mention that,taking into account New ATCO flexible rostering systems progressively implemented in French ACC as of summer 2016 after signature of the new DGAC social agreement will generate additional capacity at peak hours, the targets for 2017 2018 and 2019 has been aligned to NM reference values for FABEC. The level of ambition remains high as those values remain below the current delay forecasts published in the Network Operations Plan which reflects the latest FABEC ANSPs' capacity plans integrated in a network approch. It is also important to mention that the reference values, Network Operations Plan (NOP) and FABEC performance plan (FPP) are not fully comparable because each of them is based on different assumptions : Reference values are only top down values not linked to any traffic scenario or capacity plans, NOP delay forecasts are calculated on the basis of the STATFOR base traffic scenario, whilst the STATFOR low is used as FPP traffic scenario for the calculation of capacity target in consistency with the cost efficiency target and FABEC ANSPs internal RP2 scenario used for bottom-up capacity planning. Another point to consider is the interdependency between cost efficiency and capacity: it remains difficult to assess the combined impacts of cost reduction measures (induced by a highly challenging target) and traffic evolutions ANSPs will have to face during RP2.				

Detailed justification in case of inconsistency	Generally speaking, the FABEC target level is directly influenced by multiple factors: - the required system implementations planned during RP2 in order to renew ATM systems to offer higher capacity and new services, enhance quality of service and comply with interoperability regulations. Those implementations require large training phases which have an impact on operational staffing and temporary capacity shortages due to commissioning phase. - the implementation of FABEC airspace redesign projects Free Route Airspace, Cross-border Arrival Manager, or Air Traffic Flow and Capacity Management / Air Space Management at FABEC level, that will shift traffic volumes and impact the capacity plans of some ACCs and could create some new capacity bottlenecks. Due to the implementations of these projects additional temporary capacity shortages have to be expected due to training of the new traffic patterns resulting from the airspace redesign projects. - the recent modifications in traffic patterns, mainly due to improvement of flight planning systems by aircraft operators, that have already impacted the capacity of some FABEC ACCs or sectors and could create additional complexity and new bottlenecks generating delays. Additional justification is given at ANSP level in the following table, together with the internal breakdown of the individual ANSPs' contributions to the FABEC target for monitoring purposes.

Select Number of ANSPs >>	7

		2015 Value	2016 Value	2017 Value	2018 Value	2019 Target
National level	***ANA LUX***	N/A	N/A	N/A	N/A	N/A
	ANSP contribution to FABEC target	No en route service provision as such (see MUAC)				
	Belgocontrol	0,08	0,08	0,08	0,08	0,09
	ANSP contribution to FABEC target	Belgocontrol contribution is consistent with the NM reference values at the end of RP2 but generally slightly higher for the first 3 years of RP2 due to a reduction of ATCO recruitment for cost efficiency enhancement and the implementation for safety reasons of a new mandatory severe weather procedure resulting in higher delays.				
	DFS	0,35	0,34	0,32	0,31	0,30
	ANSP contribution to FABEC target	DFS contribution is globally consistent with and for 2017 - 2019 even better than its NM reference value. Only 2015 - 2016 values are slightly above the NM reference values mainly due to systems implementation in Langen ACC (P2 is an update of P1 ATC system including rehosting from UNIX to LINUX and a new controller working position; PSS is the new paperless strip system already implemented in Bremen and some Munich and Langen sectors)				
	DSNA	0,37	0,40	0,27	0,28	0,30
	ANSP contribution to FABEC target	RP2 will be for DSNA a transition phase : between 2015 and 2019 major systems overhauls will take place. The new global ATM technical system (ERATO and 4Flight projects : see chapter 2 for precise description of those projects) will be implemented in the 5 French ACCs. Every implementation in an ACC will require 2 years from the initial training to commissioning, generating additional delays from 2015 to 2018. New ATCO flexible rostering system progressively implemented as of summer 2016 after signature of the new DGAC social agreement will generate additional capacity at peak hours in French ACC.				
	LVNL	0,16	0,18	0,18	0,16	0,16
	ANSP contribution to FABEC target	LVNL contribution is slightly above the NM reference values due to high peak traffic demand generated by deviations from planned flight times (en route headwinds/tailwinds, direct-to instruction, aircraft handling delays) that are not captured in the CEF capacity planning process.				

	MUAC	0,18	0,18	0,18	0,18	0,18
	ANSP contribution to FABEC target	MUAC contribution is consistent with the NM reference values. Focus will be made during RP2 in cost containment measures which do not allow additional capacity provision.				
	Skyguide	0,22	0,22	0,22	0,23	0,23
	ANSP contribution to FABEC target	Skyguide contribution is consistent with the NM reference values, slightly above in 2018 - 2019. Cost saving measures due to the highly challenging cost efficiency target (voluntary redundancy, unpaid leave, early retirements, etc.) will be an impediment to deliver additional capacity. Besides, projects such as Stripless and Virtual Centre program will generate further capacity reduction during the implementation phase.				

Additional comments
It's important to note that the meeting of the yearly targets by FABEC ANSPs depends also on the expected contribution of the Network Manager who commits to bring an additional delay reduction of 10% during RP2 on top of ANSPs contributions to Union wide target, as described in the Network strategy Plan. In other words, the 10% NM contribution is included in the targets above. *ANSP contributions to the capacity target are based on the individual capacity plans of each ANSP. These bottom-up delay forecasts per ANSP have been adjusted downwards to meet the capacity target at FABEC level.* *The calculation of Average Delay per Flight (ADF) takes into account the absolute number of ATFM delay minutes and the number of flights in the reference airspace. Whereas the sum of ATFM delay minutes of an individual ANSP is equal to the amount of delay minutes at FABEC level, the number of flights cannot simply be summed up at FABEC level, as a flight might take place in the airspace of several ANSPs. Therefore, the breakdown of ADF from FABEC to ANSP level is very much dependent on the chosen traffic scenario. The traffic share of each ANSP might differ significantly from one scenario to another.* *For a more detailed description of the contribution of individual ANSPs please refer to the individual ANSPs capacity plans where all actions and initiatives having an impact on capacity are described at ACC level.*

	2015 Target	**2016 Target**	**2017 Target**	**2018 Target**	**2019 Target**
FABEC Targets for application of the financial incentive scheme (CRSTMP delay causes)	0,37	0,38	0,33	0,33	0,34
Comments	Taking into account the general framework laid down in the charging and performance regulations (IR (EU) No. 391/2013 & IR (EU) No. 390/2013) FABEC decided to apply the incentive scheme only on CRSTMP delay causes. Therefore, two FABEC targets are set: the first one related to all-causes delays (see here above), the second one considers only CRSTMP delays and is used as a reference for the application of the incentive mechanism. This so called CRSTMP target is established at FABEC level for each year of the reference period with an indication of the relative contribution of ANSPs for application of the incentive scheme (see chapter 4 for description). The FABEC capacity performance in RP2 will considerably be influenced by ATM system implementations (e.g. 4-Flight at DSNA) expected to result in temporarily a negative impact on capacity due to run-in phase and training of ATCOs. The relative share of CRSTMP-Delay (mainly Capacity) is therefore expected to significantly increase. Past experience at DFS supports this assumption: During the introduction of VAFORIT, the relative share of CRSTMP-Delay amounted up to 84%. Additionally, FABEC expects to decrease the relative share of Non-CRSTMP-Delay (mainly Industrial action) by social dialogue. Last but not least, due to the low traffic in RP1 the capacity situation was generally not highly strained, therefore relatively little C and S delay was produced, whereas the main Non-CRSTMP-delays like W and I are to a lesser extent influenced by situations of low traffic. The resulting targets and ANSPs breakdown are described here under.				

	2015 Value	2016 Value	2017 Value	2018 Value	2019 Target
ANA LUX	N/A	N/A	N/A	N/A	N/A
Belgocontrol	0,07	0,07	0,07	0,07	0,07
DFS	0,27	0,27	0,24	0,24	0,23
DSNA	0,29	0,31	0,22	0,21	0,23
LVNL	0,14	0,14	0,14	0,14	0,14
MUAC	0,14	0,14	0,14	0,15	0,15
Skyguide	0,17	0,17	0,17	0,18	0,18

Additional comments
To make the non-CRSTMP delay classification more verifiable and transparent for all stakeholders and reviewable for NSAs, the FABEC Member States have established a method of verification, which is described below. *Materially the total relevant number of the total non-CRSTMP regulations identified by FABEC ANSPs will be subject to an analysis under the direction of the FPC. The total number will consist of both regulations causing the highest delay during year n as well as of regulations on 5 sampled days in the same year. The number of regulations causing the highest delay during year n will be determined by a percentage of regulations of each ANSP of FABEC. The sample days of year n, selected by the FPC, will be communicated to the ANSPs by mid-January of year n+1 at the latest. In order to perform the analysis ANSPs will have to prepare and transmit all relevant information for the proof of a non-CRSTMP cause of the selected regulations to the FPC by mid-March of year n+1 at the latest. It is planned to start with the analysis of the regulations in the second half of March and to produce the final validation result around mid April. In case inconsistencies are detected FPC informs the ANSPs in due time to solve the issue collectively, whereby the independent opinion of the FPC will be crucial since it will be based exclusively on qualitative facts. The finalisation of the data validation will be conducted by the FPC at the start of May in year n+1 before the annual performance monitoring report will become due.*

3.1.(c).(ii) - Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight

Number of States	6

Belgium

	2015 Value	2016 Value	2017 Value	2018 Value	2019 Target
National level (CRSTMP delay)	0,11	0,10	0,10	0,10	0,10
Contribution to the improvement of the European ATM network performance					

Number of airports	5

Airport level	***EBBR (BRUSSELS/BRUSSELS-NATIONAL)***	0,12	0,12	0,11	0,11	0,11
	Airport contribution to national targets					
	EBAW (ANTWERPEN/DEURNE)	N/A	N/A	N/A	N/A	N/A
	Airport contribution to national targets					
	EBOS (OOSTENDE-BRUGGE/OOSTENDE)	N/A	N/A	N/A	N/A	N/A
	Airport contribution to national targets					
	EBCI (CHARLEROI/BRUSSELS SOUTH)	N/A	N/A	N/A	N/A	N/A
	Airport contribution to national targets					
	EBLG (LIEGE/LIEGE)	0,06	0,06	0,06	0,06	0,06
	Airport contribution to national targets					
	Airport contribution to national targets					

Additional comments
There is no robust target setting methodology available to be applied for this indicator. However, a pragmatic approach has been followed to derive targets which are covering the CRSTMP delay causes. Therefore, those targets are not covering all causes of delay. The pragmatic approach consists in considering per airport, on the basis of the historic data of the last five years (2009-2013), the average delay of the worst year (highest delay) and the best year (lowest delay). The individual airport targets are calculated by dividing this average amount of delay by the expected arrival movements considering the STATFOR Medium-Term Forecast (February 14) Low scenario, and are aimed at keeping this level of performance during RP2 despite of traffic growth. The national target is the aggregation of the airport targets, obtained by dividing the sum of the individual average amounts of delay by the sum of the respective expected arrival movements. Although five airports should be subject to target setting, this was not possible at three of them due to the absence of ad hoc traffic volumes. The two airports on which a draft target has been set represent alsmost 80% of total IFR flights.

France	2015 Value	2016 Value	2017 Value	2018 Value	2019 Target
National level - All causes Delays	*0,60*	*0,60*	*0,60*	*0,60*	*0,60*
National Target - CRSTMP Delays (Target for incentive scheme application)	**0,15**	**0,15**	**0,15**	**0,15**	**0,15**
Contribution to the improvement of the European ATM network performance	According to 7-year IFR Flight Movements and Service Units Forecast: 2014-2020 from EUROCONTROL Statfor (STATFOR Doc522 - Edition date 3/2/14), traffic during RP2 on French airports is expected to turn to growth but with a very moderate path : Low, Base and High scenarios showing a trend 2019/2014 respectively at 0.8%, 2.1% and 3% (Part H : Terminal Navigation Service Unit Forecast). Taking into account the lower RP2 economic growth in France (1,5% against 2% per year in Europe), the remaining effects of the high speed trains development policy in France, moderating internal traffic growth, but also the long term changes in Airlines operation introduced by the 2008 economic crisis (increased seasonality, higher carriage rates, bigger aircrafts, etc.), French NSA long term forecasts on major airports foresees a 1% average traffic growth per year (1.3% for CDG). The targets have been set in order to maintain the current good performance (0,65 min/flight All causes and 0,17 min/flight CRSTMP causes in average between 2009 and 2014) and accomodate this moderate growth of traffic on French airports during RP2 timeframe. It should also enable at the same time implementation of new ATM terminal systems delivering increased performance expected and new tools for air traffic controllers such as SYSAT (SYStème Approche Tour) program, deployed from 2017 in control towers located on major French airports (cf. section 2 for investments and projects description), some major works planned during RP2 (on runways, taxiways or tower), international events management (UEFA EURO 2016 Finals organized in France from 10 June to 10 July).				

	Number of airports	60 airports (7 above 70000 mvts)				
Airport level	***LFPG (PARIS CHARLES DE GAULLE)***	0,73	0,71	0,73	0,85	0,86
	CRSTMP indicative value	0,14	0,14	0,15	0,17	0,17
	Airport contribution to national targets					
	LFPO (PARIS ORLY)	0,82	1,06	1,06	0,92	0,92
	CRSTMP indicative value	0,07	0,08	0,08	0,08	0,08
	Airport contribution to national targets					
	LFMN (NICE COTE D'AZUR)	0,64	0,56	0,53	0,46	0,47
	CRSTMP indicative value	0,11	0,1	0,1	0,09	0,09
	Airport contribution to national targets					
	LFLL (LYON SAINT EXUPERY)	0,84	0,71	0,67	0,58	0,58
	CRSTMP indicative value	0,09	0,09	0,09	0,09	0,09
	Airport contribution to national targets					
	LFML (MARSEILLE PROVENCE)	0,49	0,41	0,37	0,33	0,33
	CRSTMP indicative value	0,25	0,3	0,26	0,22	0,23
	Airport contribution to national targets					
	LFBO (TOULOUSE BLAGNAC)	0,43	0,37	0,43	0,4	0,34
	CRSTMP indicative value	0,08	0,08	0,08	0,08	0,08
	Airport contribution to national targets					
	LFSB (BALE-MULHOUSE)	0,72	0,66	0,63	0,6	0,58
	CRSTMP indicative value	0,2	0,15	0,15	0,12	0,11
	Airport contribution to national targets					
	OTHER AIRPORTS	0,37	0,37	0,37	0,37	0,37
	CRSTMP indicative value	0,2	0,2	0,2	0,2	0,2

Additional comments
Regarding local breakdown, local indicative values have been established for monitoring purposes for each 7 major airports (above 70000 IFR mvts per year, having a noticeable impact on the network). An average indicative value has also been given for the group of 53 remaining smaller airports. *A national incentive scheme will apply to this Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight and is described in Chapter 4. This incentive scheme will apply to the CRSTMP national target, including all delays causes related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special event with the codes C, R, S, T, M and P of the ATFCM user manual.*

Germany	2015 Value	2016 Value	2017 Value	2018 Value	2019 Target
National level (all causes)	0,65	0,65	0,65	0,65	0,65
National level (CRSTMP causes)	0,09	0,09	0,09	0,09	0,09

Number of airports	16

	EDDB (BERLIN/SCHONEFELD)	0,02	0,020	0,02	0,02	0,02
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				
	EDDC (DRESDEN)	0,00	0,00	0,00	0,00	0,00
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				
	EDDE (ERFURT-WEIMAR)	0,00	0,00	0,00	0,00	0,00
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				
	EDDF (FRANKFURT MAIN)	1,76	1,76	1,76	1,76	1,76
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				
	EDDG (MUNSTER/OSNABRUCK)	0,00	0,00	0,00	0,00	0,00
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				
	EDDH (HAMBURG)	0,25	0,25	0,25	0,25	0,25
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				
	EDDK (KOLN/BONN)	0,04	0,04	0,04	0,04	0,04
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				

Airport level	***EDDL (DUSSELDORF)***	0,46	0,46	0,46	0,46	0,46
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				
	EDDM (MUNCHEN)	0,65	0,65	0,65	0,65	0,65
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				
	EDDN (NURNBERG)	0,01	0,01	0,01	0,01	0,01
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				
	EDDP (LEIPZIG/HALLE)	0,02	0,02	0,02	0,02	0,02
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				
	EDDR (SAARBRUCKEN)	0,00	0,00	0,00	0,00	0,00
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				
	EDDS (STUTTGART)	0,07	0,07	0,07	0,07	0,07
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				
	EDDT (BERLIN-TEGEL)	0,31	0,31	0,31	0,31	0,31
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				
	EDDV (HANNOVER)	0,00	0,00	0,00	0,00	0,00
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				

	EDDW (BREMEN)	0,01	0,01	0,01	0,01	0,01
	Airport contribution to national targets	For a consistent approach the same calculation as for the national target was used for airport values. Therefore the average arrival ATFM delay per inbound IFR flight of the relevant airport of the years 2008 - 2013 was calculated. Subsequently this airport average value was reduced by the efficiency path of 49%. As a result each airport contributes to the national target by considering its historical number of arrivals and previous years performance.				

Additional comments
An additional national incentive scheme will apply to the Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight and is described in Chapter 4.1. This incentive scheme will apply to the CRSTMP national target.

Luxembourg

		2015 Value	2016 Value	2017 Value	2018 Value	2019 Target
National level		0,48	0,49	0,48	0,47	0,43
Contribution to the improvement of the European ATM network performance						

Number of airports	1

Airport level	***ELLX (LUXEMBOURG/LUXEMBOURG)***	0,48	0,49	0,48	0,47	0,43
	Airport contribution to national targets	ELLX is the sole airport in LU; targets are an average amount/year over RP2				

Additional comments
Luxembourg airport has sufficient capacity. Therefore no national incentive scheme has been set up and will apply to terminal and airport ANS ATFM arrival delay / flight at Luxembourg airport regarding the CRSTMP targets.

Netherlands

	2015 Value	2016 Value	2017 Value	2018 Value	2019 Target
National level	average terminal delay per flight: 2 min per flight	average terminal delay per flight: 2 min per flight	average terminal delay per flight: 2 min per flight	average terminal delay per flight: 2 min per flight	average terminal delay per flight: 2 min per flight
Contribution to the improvement of the European ATM network performance	Average minutes of airport all causes ATFM delay per arrival attributable to terminal and airport ANS and caused by landing restrictions at the destination				
Number of airports	4				
Airport level	***EHAM (AMSTERDAM/SCHIPHOL)***	0,5	0,5	0,5	0,5	0,5
	Airport contribution to national targets	average terminal ATFM delay CRSTM target per controlled flight: 0,5 min				
	EHBK (MAASTRICHT/MAASTRICHT AACHEN)	n/a	n/a	n/a	n/a	n/a
	Airport contribution to national targets					
	EHGG (GRONINGEN/EELDE)	n/a	n/a	n/a	n/a	n/a
	Airport contribution to national targets					
	EHRD (ROTTERDAM)	n/a	n/a	n/a	n/a	n/a
	Airport contribution to national targets					

Additional comments
The four LVNL controlled airports in the Netherlands (Schiphol, Rotterdam, Beek and Eelde) form a One Group of Airports (OGA): the chargeable terminal unit rate is the same for all four airports. *Amsterdam Airport Schiphol (AAS) is by far the biggest airport in the Netherlands. Its market share is about 90%. Rotterdam the Hague Airport has a market share of 5%, wghereas Groningen Eelde and Maastricht Aachen Airport have a declining market share of around 2.5% - 3%.* *A change in these market shares is not expected in the coming years.* *The number of IFR flights on each of the three smaller airports is below the threshold of 70000 commercial IFR movements per year, while a substantial part of the total traffic movements on Rotterdam, Eelde and Maastricht concerns training flights ("touch and go's"). Delays are not relevant for this type of traffic. The share of the arrival delay at Rotterdam, Eelde and Maastricht is very marginal.* *Due the differences in size and nature between Schiphol on the one hand and the three other airports on the other it does not seem sensible to implement a joint Dutch terminal capacity target and a joint Dutch terminal capacity incentive scheme for all four LVNL controlled airports.* *The implementation of a capacity target and a capacity incentive scheme for Schiphol is unavoidable.* *Two groups of airports are defined in respect of the terminal and airport ANS ATFM arrival delay per flight in The Netherlands:* *a. Amsterdam Airport Schiphol (EHAM);* *b. Group of other airports, including Rotterdam the Hague Airport (EHRD), Groningen Eelde Airport (EHGG) and Maastricht Aachen Airport (EHBK).* *Justification of the scheme* *The Dutch target applies for Amstyerdam/Schiphol exclusively and is set in line with the performance observed throughout the last years. Baseline is that no additional airport delay is introduced with growth of traffic.* *The LVNL measurement methodology used to derive the historical performance is completely in line with PRB's methodology (airport ATFM-delay per arrival of inbound Schiphol traffic; A national incentive scheme will apply to the Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight at Schiphol airport and is described in Chapter 4.1. This incentive scheme will be applicable only to the CRSTMP target at Schiphol airport.*

Switzerland

	2015 Value	2016 Value	2017 Value	2018 Value	2019 Target
National level	Target values are dependent on traffic evolution				
Contribution to the improvement of the European ATM network performance					
Number of airports	2				
Airport level	***LSGG (GENEVE)***	Target values are dependent on traffic evolution				
	Airport contribution to national targets					
	LSZH (ZURICH)	Target values are dependent on traffic evolution				
	Airport contribution to national targets					

Additional comments
For target values and a detailed derivation of the Swiss terminal capacity target refer to ANNEX E of this performance plan.The national incentive scheme that applies to this target is described in chapter 4.1.

3.1.(c).(iii) - Capacity Plans

In order to avoid duplication, Member States will not be requested to attach ANSPs capacity plans when submitting the performance plans, for as long as they are already available to the PRB and the Commission. In any case, they are an integral part of the FAB performance plans.

SECTION 3.1.(d): COST-EFFICIENCY KPA

Mapping between the template for the FAB performance plan and Annex II of the performance Regulation				
Structure of ANNEX II of the performance Regulation	Link with PRB Performance Plan template			
	Body of Performance Plan	Annex C For cost-effiency		Other annexes
		RT ref.	AI ref.	
(d) Cost-efficiency	3.1.(d)			
(i) determined costs for *en route* and terminal air navigation services set in accordance with the provisions of Article 15(2)(a) and (b) of Regulation (EC) No 550/2004 and in application of the provisions of Implementing Regulation (EU) No 391/2013 for each year of the reference period;	3.1.(d).1.A 3.1.(d).2.A			
(ii) *en route* and terminal service units forecast for each year of the reference period;	3.1.(d).1.A 3.1.(d).2.A 3.1.(d).1.C 3.1.(d).2.C	RT 1 (5.4)		
(iii) as a result, the determined unit costs for the reference period;	3.1.(d).1.A 3.1.(d).2.A	RT 1 (5.5)		
(iv) description and justification of the return on equity of the air navigation service providers concerned, as well as on the gearing ratio and on the level/composition of the asset base used to calculate the cost of capital comprised in the determined costs;		RT 1 (3.1-3.4, 3.6)	AI 1 e)	
(v) description and explanation of the carry-overs from the years preceding the reference period;		RT 1 (3.1-3.4, 3.6)	AI 3 c), d), e)	
(vi) description of economic assumptions, including: — inflation assumptions used in the plan as compared to an international source such as the IMF (International Monetary Fund) Consumer Price Index (CPI) for the forecasts and Eurostat Harmonised Index of Consumer Price for the actuals. Justification of any deviation from these sources,	3.1.(d).1.B 3.1.(d).2.B	RT 1 (5.1-5.2)		
— assumptions underlying the calculation of pension costs comprised in the determined costs, including a description on the relevant national pension regulations and pension accounting regulations in place and on which the assumptions are based, as well as information whether changes of these regulations are anticipated,			AI 4 b)	
— interest rate assumptions for loans financing the provision of air navigation services, including relevant information on loans (amounts, duration, etc.) and explanation for the (weighted) average interest on debt used to calculate the cost of capital pre tax rate and the cost of capital comprised in the determined costs,		RT 1 (3.7)	AI 4 c)	
— adjustments beyond the provisions of the International Accounting Standards;			AI 1 Item c)	

(vii) if applicable, description in respect to the previous reference period of relevant events and circumstances set out in Article 14(2)(a) of Implementing Regulation (EU) No 391/2013 using the criteria set out in Article 14(2)(b) of Implementing Regulation (EU) No 391/2013 including an assessment of the level, composition and justification of costs exempt from the application of Article 14(1)(a) and (b) of Implementing Regulation (EU) No 391/2013;		RT 3 (3.1-3.12)	AI 3 b)	
(viii) if applicable, a description of any significant restructuring planned during the reference period including the level of restructuring costs and a justification for these costs in relation to the net benefits to the airspace users over time;		RT 3 (4.1)	AI 4 d)	
(ix) if applicable, restructuring costs approved from previous reference periods to be recovered.		RT 3 (4.1)	AI 4 e)	

IMPORTANT NOTE FOR SECTION 3.1.(d) – Cost-efficiency:

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
    - The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
    - The entries and justification requiring data from external sources i.e.
        - The traffic forecast used and, if applicable, their justification against STATFOR
        - The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
    - The local alert thresholds, if any, and their justification.
    - A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
    - The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;

3.1.(d) - Cost Efficiency

List of En Route Charging Zones

Number of en route charging zones	5

1	***Belgium-Luxembourg***
2	***France***
3	***Germany***
4	***Netherlands***
5	***Switzerland***

List of Terminal Charging Zones

Number of terminal charging zones	

	11
1	***Belgium Antwerpen***
2	***Belgium Brussels***
3	***Belgium Charleroi***
4	***Belgium Liege***
5	***Belgium Oostende-Brugge***
6	***France CZ 1***
6bis	***France CZ 2***
7	***Germany***
8	***Luxembourg***
9	***Netherlands***
10	***Switzerland***

3.1.(d).1 - En Route Charging Zone #1

A - Cost efficiency KPI #1: Determined unit cost (DUC) for en route ANS

in EUR

		Historical data (actual 2009-2014)						RP2 Performance Plan					RP1 PP	Average pct variation p.a.			
	Belgium-Luxembourg	**2009 A**	**2010 A**	**2011 A**	**2012 A**	**2013 A**	**2014 A**	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**	**2014 D**	**2009A-2019D**	**2014A-2019D**	**2011A-2019D**	**2014D-2019D**
Local currency (Nominal and 2012 prices)	Total en route actual/forecast/determined costs in nominal terms (in national currency)	170 650 791	154 876 930	* 156 584 274	158 794 458	162 308 998	** 161 242 626	168 277 718	172 792 013	177 260 922	180 556 020	183 521 461	** 177 352 069	0,7%	2,6%	2,0%	0,7%
	Inflation %		2,20%	3,50%	2,61%	1,20%	0,50%	1,12%	1,19%	1,32%	1,37%	1,38%					
	Inflation index (Base = 100 in 2012)	92,13	94,16	97,46	100,00	101,20	101,71	102,84	104,06	105,44	106,87	108,35	103,32	1,6%	1,3%	1,3%	1,0%
	Total en route actual/forecast/determined costs in real terms (in national currency at 2012 prices)	185 220 579	164 481 390	160 671 124	158 794 458	160 384 386	158 537 968	163 628 955	166 045 915	168 122 810	168 941 983	169 379 242	171 653 009	-0,9%	1,3%	0,7%	-0,3%
	Total en route Service Units (TSU)	2 078 793	2 114 555	2 211 673	2 231 537	2 277 014	2 362 038	*** 2 440 000	2 510 000	2 580 000	2 650 000	2 720 000	2 422 721	2,7%	2,9%	2,6%	2,3%
	Real en route UCs/DUCs (in national currency at 2012 prices)	89,10	77,79	72,65	71,16	70,44	67,12	67,06	66,15	65,16	63,75	62,27	70,85	-3,5%	-1,5%	-1,9%	-2,5%
€2012 prices	2012 average exchange rate (1EUR=)	1	1	1	1	1	1	1	1	1	1	1	1				
	Total **en route** costs in real terms (in €$_{2012}$ prices)	185 220 579	164 481 390	160 671 124	158 794 458	160 384 386	158 537 968	163 628 955	166 045 915	168 122 810	168 941 983	169 379 242	171 653 009	-0,9%	1,3%	0,7%	-0,3%
	Trend in total **en route** costs in real terms %n/n-1		-11,2%	-2,3%	-1,2%	1,0%	-1,2%	3,2%	1,5%	1,3%	0,5%	0,3%					
	Real **en route** UCs/DUCs (in €$_{2012}$ prices)	89,10	77,79	72,65	71,16	70,44	67,12	67,06	66,15	65,16	63,75	62,27	70,85	-3,5%	-1,5%	-1,9%	-2,5%
	Trend in real **en route** UCs/DUCs (in €$_{2012}$ prices) %n/n-1		-12,7%	-6,6%	-2,0%	-1,0%	-4,7%	-0,1%	-1,4%	-1,5%	-2,2%	-2,3%					
€2009 prices	Inflation index (Base = 100 in 2009)	100,00	102,20	105,78	108,54	109,84	110,39	111,62	112,95	114,44	116,00	117,60	112,14				
	2009 average exchange rate (1EUR=)	1	1	1	1	1	1	1	1	1	1	1	1				
	Total **en route** costs in real terms (in €$_{2009}$ prices)	170 650 791	151 542 984	148 032 440	146 303 396	147 768 257	146 067 082	150 757 603	152 984 440	154 897 964	155 652 698	156 055 562	158 150 470	-0,9%	1,3%	0,7%	-0,3%
	Trend in total **en route** costs in real terms %n/n-1		-11,2%	-2,3%	-1,2%	1,0%	-1,2%	3,2%	1,5%	1,3%	0,5%	0,3%					
	Real **en route** UCs/DUCs (in €$_{2009}$ prices)	82,09	71,67	66,93	65,56	64,90	61,84	61,79	60,95	60,04	58,74	57,37	65,28	-3,5%	-1,5%	-1,9%	-2,5%
	Trend in real **en route** UCs/DUCs (in €$_{2009}$ prices) %n/n-1		-12,7%	-6,6%	-2,0%	-1,0%	-4,7%	-0,1%	-1,4%	-1,5%	-2,2%	-2,3%					

Description of the consistency between local and Union-wide targets	The Belgian – Luxembourg en cost-efficiency target is fully consistent with the Union Wide-target and complies with the EC decision (EU) 2015/347 of 2 March 2015 (art. 4) requesting Belgium and Luxembourg to revise downwards their en route determined unit costs to a level that is in line with the reduction of the average en route determined unit costs on Union level over the combined period of the first and the second reference period. The Belgian –Luxembourg cost-efficiency target over the these two reference periods is even better than the average en route determined unit cost on Union level (1,8% versus 1,7%). Moreover The Belgian – Luxembourg en route determined unit cost in €2009 prices becomes even lower than that of the group comparator in the last year of RP2. * Adjusted for the one shot effect of IFRS implementation in Eurocontrol Agency and MUAC in 2011 (+6 millions EUR) ** Cost base ANA Luxembourg added in Actuals 2014 to obtain a correct starting point for RP2 (+5.5 millions EUR) *** Statfor Eurocontrol Seven Year Forecast February 2015 - Base growth scenario See annex E "Additional material".

B - Inflation assumptions

Belgium-Luxembourg	2009 A	2010 A	2011 A	2012 A	2013 A	2014 F	2015 D	2016 D	2017 D	2018 D	2019 D
Inflation %				2,61%	1,20%	0,50%	1,12%	1,19%	1,32%	1,37%	1,38%
Inflation index (2012=100)				100,000	101,200	101,706	102,841	104,063	105,435	106,875	108,349
Eurostat HICP (actuals) and IMF CPI (forecasts)				2,61%	1,20%	1,03%	1,12%	1,19%	1,32%	1,37%	1,38%
Inflation index (2012=100) HICP and IMF				100,000	101,200	102,242	103,383	104,612	105,991	107,438	108,921
Difference in percentage points					0,00	-0,01	0,00	0,00	0,00	0,00	0,00
Cumulative difference in percentage points					0,00	-0,01	-0,01	-0,01	-0,01	-0,01	-0,01
Justification and data source in case of deviation from inflation references											

C - Service Units forecast for en route

	Belgium-Luxembourg	2009 A	2010 A	2011 A	2012 A	2013 A	2014 F	2015 D	2016 D	2017 D	2018 D	2019 D
	Total **en route** service units (TSU)				2 231 537	2 277 014	2 362 038	2 440 000	2 510 000	2 580 000	2 650 000	2 720 000
	Year on Year variation TSU					2,0%	3,7%	3,3%	2,9%	2,8%	2,7%	2,6%
Baseline	STATFOR **en route** service units forecast (Baseline scenario)				2 231 537	2 277 014	2 351 796	2 423 741	2 495 361	2 557 634	2 627 436	2 701 807
Baseline	Year on Year variation TSU STATFOR					2,0%	3,3%	3,1%	3,0%	2,5%	2,7%	2,8%
Baseline	Difference in percentage points					0,00	0,00	0,00	0,00	0,00	0,00	0,00
Baseline	Cumulative difference in percentage points					0,00	0,00	0,01	0,01	0,01	0,01	0,01
Low	STATFOR **en route** service units forecast (Low scenario)				2 231 537	2 277 014	2 324 049	2 370 804	2 397 991	2 426 749	2 462 930	2 501 309
Low	Year on Year variation TSU STATFOR					2,0%	2,1%	2,0%	1,1%	1,2%	1,5%	1,6%
Low	Difference in percentage points					0,00	0,02	0,01	0,02	0,02	0,01	0,01
Low	Cumulative difference in percentage points					0,00	0,02	0,03	0,05	0,06	0,08	0,09
	Explanation of the differences (if any), justification, rationale and source											

D - Alert thresholds (en route service units)

Belgium-Luxembourg	2009 A	2010 A	2011 A	2012 A	2013 A	2014 F	2015 D	2016 D	2017 D	2018 D	2019 D
Local thresholds							10%	10%	10%	10%	10%
Local thresholds set by the European Commission							10%	10%	10%	10%	10%
Detailed justification in case of deviation											

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
   - The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
   - The entries and justification requiring data from external sources i.e.
     - The traffic forecast used and, if applicable, their justification against STATFOR
     - The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - The local alert thresholds, if any, and their justification.
   - A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
   - The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
   - The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

Annex C forms an integral part of the performance plan and will be used to carry out the assessment of the performance plan.

3.1.(d).1 - En Route Charging Zone #2

A - Cost efficiency KPI #1: Determined unit cost (DUC) for en route ANS

in EUR

		Historical data (actual 2009-2014)						RP2 Performance Plan					RP1 PP	Average pct variation p.a.			
	France	**2009 A**	**2010 A**	**2011 A**	**2012 A**	**2013 A**	**2014 A**	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**	**2014 D**	**2009A-2019D**	**2014A-2019D**	**2011A-2019D**	**2014D-2019D**
Local currency (Nominal and 2012	Total en route actual/forecast/determined costs in nominal terms (in national currency)	1 110 118 353	1 129 965 799	1 141 923 037	1 154 073 709	1 161 816 605	1 194 806 122	1 290 640 175	1 296 576 851	1 328 676 964	1 334 112 339	1 337 956 806	1 252 330 251	1,9%	2,3%	2,0%	1,3%
	Inflation %		1,74%	2,29%	2,22%	0,99%	0,62%	0,11%	0,83%	1,09%	1,11%	1,32%					
	Inflation index (Base = 100 in 2012)	94,00	95,64	97,83	100,00	100,99	101,62	101,73	102,57	103,69	104,84	106,23	102,3	1,2%	0,9%	1,0%	0,8%
	Total en route actual/forecast/determined costs in real terms (in national currency at 2012 prices)	1 180 946 086	1 181 501 708	1 167 273 729	1 154 073 709	1 150 427 374	1 175 803 514	1 268 717 800	1 264 061 924	1 281 389 896	1 272 507 000	1 259 547 909	1 224 548 362	0,6%	1,4%	1,0%	0,6%
	Total en route Service Units (TSU)	16 779 861	16 636 697	17 691 225	17 515 047	17 899 945	18 496 754	18 662 000	19 177 000	19 300 000	20 204 000	20 333 000	19 045 084	1,9%	1,9%	1,8%	1,3%
	Real en route UCs/DUCs (in national currency at 2012 prices)	70,38	71,02	65,98	65,89	64,27	63,57	**67,98**	**65,92**	**66,39**	**62,98**	**61,95**	64,30	-1,3%	-0,5%	-0,8%	-0,7%
€2012 prices	2012 average exchange rate (1EUR=)	1	1	1	1	1	1	1	1	1	1	1	1				
	Total **en route** costs in real terms (in €$_{2012}$ prices)	1 180 946 086	1 181 501 708	1 167 273 729	1 154 073 709	1 150 427 374	1 175 803 514	1 268 717 800	1 264 061 924	1 281 389 896	1 272 507 000	1 259 547 909	1 224 548 362	0,6%	1,4%	1,0%	0,6%
	Trend in total **en route** costs in real terms %n/n-1		0,0%	-1,2%	-1,1%	-0,3%	2,2%	7,9%	-0,4%	1,4%	-0,7%	-1,0%					
	Real **en route** UCs/DUCs (in €$_{2012}$ prices)	70,38	71,02	65,98	65,89	64,27	63,57	67,98	65,92	66,39	62,98	61,95	64,30	-1,3%	-0,5%	-0,8%	-0,7%
	Trend in real **en route** UCs/DUCs (in €$_{2012}$ prices) %n/n-1		0,9%	-7,1%	-0,1%	-2,5%	-1,1%	6,9%	-3,0%	0,7%	-5,1%	-1,6%					
€2009 prices	Inflation index (Base = 100 in 2009)	100,00	101,74	104,07	106,38	107,43	108,10	108,22	109,12	110,31	111,53	113,00	108,79				
	2009 average exchange rate (1EUR=)	1	1	1	1	1	1	1	1	1	1	1	1				
	Total **en route** costs in real terms (in €$_{2009}$ prices)	1 110 118 353	1 110 640 651	1 097 266 001	1 084 857 657	1 081 430 013	1 105 284 209	1 192 625 922	1 188 249 284	1 204 538 004	1 196 187 863	1 184 005 999	1 151 105 564	0,6%	1,4%	1,0%	0,6%
	Trend in total **en route** costs in real terms %n/n-1		0,0%	-1,2%	-1,1%	-0,3%	2,2%	7,9%	-0,4%	1,4%	-0,7%	-1,0%					
	Real **en route** UCs/DUCs (in €$_{2009}$ prices)	66,16	66,76	62,02	61,94	60,42	59,76	63,91	61,96	62,41	59,21	58,23	60,44	-1,3%	-0,5%	-0,8%	-0,7%
	Trend in real **en route** UCs/DUCs (in €$_{2009}$ prices) %n/n-1		0,9%	-7,1%	-0,1%	-2,5%	-1,1%	6,9%	-3,0%	0,7%	-5,1%	-1,6%					

Description of the consistency between local and Union-wide targets	Generally speaking DSNA unit costs will have been reduced by -1.3% per annum between 2009 and 2019 in real terms in this updated version of FABEC Performance Plan versus -1,0% per annum in previous July 2015 version. The drivers of this improvement are a reduction of the debt interests rate (1,6%) and an update of traffic forecast and IMF for 2018 and 2019 (STATFOR September 2016 low scenario). But, mainly due to the combined effect of traffic down-turn and the end of the full cost recovery system, the RP1 loss of revenues has led to postponment of some major DSNA investments, which need to be done during RP2 in order for DSNA to be able to modernize its ATM system to make it compatible with future SESAR deployment requirements and reach full compliance with interoperability regulations.

B - Inflation assumptions

France	2009 A	2010 A	2011 A	2012 A	2013 A	2014 A	2015 D	2016 D	2017 D	2018 D	2019 D
Inflation %				2,22%	0,99%	0,62%	0,11%	0,83%	1,09%	1,11%	1,32%
Inflation index (2012=100)				100,00	100,99	101,62	101,73	102,57	103,69	104,84	106,23
Eurostat HICP (actuals) and IMF CPI (forecasts)				2,22%	0,99%	0,62%	0,11%	0,83%	1,09%	1,11%	1,32%
Inflation index (2012=100) HICP and IMF				100,00	100,99	101,62	101,73	102,57	103,69	104,84	106,23
Difference in percentage points					0,00	0,00	0,00	0,00	0,00	0,00	0,00
Cumulative difference in percentage points					0,00	0,00	0,00	0,00	0,00	0,00	0,00
Justification and data source in case of deviation from inflation references				IMF ICP April 2015 forecasts have been used for 2015-2017. IMF ICP Octoebr 2016 forecasts have been used for 2018-2019.							

C - Service Units forecast for en route

	France	2009 A	2010 A	2011 A	2012 A	2013 A	2014 A	2015 D	2016 D	2017 D	2018 D	2019 D
	Total **en route** service units (TSU)				17 515 047	17 899 945	18 496 754	18 662 000	19 177 000	19 300 000	20 204 000	20 333 000
	Year on Year variation TSU					2,2%	3,3%	0,9%	2,8%	0,6%	4,7%	0,6%
Baseline	STATFOR **en route** service units forecast (Baseline scenario)				17 515 047	17 899 945	18 496 754	18 823 000	19 541 000	20 044 000	20 573 000	21 102 000
Baseline	Year on Year variation TSU STATFOR					2,2%	3,3%	1,8%	3,8%	2,6%	2,6%	2,6%
Baseline	Difference in percentage points					0,00	0,00	-0,01	-0,01	-0,02	0,02	-0,02
Baseline	Cumulative difference in percentage points					0,00	0,00	-0,01	-0,02	-0,04	-0,02	-0,04
Low	STATFOR **en route** service units forecast (Low scenario)				17 515 047	17 899 945	18 496 754	18 662 000	19 177 000	19 300 000	19 526 000	19 759 000
Low	Year on Year variation TSU STATFOR					2,2%	3,3%	0,9%	2,8%	0,6%	1,2%	1,2%
Low	Difference in percentage points					0,00	0,00	0,00	0,00	0,00	0,04	-0,01
Low	Cumulative difference in percentage points					0,00	0,00	0,00	0,00	0,00	0,03	0,03
	Explanation of the differences (if any), justification, rationale and source				No deviation : Low scenario February 2015 has been used for 2015 - 2017 and Low scenarion September 2016 has been used for 2018 - 2019, consistent with EC decision 11th March 2014. This scenario is also consistent with FABEC ANSPs forecast and with National DTA forecast for RP2.							

D - Alert thresholds (en route service units)

France	2009 A	2010 A	2011 A	2012 A	2013 A	2014 A	2015 D	2016 D	2017 D	2018 D	2019 D
Local thresholds							10%	10%	10%	10%	10%
Local thresholds set by the European Commission							10%	10%	10%	10%	10%
Detailed justification in case of deviation				No deviation : EC thresholds are used.							

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
   - The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
   - The entries and justification requiring data from external sources i.e.
     - The traffic forecast used and, if applicable, their justification against STATFOR
     - The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - The local alert thresholds, if any, and their justification.
   - A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
   - The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
   - The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

Annex C forms an integral part of the performance plan and will be used to carry out the assessment of the performance plan.

3.1.(d).1 - En Route Charging Zone #3

A - Cost efficiency KPI #1: Determined unit cost (DUC) for en route ANS

in EUR

		Historical data (actual 2009-2014)						RP2 Performance Plan					RP1 PP	Average pct variation p.a.			
	Germany	**2009 A**	**2010 A**	**2011 A**	**2012 A**	**2013 A**	**2014 A**	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**	**2014 D**	**2009A-2019D**	**2014A-2019D**	**2011A-2019D**	**2014A-2019D**
Local currency (Nominal and 2012 prices)	Total en route actual/forecast/determined costs in nominal terms (in national currency)	865 464 580	856 264 281	924 293 067	1 006 287 513	988 712 469	1 015 641 838	1 069 142 223	1 039 587 943	933 436 977	927 369 907	922 283 254	1 048 860 894	0,6%	-1,9%	0,0%	-2,5%
	Inflation %		1,20%	2,50%	2,10%	1,60%	0,80%	1,36%	1,60%	1,70%	1,70%	1,70%					
	Inflation index (Base = 100 in 2012)	94,42	95,55	97,94	100,00	101,60	102,41	103,80	105,46	107,26	109,08	110,93	103,43	1,6%	1,6%	1,6%	1,4%
	Total en route actual/forecast/determined costs in real terms (in national currency at 2012 prices)	916 599 084	896 101 976	943 703 222	1 006 287 513	973 142 194	991 713 768	1 029 976 921	985 733 550	870 286 712	850 177 090	831 380 375	1 014 067 382	-1,0%	-3,5%	-1,6%	-3,9%
	Total en route Service Units (TSU)	11 912 989	12 201 835	12 657 524	12 442 470	12 506 062	12 806 143	12 801 000	13 057 000	13 122 000	13 242 000	13 365 000	14 119 320	1,2%	0,9%	0,7%	-1,1%
	Real en route UCs/DUCs (in national currency at 2012 prices)	76,94	73,44	74,56	80,88	77,81	77,44	**80,46**	**75,49**	**66,32**	**64,20**	**62,21**	71,82	-2,1%	-4,3%	-2,2%	-2,8%
€2012 prices	2012 average exchange rate (1EUR=)	1	1	1	1	1	1	1	1	1	1	1	1				
	Total **en route** costs in real terms (in €$_{2012}$ prices)	916 599 084	896 101 976	943 703 222	1 006 287 513	973 142 194	991 713 768	1 029 976 921	985 733 550	870 286 712	850 177 090	831 380 375	1 014 067 382	-1,0%	-3,5%	-1,6%	-3,9%
	Trend in total **en route** costs in real terms %n/n-1		-2,2%	5,3%	6,6%	-3,3%	1,9%	3,9%	-4,3%	-11,7%	-2,3%	-2,2%					
	Real **en route** UCs/DUCs (in €$_{2012}$ prices)	76,94	73,44	74,56	80,88	77,81	77,44	80,46	75,49	66,32	64,20	62,21	71,82	-2,1%	-4,3%	-2,2%	-2,8%
	Trend in real **en route** UCs/DUCs (in €$_{2012}$ prices) %n/n-1		-4,6%	1,5%	8,5%	-3,8%	-0,5%	3,9%	-6,2%	-12,1%	-3,2%	-3,1%					
€2009 prices	Inflation index (Base = 100 in 2009)	100,00	101,20	103,73	105,91	107,60	108,46	109,94	111,69	113,59	115,52	117,49	109,54				
	2009 average exchange rate (1EUR=)	1	1	1	1	1	1	1	1	1	1	1	1				
	Total **en route** costs in real terms (in €$_{2009}$ prices)	865 464 580	846 110 949	891 056 654	950 149 542	918 853 308	936 388 826	972 517 385	930 742 228	821 735 846	802 748 084	784 999 985	957 495 395	-1,0%	-3,5%	-1,6%	-3,9%
	Trend in total **en route** costs in real terms %n/n-1		-2,2%	5,3%	6,6%	-3,3%	1,9%	3,9%	-4,3%	-11,7%	-2,3%	-2,2%					
	Real **en route** UCs/DUCs (in €$_{2009}$ prices)	72,65	69,34	70,40	76,36	73,47	73,12	75,97	71,28	62,62	60,62	58,74	67,81	-2,1%	-4,3%	-2,2%	-2,8%
	Trend in real **en route** UCs/DUCs (in €$_{2009}$ prices) %n/n-1		-4,6%	1,5%	8,5%	-3,8%	-0,5%	3,9%	-6,2%	-12,1%	-3,2%	-3,1%					

Description of the consistency between local and Union-wide targets	For the German cost base for the 2nd Reference Period (RP2) the cost base of DFS was subject to a top down regulation on the total cost basis. Due to that fact possibly the investment section of this Performance Plan do as far as DFS is concerned not reflect the current status after the top down regulation. The top down regulation of DFS is starting from the national equivalent of the EU-wide starting point of 2014 for DFS explained in detail in the consultation documentation (Annex A). To the level of this starting point the effect of the change of the interest rate for the valuation of the pension obligations of DFS from 4.65% in RP1 to 3.25% in RP2 is added. From this level the EU wide efficiency path of -2.1% in average per year of RP2 is applied to the cost base of DFS. Together with the planning of the other German entities participating in the performance scheme the above cost base and unit cost were determined for RP2.

B - Inflation assumptions

Germany	**2009 A**	**2010 A**	**2011 A**	**2012 A**	**2013 A**	**2014 A**	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**
Inflation %				2,10%	1,60%	0,80%	1,36%	1,60%	1,70%	1,70%	1,70%
Inflation index (2012=100)				100,00	101,60	102,41	103,80	105,46	107,26	109,08	110,93
Eurostat HICP (actuals) and IMF CPI (forecasts)				2,10%	1,60%	1,36%	1,36%	1,60%	1,70%	1,70%	1,70%
Inflation index (2012=100) HICP and IMF				100,00	101,60	102,98	104,38	106,05	107,85	109,69	111,55
Difference in percentage points					0,00	-0,01	0,00	0,00	0,00	0,00	0,00
Cumulative difference in percentage points					0,00	-0,01	-0,01	-0,01	-0,01	-0,01	-0,01
Justification and data source in case of deviation from inflation references											

C - Service Units forecast for en route

	Germany	**2009 A**	**2010 A**	**2011 A**	**2012 A**	**2013 A**	**2014 A**	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**
	Total **en route** service units (TSU)				12 442 470	12 506 062	12 806 143	12 801 000	13 057 000	13 122 000	13 242 000	13 365 000
	Year on Year variation TSU					0,5%	2,4%	0,0%	2,0%	0,5%	0,9%	0,9%
Baseline	STATFOR **en route** service units forecast (Baseline scenario)				12 442 470	12 506 062	12 617 867	12 896 166	13 232 680	13 512 409	13 794 870	14 114 049
Baseline	Year on Year variation TSU STATFOR					0,5%	0,9%	2,2%	2,6%	2,1%	2,1%	2,3%
Baseline	Difference in percentage points					0,00	0,02	-0,02	-0,01	-0,02	-0,01	-0,01
Baseline	Cumulative difference in percentage points					0,00	0,01	-0,01	-0,01	-0,03	-0,04	-0,05
Low	STATFOR **en route** service units forecast (Low scenario)				12 442 470	12 506 062	12 494 445	12 632 640	12 730 027	12 830 390	12 943 550	13 069 166
Low	Year on Year variation TSU STATFOR					0,5%	-0,1%	1,1%	0,8%	0,8%	0,9%	1,0%
Low	Difference in percentage points					0,00	0,02	-0,01	0,01	0,00	0,00	0,00
Low	Cumulative difference in percentage points					0,00	0,02	0,01	0,03	0,02	0,02	0,02
	Explanation of the differences (if any), justification, rationale and source				The difference is due to the exclusion of 65,000 SU for OAT which are included in the STATFOR forecasts.							

D - Alert thresholds (en route service units)

Germany	**2009 A**	**2010 A**	**2011 A**	**2012 A**	**2013 A**	**2014 A**	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**
Local thresholds							10%	10%	10%	10%	10%
Local thresholds set by the European Commission							10%	10%	10%	10%	10%
Detailed justification in case of deviation											

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
   - The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
   - The entries and justification requiring data from external sources i.e.
     - The traffic forecast used and, if applicable, their justification against STATFOR
     - The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - The local alert thresholds, if any, and their justification.
   - A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
   - The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
   - The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

Annex C forms an integral part of the performance plan and will be used to carry out the assessment of the performance plan.

3.1.(d).1 - En Route Charging Zone #4

A - Cost efficiency KPI #1: Determined unit cost (DUC) for en route ANS

in EUR

		Historical data (actual 2009-2013, latest 2014 forecast)						RP2 Performance Plan					RP1 PP	Average pct variation p.a.			
	Netherlands	**2009 A**	**2010 A**	**2011 A**	**2012 A**	**2013 A**	**2014 A**	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**	**2014 D**	**2009A-2019D**	**2014F-2019D**	**2011A-2019D**	**2014D-2019D**
Local currency (Nominal and 2012	Total en route actual/forecast/determined costs in nominal terms (in national currency)	179 226 067	161 272 490	159 583 640	170 033 899	171 458 338	177 088 241	184 921 748	184 103 595	187 092 113	193 763 267	198 069 117	173 192 000	1,0%	2,3%	2,7%	2,7%
	Inflation %		1,00%	2,50%	2,80%	2,60%	0,30%	1,00%	1,24%	1,44%	1,49%	1,51%	2%				
	Inflation index (Base = 100 in 2012)	93,82	94,77	97,20	100,00	102,60	102,91	103,94	105,23	106,74	108,33	109,97	102,9	1,6%	1,3%	1,6%	1,3%
	Total en route actual/forecast/determined costs in real terms (in national currency at 2012 prices)	191 027 151	170 172 512	164 180 700	170 033 899	167 113 390	172 084 372	177 917 359	174 960 683	175 276 800	178 861 616	180 116 559	168 298 224	-0,6%	0,9%	1,2%	1,4%
	Total en route Service Units (TSU)	2 426 000	2 476 000	2 595 143	2 587 398	2 701 735	2 767 312	2 806 192	2 825 835	2 845 616	3 045 000	3 077 000	2 794 000	2,4%	2,1%	2,2%	1,9%
	Real en route UCs/DUCs (in national currency at 2012 prices)	78,74	68,73	63,26	65,72	61,85	62,18	**63,40**	**61,91**	**61,60**	**58,74**	**58,54**	60,24	-2,9%	-1,2%	-1,0%	-0,6%
€2012 prices	2012 average exchange rate (1EUR=)	1	1	1	1	1	1	1	1	1	1	1	1				
	Total **en route** costs in real terms (in €$_{2012}$ prices)	191 027 151	170 172 512	164 180 700	170 033 899	167 113 390	172 084 372	177 917 359	174 960 683	175 276 800	178 861 616	180 116 559	168 298 224	-0,6%	0,9%	1,2%	1,4%
	Trend in total **en route** costs in real terms %n/n-1		-10,9%	-3,5%	3,6%	-1,7%	3,0%	3,4%	-1,7%	0,2%	2,0%	0,7%					
	Real **en route** UCs/DUCs (in €$_{2012}$ prices)	78,74	68,73	63,26	65,72	61,85	62,18	63,40	61,91	61,60	58,74	58,54	60,24	-2,9%	-1,2%	-1,0%	-0,6%
	Trend in real **en route** UCs/DUCs (in €$_{2012}$ prices) %n/n-1		-12,7%	-8,0%	3,9%	-5,9%	0,5%	2,0%	-2,3%	-0,5%	-4,6%	-0,3%					
€2009 prices	Inflation index (Base = 100 in 2009)	100,00	101,00	103,53	106,42	109,19	109,52	110,61	111,99	113,60	115,29	117,03	109,68				
	2009 average exchange rate (1EUR=)	1	1	1	1	1	1	1	1	1	1	1	1				
	Total **en route** costs in real terms (in €$_{2009}$ prices)	179 226 067	159 675 733	154 149 858	159 770 708	157 026 480	161 697 415	167 178 325	164 400 113	164 697 149	168 065 587	169 244 782	157 901 265	-0,6%	0,9%	1,2%	1,4%
	Trend in total **en route** costs in real terms %n/n-1		-10,9%	-3,5%	3,6%	-1,7%	3,0%	3,4%	-1,7%	0,2%	2,0%	0,7%					
	Real **en route** UCs/DUCs (in €$_{2009}$ prices)	73,88	64,49	59,40	61,75	58,12	58,43	59,57	58,18	57,88	55,19	55,00	56,51	-2,9%	-1,2%	-1,0%	-0,5%
	Trend in real **en route** UCs/DUCs (in €$_{2009}$ prices) %n/n-1		-12,7%	-7,9%	4,0%	-5,9%	0,5%	2,0%	-2,3%	-0,5%	-4,6%	-0,3%					

Description of the consistency between local and Union-wide targets	The combined effect of the Union wide RP1 and RP2 cost efficiency targets would result in a reduction of the Determined Unit Costs of 26%, taking also into account the pre-performance scheme cost containment measures. The Netherlands will achieve the combined Cost efficiency target. The substantial and structural effects of the RP1 costs exempt in RP2 and the cost increasing effects of replacement investments (as a number of the assets to be replaced is already completely written off and thus does not result in depreciation or capital costs anymore) hamper further cost reductions. The Netherlands has changed its traffic volume for the years 2018 and 2019 in this revised plan in comparison to the RP2 performance plan which was submitted by the Netherlands in 2014 and which included a low scenario plus on the basis of the February 2014 STATFOR forecast. The update to the traffic forecast is in line with the low scenario of the February 2016 STATFOR forecast. The actual inflation in 2014 was very low and does not help to improve the cost efficiency performance. The October 2016 IMF WEO figures indicate a continuation of low but slowly rising inflation rates over the RP2 period. Forecasts remain below the assumptions in the 2014 performance plan. Because of the volatility of low inflation rates the inflation rates included in the revised cost efficiency performance plan of the Netherlands have not been changed.

B - Inflation assumptions

Netherlands	2009 A	2010 A	2011 A	2012 A	2013 A	2014 A	2015 D	2016 D	2017 D	2018 D	2019 D
Inflation %				2,80%	2,60%	0,30%	1,00%	1,24%	1,44%	1,49%	1,51%
Inflation index (2012=100)				100,00	102,60	102,91	103,94	105,23	106,74	108,33	109,97
Eurostat HICP (actuals) and IMF CPI (forecasts)				2,80%	2,60%	0,80%	1,00%	1,24%	1,44%	1,49%	1,51%
Inflation index (2012=100) HICP and IMF				100,00	102,60	103,42	104,46	105,75	107,27	108,87	110,52
Difference in percentage points					0,00	-0,01	0,00	0,00	0,00	0,00	0,00
Cumulative difference in percentage points					0,00	-0,01	-0,01	-0,01	-0,01	-0,01	-0,01
Justification and data source in case of deviation from inflation references				Both mandatory sources of inflation have been used.							

C - Service Units forecast for en route

	Netherlands	2009 A	2010 A	2011 A	2012 A	2013 A	2014 A	2015 D	2016 D	2017 D	2018 D	2019 D
	Total **en route** service units (TSU)				2 587 398	2 701 735	2 767 312	2 806 192	2 825 835	2 845 616	3 045 000	3 077 000
	Year on Year variation TSU					4,4%	2,4%	1,4%	0,7%	0,7%	7,0%	1,1%
Baseline	STATFOR **en route** service units forecast (Baseline scenario)				2 587 398	2 701 735	2 770 000	2 847 000	2 918 000	2 977 000	3 041 000	3 109 000
Baseline	Year on Year variation TSU STATFOR					4,4%	2,5%	2,8%	2,5%	2,0%	2,1%	2,2%
Baseline	Difference in percentage points					0,00	0,00	-0,01	-0,02	-0,01	0,05	-0,01
Baseline	Cumulative difference in percentage points					0,00	0,00	-0,01	-0,03	-0,04	0,00	-0,01
Low	STATFOR **en route** service units forecast (Low scenario)				2 587 398	2 701 735	2 736 000	2 780 000	2 800 000	2 821 000	2 848 000	2 876 000
Low	Year on Year variation TSU STATFOR					4,4%	1,3%	1,6%	0,7%	0,8%	1,0%	1,0%
Low	Difference in percentage points					0,00	0,01	0,00	0,00	0,00	0,06	0,00
Low	Cumulative difference in percentage points					0,00	0,01	0,01	0,01	0,01	0,07	0,07
	Explanation of the differences (if any), justification, rationale and source				The Statfor medium term forecast February 2014, low scenario, is used for the period 2015-2017. However, as the latest traffic prognosis 2014 for the Dutch en route charging zone indicated a number of service units higher than the Statfor low scenario, the use of the low scenario would have resulted in a decrease in the number of service units in 2015. To avoid such an illogical phenomenon, the latest prognosis was used as starting point on which the low scenario growth percentages have been applied to calculate the service unit development. The Statfor medium term forecast February 2016, low scenario, is used for the period 2018-2019.							

D - Alert thresholds (en route service units)

Netherlands	2009 A	2010 A	2011 A	2012 A	2013 A	2014 F	2015 D	2016 D	2017 D	2018 D	2019 D
Local thresholds							10%	10%	10%	10%	10%
Local thresholds set by the European Commission							10%	10%	10%	10%	10%
Detailed justification in case of deviation											

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
   - The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
   - The entries and justification requiring data from external sources i.e.
     - The traffic forecast used and, if applicable, their justification against STATFOR
     - The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - The local alert thresholds, if any, and their justification.
   - A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
   - The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
   - The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

Annex C forms an integral part of the performance plan and will be used to carry out the assessment of the performance plan.

3.1.(d).1 - En Route Charging Zone #5

A - Cost efficiency KPI #1: Determined unit cost (DUC) for en route ANS

in CHF

		Historical data (actual 2009-2013, latest 2014 forecast)						RP2 Performance Plan					RP1 PP	Average pct variation p.a.			
	Switzerland	**2009 A**	**2010 A**	**2011 A**	**2012 A**	**2013 A**	**2014 SP**	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**	**2014 D**	**2009A-2019D**	**2014F-2019D**	**2011A-2019D**	**2014D-2019D**
Local currency (Nominal and 2012 prices)	Total en route actual/forecast/determined costs in nominal terms (in national currency)	185 244 795	195 808 522	157 414 339	157 318 354	148 603 864	161 570 451	158 188 309	156 222 383	157 901 505	157 939 446	159 353 943	170 060 842	-1,5%	-0,3%	0,2%	-1,3%
	Inflation %		0,60%	0,10%	-0,70%	0,10%	0,00%	-1,00%	0,00%	0,50%	1,00%	1,00%					
	Inflation index (Base = 100 in 2012)	100,0	100,6	100,7	100,0	100,1	100,1	99,1	99,1	99,6	100,6	101,6	103,26	0,2%	0,3%	0,1%	-0,3%
	Total en route actual/forecast/determined costs in real terms (in national currency at 2012 prices)	185 236 822	194 632 300	156 312 439	157 318 354	148 455 409	161 409 042	159 626 545	157 642 744	158 544 411	157 012 382	156 850 076	164 686 440	-1,6%	-0,6%	0,0%	-1,0%
	Total en route Service Units (TSU)	1 396 243	1 409 298	1 431 092	1 398 574	1 384 957	1 427 068	1 452 683	1 470 066	1 490 591	1 512 889	1 565 000	1 564 541	1,1%	1,9%	1,1%	0,0%
	Real en route UCs/DUCs (in national currency at 2012 prices)	132,67	138,11	109,23	112,48	107,19	113,11	**109,88**	**107,24**	**106,36**	**103,78**	**100,22**	105,26	-2,8%	-2,4%	-1,1%	-1,0%
€2012 prices	2012 average exchange rate (1EUR=)	1,20483	1,20483	1,20483	1,20483	1,20483	1,20483	1,20483	1,20483	1,20483	1,20483	1,20483	1,20483				
	Total **en route** costs in real terms (in €$_{2012}$ prices)	153 745 194	161 543 371	129 738 169	130 573 072	123 216 893	133 968 313	132 488 853	130 842 313	131 590 690	130 319 117	130 184 404	136 688 529	-1,6%	-0,6%	0,0%	-1,0%
	Trend in total **en route** costs in real terms %n/n-1		5,1%	-19,7%	0,6%	-5,6%	8,7%	-1,1%	-1,2%	0,6%	-1,0%	-0,1%					
	Real **en route** UCs/DUCs (in €$_{2012}$ prices)	110,11	114,63	90,66	93,36	88,97	93,88	91,20	89,00	88,28	86,14	83,18	87,37	-2,8%	-2,4%	-1,1%	-1,0%
	Trend in real **en route** UCs/DUCs (in €$_{2012}$ prices) %n/n-1		4,1%	-20,9%	3,0%	-4,7%	5,5%	-2,8%	-2,4%	-0,8%	-2,4%	-3,4%					
€2009 prices	Inflation index (Base = 100 in 2009)	100,00	100,60	100,70	100,00	100,10	100,10	99,09	99,09	99,59	100,59	101,59	103,26				
	2009 average exchange rate (1EUR=)	1,50898	1,50898	1,50898	1,50898	1,50898	1,50898	1,50898	1,50898	1,50898	1,50898	1,50898	1,50898				
	Total **en route** costs in real terms (in €$_{2009}$ prices)	122 761 598	128 988 242	103 592 604	104 259 252	98 385 531	106 970 264	105 788 954	104 474 234	105 071 794	104 056 476	103 948 911	109 142 287	-1,6%	-0,6%	0,0%	-1,0%
	Trend in total **en route** costs in real terms %n/n-1		5,1%	-19,7%	0,6%	-5,6%	8,7%	-1,1%	-1,2%	0,6%	-1,0%	-0,1%					
	Real **en route** UCs/DUCs (in €$_{2009}$ prices)	87,92	91,53	72,39	74,55	71,04	74,96	72,82	71,07	70,49	68,78	66,42	69,76	-2,8%	-2,4%	-1,1%	-1,0%
	Trend in real **en route** UCs/DUCs (in €$_{2009}$ prices) %n/n-1		4,1%	-20,9%	3,0%	-4,7%	5,5%	-2,8%	-2,4%	-0,8%	-2,4%	-3,4%					

Description of the consistency between local and Union-wide targets	To assess the cost-efficiency over 2014-2019 we have set the DUC starting point according to European regulation (Common Implementation Decision 2014/132/EU (12)). The regulation states that starting point for RP2 corresponds to the RP1 Determined costs for 2014 (DC as if RP1 target 100% achieved) divided by 2014 actual traffic. In column "2014 SP" (Starting Point), on line "real en route DUC", the 113.11 CHF corresponds to the starting point for RP2. It is calculated by dividing 161.409 MCHF (RP1 2014 DC with target 100% achieved) by 1.427068 SU (actual 2014 traffic). Over 2014-2019, the DUC decreases by 2.4% p.a. which is an improvement since the first and second draft of the RP2 PP. On a long term perspective (2009-2019) the DUC decreases by 2.8% p.a. which is above the EU wide target (-2.5%). Proceeding accordingly enables to take into account cost efforts made before RP2 which were significant. The monitoring of ANS performance must include a long term perspective and not only focus on short term variances.

B - Inflation assumptions

Switzerland	2009 A	2010 A	2011 A	2012 A	2013 A	2014 A	2015 D	2016 D	2017 D	2018 D	2019 D
Inflation %				-0,70%	0,10%	0,00%	-1,00%	0,00%	0,50%	1,00%	1,00%
Inflation index (2012=100)				100,00	100,10	100,10	99,10	99,10	99,59	100,59	101,60
Eurostat HICP (actuals) and IMF CPI **April 2015** (forecasts)				-0,70%	0,10%	-0,01%	-1,19%	-0,38%	0,41%	1,00%	1,00%
Inflation index (2012=100) HICP and IMF				100,00	100,10	100,09	98,90	98,53	98,93	99,92	100,92
Difference in percentage points					0,00	0,00	0,00	0,00	0,00	0,00	0,00
Cumulative difference in percentage points					0,00	0,00	0,00	0,01	0,01	0,01	0,01
Justification and data source in case of deviation from inflation references				The Swiss inflation rates forecasts for 2015-2019 were revised by the Swiss Federal Statistical Office and IMF since our first submission in June 2014 (www.bfs.admin.ch - March 2015 / IMF April 2014). Switzerland therefore used revised inflation rates in this second draft. Switzerland reflected the lower inflation rates by decreasing nominal determined costs.							

	2014 A	2015	2016	2017	2018	2019	Average 2014/19
Inflation rate V2	0.0%	-1.0%	0.0%	0.5%	1.0%	1.0%	0.3%
Inflation rate V1	0.2%	0.5%	1.0%	1.0%	1.0%	1.0%	0.8%
V2 source	*Actual*	*Based on Swiss Statistical Office (March 2015) and IMF April 2015*					
V1 source		*IMF April 2014*					

C - Service Units forecast for en route

	Switzerland	2009 A	2010 A	2011 A	2012 A	2013 A	2014 A	2015 D	2016 D	2017 D	2018 D	2019 D
Baseline	Total **en route** service units (TSU)				1 398 574	1 384 957	1 427 068	1 452 683	1 470 066	1 490 591	1 512 889	1 565 000
	Year on Year variation TSU					-1,0%	3,0%	1,8%	1,2%	1,4%	1,5%	3,4%
	STATFOR **en route** service units forecast (Baseline scenario)				1 398 574	1 384 957	1 431 956	1 467 624	1 505 540	1 536 867	1 571 742	1 609 330
	Year on Year variation TSU STATFOR					-1,0%	3,4%	2,5%	2,6%	2,1%	2,3%	2,4%
	Difference in percentage points					0,00	0,00	-0,01	-0,01	-0,01	-0,01	0,01
	Cumulative difference in percentage points					0,00	0,00	-0,01	-0,02	-0,03	-0,04	-0,03
Low	STATFOR **en route** service units forecast (Low scenario)				1 398 574	1 384 957	1 414 457	1 433 365	1 443 367	1 454 327	1 468 935	1 484 462
	Year on Year variation TSU STATFOR					-1,0%	2,1%	1,3%	0,7%	0,8%	1,0%	1,1%
	Difference in percentage points					0,00	0,01	0,00	0,00	0,01	0,00	0,02
	Cumulative difference in percentage points					0,00	0,01	0,01	0,02	0,02	0,03	0,05
	Explanation of the differences (if any), justification, rationale and source				Since our first draft submission of the PP we increased the number of service units by 278'946 over RP2 which corresponds to an increase of +3.9% compared to V1 total SU. Considering the traffic evolution from the last 14 years (average traffic growth between 2001 - 2014 = +0.9%), we consider these forecasts as very ambitious. This implies a higher risk at ANSP level.							

	2015	2016	2017	2018	2019	Sum 2015/19
Total SU V3	1'452'683	1'470'066	1'490'591	1'512'889	1'565'000	7'491'229
Total SU V1	1'418'755	1'428'660	1'440'060	1'454'424	1'470'383	7'212'282
V3 vs V1 increase in SU	278'946					
V3 vs V1 increase in %	3.9%					

D - Alert thresholds (en route service units)

Switzerland	2009 A	2010 A	2011 A	2012 A	2013 A	2014 F	2015 D	2016 D	2017 D	2018 D	2019 D
Local thresholds							10%	10%	10%	10%	10%
Local thresholds set by the European Commission							10%	10%	10%	10%	10%
Detailed justification in case of deviation											

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
   - The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
   - The entries and justification requiring data from external sources i.e.
     - The traffic forecast used and, if applicable, their justification against STATFOR
     - The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - The local alert thresholds, if any, and their justification.
   - A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
   - The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
   - The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

Annex C forms an integral part of the performance plan and will be used to carry out the assessment of the performance plan.

3.1.(d).2 - En Route ANS at FAB level

A - Cost efficiency KPI #1: Determined unit cost (DUC) for en route ANS aggregated at FAB level

		Historical data (actual 2009-2013, actual 2014 (for CHE SP)						RP2 Performance Plan					RP1 PP	Average percentage variation per annum			
		2009 A	2010 A	2011 A	2012 A	2013 A	2014	2015 D	2016 D	2017 D	2018 D	2019 D	2014 D	2009A-2019D	2014-2019D	2011A-2019D	2014-2019D
€2012 prices	Total en route Service Units (TSU)	34 593 886	34 838 385	36 586 657	36 175 026	36 769 713	37 859 315	38 161 875	39 039 901	39 338 207	40 653 889	41 060 000	39 945 666	1,7%	1,6%	1,5%	0,6%
	Trend in Total en route Service Units (TSU)%n/n-1		0,71%	5,02%	-1,13%	1,64%	2,96%	0,80%	2,30%	0,76%	3,34%	1,00%					
	Total en route costs in real terms (in €$_{2012}$ prices)	2 627 538 094	2 573 800 958	2 565 566 943	2 619 762 650	2 574 284 236	2 632 107 934	2 772 729 889	2 721 644 385	2 626 666 908	2 600 806 806	2 570 608 489	2 715 255 506	-0,2%	-0,5%	0,0%	-1,1%
	Trend in total en route costs in real terms (in €$_{2012}$ prices) %n/n-1		-2,05%	-0,32%	2,11%	-1,74%	2,25%	5,34%	-1,84%	-3,49%	-0,98%	-1,16%					
	Real en route UCs/DUCs (in €$_{2012}$ prices)	75,95	73,88	70,12	72,42	70,01	69,52	72,66	69,71	66,77	63,97	62,61	67,97	-1,9%	-2,1%	-1,4%	-1,6%
	Trend in real en route UCs/DUCs (in €$_{2012}$ prices)%n/n-1		-2,73%	-5,08%	3,27%	-3,33%	-0,70%	4,51%	-4,05%	-4,22%	-4,19%	-2,14%					
€2009 prices	Total en route costs in real terms (in €$_{2009}$ prices)	2 448 221 388	2 396 958 560	2 394 097 556	2 445 340 556	2 403 463 590	2 456 407 796	2 588 868 189	2 540 850 299	2 450 940 756	2 426 710 708	2 398 255 239	2 533 794 981	-0,2%	-0,5%	0,0%	-1,1%
	Trend in total en route costs in real terms (in €$_{2009}$ prices) %n/n-1		-2,09%	-0,12%	2,14%	-1,71%	2,20%	5,39%	-1,85%	-3,54%	-0,99%	-1,17%					
	Real en route UCs/DUCs (in €$_{2009}$ prices)	70,77	68,80	65,44	67,60	65,37	64,88	67,84	65,08	62,30	59,69	58,41	63,43	-1,9%	-2,1%	-1,4%	-1,6%
	Trend in real en route UCs/DUCs (in €$_{2009}$ prices)%n/n-1		-2,78%	-4,89%	3,30%	-3,30%	-0,74%	4,56%	-4,06%	-4,27%	-4,19%	-2,15%					

Description of benefits and synergies achieved at functional airspace block level

3.1.(d).3 - Terminal Charging Zone #1

A - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

in EUR

		RP2 Performance Plan					Avg pct var p.a.
	Belgium Antwerpen	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**	**2015D-2019D**
Local currency (Nominal and 2012	Total terminal determined costs in nominal terms (in national currency)	5 402 889	5 506 774	5 653 055	5 832 191	6 229 428	3,6%
	Inflation %	1,12%	1,19%	1,32%	1,37%	1,38%	
	Inflation index (Base = 100 in 2012)	102,84	104,06	105,44	106,87	108,35	1,3%
	Total terminal determined costs in real terms (in national currency at 2012 prices)	5 253 632	5 291 780	5 361 630	5 457 042	5 749 387	2,3%
	Total terminal Service Units (TSU) used for the determined unit cost	3 646	3 947	3 976	4 021	4 068	2,8%
	Real terminal DUCs (in national currency at 2012 prices)	1 441,07	1 340,64	1 348,58	1 357,28	1 413,16	-0,5%
€2012 prices	2012 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in $€_{2012}$ prices)	5 253 632	5 291 780	5 361 630	5 457 042	5 749 387	2,3%
	Trend in total terminal determined costs in real terms %n/n-1		0,7%	1,3%	1,8%	5,4%	
	Real terminal DUCs (in $€_{2012}$ prices)	1 441,07	1 340,64	1 348,58	1 357,28	1 413,16	-0,5%
	Trend in real terminal DUCs (in $€_{2012}$ prices) %n/n-1		-7,0%	0,6%	0,6%	4,1%	
€2009 prices	Inflation index (Base = 100 in 2009)	111,62	112,95	114,44	116,00	117,60	
	2009 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in $€_{2009}$ prices)	4 840 371	4 875 519	4 939 875	5 027 781	5 297 129	2,3%
	Trend in total terminal determined costs in real terms %n/n-1		0,7%	1,3%	1,8%	5,4%	
	Real terminal DUCs (in $€_{2009}$ prices)	1 327,71	1 235,18	1 242,50	1 250,51	1 302,00	-0,5%
	Trend in real terminal DUCs (in $€_{2009}$ prices) %n/n-1		-7,0%	0,6%	0,6%	4,1%	

Description and justification of how the local targets contribute to the performance of the European ATM network	The following top down approach has been used to set the target for terminal cost efficiency. Starting from the year 2014, the aggregated cost efficiency target for the terminal determined unit cost at all 5 TCZs is a reduction of -2,5% for each year during the whole RP2 and at least -1,5% at each charging zone.

B - Inflation assumptions

Belgium Antwerpen	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**
Inflation %	1,12%	1,19%	1,32%	1,37%	1,38%
Inflation index (2012=100)	102,84	104,06	105,4	106,9	108,3
Eurostat HICP (actuals) and IMF CPI (forecasts)	1,12%	1,19%	1,32%	1,37%	1,38%
Inflation index (2012=100) HICP and IMF	103,38	104,61	105,99	107,44	108,92
Difference in percentage points		0,00	0,00	0,00	0,00
Cumulative difference in percentage points		-0,01	-0,01	-0,01	-0,01
Justification and data source in case of deviation from inflation references					

C - Service Units forecast for terminal

Belgium Antwerpen	2015 D	2016 D	2017 D	2018 D	2019 D
Total terminal service units (TNSU)	3 646	3 947	3 976	4 021	4 068
Year on Year variation TNSU		8,3%	0,7%	1,1%	1,2%
STATFOR terminal service units forecast (Baseline scenario)	2 196	2 244	2 292	2 336	2 394
Year on Year variation TNSU STATFOR		2,2%	2,1%	1,9%	2,5%
Difference in percentage		0,06	-0,01	-0,01	-0,01
Cumulative difference in percentage		0,76	0,73	0,72	0,70
Explanation of the differences (if any), justification, rationale and source	Statfor low growth scenario is used, consistently with the En route activity. Correction of traffic is applied with VFR flights				

D - Alert thresholds (terminal service units)

Belgium Antwerpen	2015 D	2016 D	2017 D	2018 D	2019 D
Local thresholds	10%	10%	10%	10%	10%
Local thresholds set by the European Commission	10%	10%	10%	10%	10%
Detailed justification in case of deviation					

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
   - •The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
   - •The entries and justification requiring data from external sources i.e.
     - ○The traffic forecast used and, if applicable, their justification against STATFOR
     - ○The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - •The local alert thresholds, if any, and their justification.
   - •A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
   - •The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
   - •The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

Annex C forms an integral part of the performance plan and will be used to carry out the assessment of the performance plan.

3.1.(d).3 - Terminal Charging Zone #2

A - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

in EUR

	Belgium Brussels	RP2 Performance Plan 2015 D	2016 D	2017 D	2018 D	2019 D	Avg pct var p.a. 2015D-2019D
Local currency (Nominal and 2012	Total terminal determined costs in nominal terms (in national currency)	34 001 220	35 029 505	35 994 691	36 596 159	36 991 971	2,1%
	Inflation %	1,12%	1,19%	1,32%	1,37%	1,38%	
	Inflation index (Base = 100 in 2012)	102,84	104,06	105,44	106,87	108,35	1,3%
	Total terminal determined costs in real terms (in national currency at 2012 prices)	33 061 918	33 661 893	34 139 102	34 242 157	34 141 359	0,8%
	Total terminal Service Units (TSU) used for the determined unit cost	137 140	139 355	141 121	143 691	146 408	1,6%
	Real terminal DUCs (in national currency at 2012 prices)	241,08	241,55	241,91	238,30	233,19	-0,8%
€2012 prices	2012 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in $€_{2012}$ prices)	33 061 918	33 661 893	34 139 102	34 242 157	34 141 359	0,8%
	Trend in total terminal determined costs in real terms %n/n-1		1,8%	1,4%	0,3%	-0,3%	
	Real terminal DUCs (in $€_{2012}$ prices)	241,08	241,55	241,91	238,30	233,19	-0,8%
	Trend in real terminal DUCs (in $€_{2012}$ prices) %n/n-1		0,2%	0,1%	-1,5%	-2,1%	
€2009 prices	Inflation index (Base = 100 in 2009)	111,62	112,95	114,44	116,00	117,60	
	2009 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in $€_{2009}$ prices)	30 461 207	31 013 987	31 453 658	31 548 606	31 455 737	0,8%
	Trend in total terminal determined costs in real terms %n/n-1		1,8%	1,4%	0,3%	-0,3%	
	Real terminal DUCs (in $€_{2009}$ prices)	222,12	222,55	222,88	219,56	214,85	-0,8%
	Trend in real terminal DUCs (in $€_{2009}$ prices) %n/n-1		0,2%	0,1%	-1,5%	-2,1%	

Description and justification of how the local targets contribute to the performance of the European ATM network	The following top down approach has been used to set the target for terminal cost efficiency. Starting from the year 2014, the aggregated cost efficiency target for the terminal determined unit cost at all 5 TCZs is a reduction of -2,5% for each year during the whole RP2 and at least -1,5% at each charging zone.

B - Inflation assumptions

Belgium Brussels	2015 D	2016 D	2017 D	2018 D	2019 D
Inflation %	1,12%	1,19%	1,32%	1,37%	1,38%
Inflation index (2012=100)	102,8	104,1	105,4	106,9	108,3
Eurostat HICP (actuals) and IMF CPI (forecasts)	1,12%	1,19%	1,32%	1,37%	1,38%
Inflation index (2012=100) HICP and IMF	103,38	104,61	105,99	107,44	108,92
Difference in percentage points		0,00	0,00	0,00	0,00
Cumulative difference in percentage points		-0,01	-0,01	-0,01	-0,01
Justification and data source in case of deviation from inflation references					

C - Service Units forecast for terminal

Belgium Brussels	2015 D	2016 D	2017 D	2018 D	2019 D
Total terminal service units (TNSU)	137 140	139 355	141 121	143 691	146 408
Year on Year variation TNSU		1,6%	1,3%	1,8%	1,9%
STATFOR terminal service units forecast (Baseline scenario)	140 530	145 313	149 658	154 845	159 925
Year on Year variation TNSU STATFOR		3,4%	3,0%	3,5%	3,3%
Difference in percentage		-0,02	-0,02	-0,02	-0,01
Cumulative difference in percentage		-0,04	-0,06	-0,07	-0,08
Explanation of the differences (if any), justification, rationale and source	Statfor low growth scenario is used, consistently with the En route activity. Correction of traffic is applied with VFR flights				

D - Alert thresholds (terminal service units)

Belgium Brussels	2015 D	2016 D	2017 D	2018 D	2019 D
Local thresholds	10%	10%	10%	10%	10%
Local thresholds set by the European Commission	10%	10%	10%	10%	10%
Detailed justification in case of deviation					

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
   - •The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
   - •The entries and justification requiring data from external sources i.e.
     - ○The traffic forecast used and, if applicable, their justification against STATFOR
     - ○The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - •The local alert thresholds, if any, and their justification.
   - •A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
   - •The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
   - •The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

Annex C forms an integral part of the performance plan and will be used to carry out the assessment of the performance plan.

3.1.(d).3 - Terminal Charging Zone #3

A - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

in EUR

	Belgium Charleroi	RP2 Performance Plan 2015 D	2016 D	2017 D	2018 D	2019 D	Avg pct var p.a. 2015D-2019D
Local currency (Nominal and 2012	Total terminal determined costs in nominal terms (in national currency)	7 475 595	8 108 922	8 546 450	8 819 991	8 607 741	3,6%
	Inflation %	1,12%	1,19%	1,32%	1,37%	1,38%	
	Inflation index (Base = 100 in 2012)	102,84	104,06	105,44	106,87	108,35	1,3%
	Total terminal determined costs in real terms (in national currency at 2012 prices)	7 269 078	7 792 336	8 105 865	8 252 657	7 944 426	2,2%
	Total terminal Service Units (TSU) used for the determined unit cost	31 090	34 839	35 739	36 776	37 820	5,0%
	Real terminal DUCs (in national currency at 2012 prices)	233,80	223,67	226,81	224,40	210,06	-2,6%
€2012 prices	2012 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in $€_{2012}$ prices)	7 269 078	7 792 336	8 105 865	8 252 657	7 944 426	2,2%
	Trend in total terminal determined costs in real terms %n/n-1		7,2%	4,0%	1,8%	-3,7%	
	Real terminal DUCs (in $€_{2012}$ prices)	233,80	223,67	226,81	224,40	210,06	-2,6%
	Trend in real terminal DUCs (in $€_{2012}$ prices) %n/n-1		-4,3%	1,4%	-1,1%	-6,4%	
€2009 prices	Inflation index (Base = 100 in 2009)	111,62	112,95	114,44	116,00	117,60	
	2009 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in $€_{2009}$ prices)	6 697 279	7 179 377	7 468 243	7 603 488	7 319 503	2,2%
	Trend in total terminal determined costs in real terms %n/n-1		7,2%	4,0%	1,8%	-3,7%	
	Real terminal DUCs (in $€_{2009}$ prices)	215,41	206,07	208,96	206,75	193,53	-2,6%
	Trend in real terminal DUCs (in $€_{2009}$ prices) %n/n-1		-4,3%	1,4%	-1,1%	-6,4%	

Description and justification of how the local targets contribute to the performance of the European ATM network	The following top down approach has been used to set the target for terminal cost efficiency. Starting from the year 2014, the aggregated cost efficiency target for the terminal determined unit cost at all 5 TCZs is a reduction of -2,5% for each year during the whole RP2 and at least -1,5% at each charging zone.

B - Inflation assumptions

Belgium Charleroi	2015 D	2016 D	2017 D	2018 D	2019 D
Inflation %	1,12%	1,19%	1,32%	1,37%	1,38%
Inflation index (2012=100)	102,8	104,1	105,4	106,9	108,3
Eurostat HICP (actuals) and IMF CPI (forecasts)	1,12%	1,19%	1,32%	1,37%	1,38%
Inflation index (2012=100) HICP and IMF	103,38	104,61	105,99	107,44	108,92
Difference in percentage points		0,00	0,00	0,00	0,00
Cumulative difference in percentage points		-0,01	-0,01	-0,01	-0,01
Justification and data source in case of deviation from inflation references					

C - Service Units forecast for terminal

Belgium Charleroi	2015 D	2016 D	2017 D	2018 D	2019 D
Total terminal service units (TNSU)	31 090	34 839	35 739	36 776	37 820
Year on Year variation TNSU		12,1%	2,6%	2,9%	2,8%
STATFOR terminal service units forecast (Baseline scenario)	33 538	35 111	36 663	38 478	40 312
Year on Year variation TNSU STATFOR		4,7%	4,4%	5,0%	4,8%
Difference in percentage		0,07	-0,02	-0,02	-0,02
Cumulative difference in percentage		-0,01	-0,03	-0,04	-0,06
Explanation of the differences (if any), justification, rationale and source	Statfor low growth scenario is used, consistently with the En route activity. Correction of traffic is applied with VFR flights				

D - Alert thresholds (terminal service units)

Belgium Charleroi	2015 D	2016 D	2017 D	2018 D	2019 D
Local thresholds	10%	10%	10%	10%	10%
Local thresholds set by the European Commission	10%	10%	10%	10%	10%
Detailed justification in case of deviation					

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
   - •The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
   - •The entries and justification requiring data from external sources i.e.
     - ○The traffic forecast used and, if applicable, their justification against STATFOR
     - ○The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - •The local alert thresholds, if any, and their justification.
   - •A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
   - •The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
   - •The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

Annex C forms an integral part of the performance plan and will be used to carry out the assessment of the performance plan.

3.1.(d).3 - Terminal Charging Zone #4

A - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

in EUR

	Belgium Liege	RP2 Performance Plan					Avg pct var p.a.
		2015 D	**2016 D**	**2017 D**	**2018 D**	**2019 D**	**2015D-2019D**
Local currency (Nominal and 2012	Total terminal determined costs in nominal terms (in national currency)	7 177 907	7 486 635	7 872 765	8 073 493	7 955 035	2,6%
	Inflation %	1,12%	1,19%	1,32%	1,37%	1,38%	
	Inflation index (Base = 100 in 2012)	102,84	104,06	105,44	106,87	108,35	1,3%
	Total terminal determined costs in real terms (in national currency at 2012 prices)	6 979 613	7 194 344	7 466 910	7 554 175	7 342 017	1,3%
	Total terminal Service Units (TSU) used for the determined unit cost	26 760	25 496	26 508	27 602	28 662	1,7%
	Real terminal DUCs (in national currency at 2012 prices)	260,82	282,18	281,69	273,69	256,15	-0,5%
€2012 prices	2012 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in $€_{2012}$ prices)	6 979 613	7 194 344	7 466 910	7 554 175	7 342 017	1,3%
	Trend in total terminal determined costs in real terms %n/n-1		3,1%	3,8%	1,2%	-2,8%	
	Real terminal DUCs (in $€_{2012}$ prices)	260,82	282,18	281,69	273,69	256,15	-0,5%
	Trend in real terminal DUCs (in $€_{2012}$ prices) %n/n-1		8,2%	-0,2%	-2,8%	-6,4%	
€2009 prices	Inflation index (Base = 100 in 2009)	111,62	112,95	114,44	116,00	117,60	
	2009 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in $€_{2009}$ prices)	6 430 584	6 628 424	6 879 549	6 959 950	6 764 481	1,3%
	Trend in total terminal determined costs in real terms %n/n-1		3,1%	3,8%	1,2%	-2,8%	
	Real terminal DUCs (in $€_{2009}$ prices)	240,31	259,98	259,53	252,16	236,00	-0,5%
	Trend in real terminal DUCs (in $€_{2009}$ prices) %n/n-1		8,2%	-0,2%	-2,8%	-6,4%	

Description and justification of how the local targets contribute to the performance of the European ATM network	The following top down approach has been used to set the target for terminal cost efficiency. Starting from the year 2014, the aggregated cost efficiency target for the terminal determined unit cost at all 5 TCZs is a reduction of -2,5% for each year during the whole RP2 and at least -1,5% at each charging zone.

B - Inflation assumptions

Belgium Liege	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**
Inflation %	1,12%	1,19%	1,32%	1,37%	1,38%
Inflation index (2012=100)	102,84	104,1	105,4	106,9	108,3
Eurostat HICP (actuals) and IMF CPI (forecasts)	1,12%	1,19%	1,32%	1,37%	1,38%
Inflation index (2012=100) HICP and IMF	103,38	104,61	105,99	107,44	108,92
Difference in percentage points		0,00	0,00	0,00	0,00
Cumulative difference in percentage points		-0,01	-0,01	-0,01	-0,01
Justification and data source in case of deviation from inflation references					

C - Service Units forecast for terminal

Belgium Liege	2015 D	2016 D	2017 D	2018 D	2019 D
Total terminal service units (TNSU)	26 760	25 496	26 508	27 602	28 662
Year on Year variation TNSU		-4,7%	4,0%	4,1%	3,8%
STATFOR terminal service units forecast (Baseline scenario)	24 326	25 769	27 075	28 553	30 228
Year on Year variation TNSU STATFOR		5,9%	5,1%	5,5%	5,9%
Difference in percentage		-0,11	-0,01	-0,01	-0,02
Cumulative difference in percentage		-0,01	-0,02	-0,03	-0,05
Explanation of the differences (if any), justification, rationale and source	Statfor low growth scenario is used, consistently with the En route activity. Correction of traffic is applied with VFR flights				

D - Alert thresholds (terminal service units)

Belgium Liege	2015 D	2016 D	2017 D	2018 D	2019 D
Local thresholds	10%	10%	10%	10%	10%
Local thresholds set by the European Commission	10%	10%	10%	10%	10%
Detailed justification in case of deviation					

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
   - •The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
   - •The entries and justification requiring data from external sources i.e.
     - ○The traffic forecast used and, if applicable, their justification against STATFOR
     - ○The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - •The local alert thresholds, if any, and their justification.
   - •A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
   - •The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
   - •The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

Annex C forms an integral part of the performance plan and will be used to carry out the assessment of the performance plan.

3.1.(d).3 - Terminal Charging Zone #5

A - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

in EUR

	Belgium Oostende-Brugge	RP2 Performance Plan 2015 D	2016 D	2017 D	2018 D	2019 D	Avg pct var p.a. 2015D-2019D
Local currency (Nominal and 2012	Total terminal determined costs in nominal terms (in national currency)	2 321 852	2 410 573	2 573 002	2 579 116	2 591 757	2,8%
	Inflation %	1,12%	1,19%	1,32%	1,37%	1,38%	
	Inflation index (Base = 100 in 2012)	102,84	104,06	105,44	106,87	108,35	1,3%
	Total terminal determined costs in real terms (in national currency at 2012 prices)	2 257 709	2 316 460	2 440 360	2 413 218	2 392 035	1,5%
	Total terminal Service Units (TSU) used for the determined unit cost	4 635	6 057	6 204	6 459	6 621	9,3%
	Real terminal DUCs (in national currency at 2012 prices)	487,12	382,43	393,38	373,63	361,25	-7,2%
€2012 prices	2012 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in €$_{2012}$ prices)	2 257 709	2 316 460	2 440 360	2 413 218	2 392 035	1,5%
	Trend in total terminal determined costs in real terms %n/n-1		2,6%	5,3%	-1,1%	-0,9%	
	Real terminal DUCs (in €$_{2012}$ prices)	487,12	382,43	393,38	373,63	361,25	-7,2%
	Trend in real terminal DUCs (in €$_{2012}$ prices) %n/n-1		-21,5%	2,9%	-5,0%	-3,3%	
€2009 prices	Inflation index (Base = 100 in 2009)	111,62	112,95	114,44	116,00	117,60	
	2009 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in €$_{2009}$ prices)	2 080 114	2 134 243	2 248 396	2 223 390	2 203 873	1,5%
	Trend in total terminal determined costs in real terms %n/n-1		2,6%	5,3%	-1,1%	-0,9%	
	Real terminal DUCs (in €$_{2009}$ prices)	448,80	352,35	362,44	344,24	332,84	-7,2%
	Trend in real terminal DUCs (in €$_{2009}$ prices) %n/n-1		-21,5%	2,9%	-5,0%	-3,3%	

Description and justification of how the local targets contribute to the performance of the European ATM network	The following top down approach has been used to set the target for terminal cost efficiency. Starting from the year 2014, the aggregated cost efficiency target for the terminal determined unit cost at all 5 TCZs is a reduction of -2,5% for each year during the whole RP2 and at least -1,5% at each charging zone.

B - Inflation assumptions

Belgium Oostende-Brugge	2015 D	2016 D	2017 D	2018 D	2019 D
Inflation %	1,12%	1,19%	1,32%	1,37%	1,38%
Inflation index (2012=100)	102,84	104,06	105,44	106,87	108,35
Eurostat HICP (actuals) and IMF CPI (forecasts)	1,12%	1,19%	1,32%	1,37%	1,38%
Inflation index (2012=100) HICP and IMF	103,38	104,61	105,99	107,44	108,92
Difference in percentage points		0,00	0,00	0,00	0,00
Cumulative difference in percentage points		-0,01	-0,01	-0,01	-0,01
Justification and data source in case of deviation from inflation references					

C - Service Units forecast for terminal

Belgium Oostende-Brugge	2015 D	2016 D	2017 D	2018 D	2019 D
Total terminal service units (TNSU)	4 635	6 057	6 204	6 459	6 621
Year on Year variation TNSU		30,7%	2,4%	4,1%	2,5%
STATFOR terminal service units forecast (Baseline scenario)	4 234	4 420	4 603	4 875	5 078
Year on Year variation TNSU STATFOR		4,4%	4,1%	5,9%	4,2%
Difference in percentage		0,26	-0,02	-0,02	-0,02
Cumulative difference in percentage		0,37	0,35	0,32	0,30
Explanation of the differences (if any), justification, rationale and source	Statfor low growth scenario is used, consistently with the En route activity. Correction of traffic is applied with VFR flights				

D - Alert thresholds (terminal service units)

Belgium Oostende-Brugge	2015 D	2016 D	2017 D	2018 D	2019 D
Local thresholds	10%	10%	10%	10%	10%
Local thresholds set by the European Commission	10%	10%	10%	10%	10%
Detailed justification in case of deviation					

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
   - •The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
   - •The entries and justification requiring data from external sources i.e.
     - ○The traffic forecast used and, if applicable, their justification against STATFOR
     - ○The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - •The local alert thresholds, if any, and their justification.
   - •A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
   - •The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
   - •The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

Annex C forms an integral part of the performance plan and will be used to carry out the assessment of the performance plan.

3.1.(d).3 - Terminal Charging Zone #6

A - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

in EUR

French CZ 1 (LFPO and LFPG)	RP2 Performance Plan					Avg pct var p.a.
France	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**	**2015D-2019D**
Local currency (Nominal and 2012): Total terminal determined costs in nominal terms (in national currency)	129 832 690	131 132 361	107 596 304	106 935 078	107 772 756	-4,5%
Local currency (Nominal and 2012): Inflation %	0,11%	0,83%	1,09%	1,11%	1,32%	
Local currency (Nominal and 2012): Inflation index (Base = 100 in 2012)	101,73	102,57	103,69	104,84	106,23	1,1%
Local currency (Nominal and 2012): Total terminal determined costs in real terms (in national currency at 2012 prices)	127 627 396	127 843 887	103 766 996	101 997 134	101 456 900	-5,6%
Local currency (Nominal and 2012): Total terminal Service Units (TSU) used for the determined unit cost	569 399	589 032	590 998	602 202	615 237	2,0%
Local currency (Nominal and 2012): Real terminal DUCs (in national currency at 2012 prices)	224,14	217,04	175,58	169,37	164,91	-7,4%
€2012 prices: 2012 average exchange rate (1EUR=)	1	1	1	1	1	
€2012 prices: Total terminal determined costs in real terms (in €$_{2012}$ prices)	127 627 396	127 843 887	103 766 996	101 997 134	101 456 900	-5,6%
€2012 prices: Trend in total terminal determined costs in real terms %n/n-1		0,2%	-18,8%	-1,7%	-0,5%	
€2012 prices: Real terminal DUCs (in €$_{2012}$ prices)	224,14	217,04	175,58	169,37	164,91	-7,4%
€2012 prices: Trend in real terminal DUCs (in €$_{2012}$ prices) %n/n-1		-3,2%	-19,1%	-3,5%	-2,6%	
€2009 prices: Inflation index (Base = 100 in 2009)	108,22	109,12	110,31	111,53	113,00	
€2009 prices: 2009 average exchange rate (1EUR=)	1	1	1	1	1	
€2009 prices: Total terminal determined costs in real terms (in €$_{2009}$ prices)	119 972 890	120 176 396	97 543 527	95 879 814	95 371 980	-5,6%
€2009 prices: Trend in total terminal determined costs in real terms %n/n-1		0,2%	-18,8%	-1,7%	-0,5%	
€2009 prices: Real terminal DUCs (in €$_{2009}$ prices)	210,70	204,02	165,05	159,22	155,02	-7,4%
€2009 prices: Trend in real terminal DUCs (in €$_{2009}$ prices) %n/n-1		-3,2%	-19,1%	-3,5%	-2,6%	

Description and justification of how the local targets contribute to the performance of the European ATM network	Two terminal charging zones are created in France as from 1st January 2017: - Charging zone 1: includes the two Paris main airports: Paris-CDG and Paris-Orly; the unit rate will be decreased by ca. -21%, at 177.69 € in 2017 from the unit rate applying for 2016 (221.16 €). - Charging zone 2: includes other aerodromes where a TNC is applied; the unit rate for 2017 will be at the same level as resulting from the current plan (as revised in July 2015 and if a single charging zone would continue to apply) and from the application of the EU No 391/2013 “charging” regulation: 222.28 €. This reduction in charging zone 1 is made possible under condition to keep a cross-subsidy between both charging zones, at a level around 50 M€, and by registering as “other income” for charging zone 2 that part of the “passenger tax” levied by DGAC which was until end 2015 retained by the State General budget (as from 1.1.2016, 100% of the “passenger tax” revenue is now kept by DGAC). For 2017 for example, 26 M€ will be registered as "other income" in order to reduce the final CZ2 unit rates at the same level as before departing from the previous single TNC charging zone.

B - Inflation assumptions

France	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**
Inflation %	0,11%	0,83%	1,09%	1,11%	1,32%
Inflation index (2012=100)	101,73	102,6	103,7	104,8	106,2
Eurostat HICP (actuals) and IMF CPI (forecasts)	0,11%	0,83%	1,09%	1,11%	1,32%
Inflation index (2012=100) HICP and IMF	101,73	102,57	103,69	104,84	106,23
Difference in percentage points		0,00	0,00	0,00	0,00
Cumulative difference in percentage points		0,00	0,00	0,00	0,00

Justification and data source in case of deviation from inflation references	IMF ICP April 2015 forecasts have been used for 2015-2017. IMF ICP Octoebr 2016 forecasts have been used for 2018-2019.

C - Service Units forecast for terminal

France	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**
Total terminal service units (TNSU)	569 399	589 032	590 998	602 202	615 237
Year on Year variation TNSU		3,4%	0,3%	1,9%	2,2%
STATFOR terminal service units forecast (Baseline scenario)	1 049 155	1 078 571	1 097 242	1 117 998	1 142 197
Year on Year variation TNSU STATFOR		2,8%	1,7%	1,9%	2,2%
Difference in percentage		0,01	-0,01	0,00	0,00
Cumulative difference in percentage		-0,45	-0,46	-0,46	-0,46
Explanation of the differences (if any), justification, rationale and source	Internal traffic forecast has been used in consistency with the RP2 decreasing French unit rate for terminal services, which is also expected to foster local traffic. Slight deviation with STATFOR baseline but consistent. Breakdown between CZ1 and CZ2 has been done in consistency with traffic volumes of CZ(54% vs 46%).				

D - Alert thresholds (terminal service units)

France	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**
Local thresholds	10%	10%	10%	10%	10%
Local thresholds set by the European Commission	10%	10%	10%	10%	10%
Detailed justification in case of deviation	No deviation : EC thresholds have been used.				

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
   - •The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
   - •The entries and justification requiring data from external sources i.e.
     - ○The traffic forecast used and, if applicable, their justification against STATFOR
     - ○The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - •The local alert thresholds, if any, and their justification.
   - •A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
   - •The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
   - •The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

Annex C forms an integral part of the performance plan and will be used to carry out the assessment of the performance plan.

France

3.1.(d).3 - Terminal Charging Zone #6

A - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

TO BE COPIED (VALUE) FROM THE REPORTING TABLE

French CZ 2 (All PP French airports list but LFPO and LFPG)

	France	2015 D
Local currency (Nominal and 2012 prices)	Total terminal determined costs in nominal terms (in national currency)	111 204 151
	Inflation %	0,11%
	Inflation index (Base = 100 in 2012)	101,73
	Total terminal determined costs in real terms (in national currency at 2012 prices)	109 315 276
	Total terminal Service Units (TSU) used for the determined unit cost	487 701
	Real terminal DUCs (in national currency at 2012 prices)	224,14

€2012 prices	2012 average exchange rate (1EUR=)	1
	Total terminal determined costs in real terms (in $€_{2012}$ prices)	109 315 276
	Trend in total terminal determined costs in real terms %n/n-1	
	Real terminal DUCs (in $€_{2012}$ prices)	224,14
	Trend in real terminal DUCs (in $€_{2012}$ prices) %n/n-1	

€2009 prices	Inflation index (Base = 100 in 2009)	108,22
	2009 average exchange rate (1EUR=)	1
	Total terminal determined costs in real terms (in $€_{2009}$ prices)	102 759 046
	Trend in total terminal determined costs in real terms %n/n-1	
	Real terminal DUCs (in $€_{2009}$ prices)	210,70
	Trend in real terminal DUCs (in $€_{2009}$ prices) %n/n-1	

Description and justification of how the local targets contribute to the performance of the European ATM network	Two terminal cha - Charging zone 1 unit rate will be d applying for 2016 - Charging zone 2 for 2017 will be a 2015 and if a sing of the EU No 391 This reduction in subsidy between "other income" f which was until e 100% of the "pas For 2017 for exar the final CZ2 unit TNC charging zon

B - Inflation assumptions

France	2015 D
Inflation %	0,11%
Inflation index (2012=100)	101,73
Eurostat HICP (actuals) and IMF CPI (forecasts)	0,11%
Inflation index (2012=100) HICP and IMF	101,73
Difference in percentage points	
Cumulative difference in percentage points	
Justification and data source in case of deviation from inflation references	IMF ICP April 201 IMF ICP October

C - Service Units forecast for terminal

France	2015 D
Total terminal service units (TNSU)	487 701
Year on Year variation TNSU	
STATFOR terminal service units forecast (Baseline scenario)	1 049 155
Year on Year variation TNSU STATFOR	
Difference in percentage	
Cumulative difference in percentage	

Explanation of the differences (if any), justification, rationale and source	Internal traffic fo unit rate for term also expected to consistent. Break traffic volumes o

D - Alert thresholds (terminal service units)

France	**2015 D**
Local thresholds	10%
Local thresholds set by the European Commission	10%
Detailed justification in case of deviation	No deviation : EC

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split int
workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be prese
by the PRB):
   - •The targets with a description of the contribution to, and consistenc
   of the European ATM network;:
   - •The entries and justification requiring data from external sources i.e
     - ○The traffic forecast used and, if applicable, their justificatior
     - ○The inflation assumptions used and, if applicable, their justi
   - •The local alert thresholds, if any, and their justification.
   - •A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to
providers, National authorities…), as follows:
   - •The data and justifications in the reporting tables and additional infc
   entity level plus a consolidation at charging zone level;
   - •The data and justifications relating to cost-efficiency required at ent
   and Annexes II and IV of the performance Regulation,.

Annex C forms an integral part of the performance plan and will be used to carry

in EUR

RP2 Performance Plan				Avg pct var p.a.
2016 D	**2017 D**	**2018 D**	**2019 D**	**2015D-2019D**
112 317 559	140 427 995	139 861 540	140 579 086	6,0%
0,83%	1,09%	1,11%	1,32%	
102,57	103,69	104,84	106,23	1,1%
109 500 913	135 430 221	133 403 151	132 340 665	4,9%
504 518	506 202	515 798	526 963	2,0%
217,04	267,54	258,63	251,14	2,9%
1	1	1	1	
109 500 913	135 430 221	133 403 151	132 340 665	4,9%
0,2%	23,7%	-1,5%	-0,8%	
217,04	267,54	258,63	251,14	2,9%
-3,2%	23,3%	-3,3%	-2,9%	
109,12	110,31	111,53	113,00	
1	1	1	1	
102 933 551	127 307 737	125 402 241	124 403 479	4,9%
0,2%	23,7%	-1,5%	-0,8%	
204,02	251,50	243,12	236,08	2,9%
-3,2%	23,3%	-3,3%	-2,9%	

arging zones are created in France as from 1st January 2017:

.: includes the two Paris main airports: Paris-CDG and Paris-Orly; the decreased by ca. -21%, at 177.69 € in 2017 from the unit rate 5 (221.16 €).

2: includes other aerodromes where a TNC is applied; the unit rate at the same level as resulting from the current plan (as revised in July gle charging zone would continue to apply) and from the application /2013 "charging" regulation: 222.28 €.

charging zone 1 is made possible under condition to keep a cross- both charging zones, at a level around 50 M€, and by registering as or charging zone 2 that part of the "passenger tax" levied by DGAC end 2015 retained by the State General budget (as from 1.1.2016, senger tax" revenue is now kept by DGAC).

mple, 26 M€ will be registered as "other income" in order to reduce rates at the same level as before departing from the previous single ne.

2016 D	2017 D	2018 D	2019 D
0,83%	1,09%	1,11%	1,32%
102,6	103,7	104,8	106,2
0,83%	1,09%	1,11%	1,32%
102,57	103,69	104,84	106,23
0,00	0,00	0,00	0,00
0,00	0,00	0,00	0,00

5 forecasts have been used for 2015-2017.
2016 forecasts have been used for 2018-2019.

2016 D	2017 D	2018 D	2019 D
504 518	506 202	515 798	526 963
3,4%	0,3%	1,9%	2,2%
1 078 571	1 097 242	1 117 998	1 142 197
2,8%	1,7%	1,9%	2,2%
0,01	-0,01	0,00	0,00
-0,53	-0,54	-0,54	-0,54

recast has been used in consistency with the RP2 decreasing French
inal services (taking into account "other income" for CZ 2), which is
foster local traffic. Slight deviation with STATFOR baseline but
down between CZ1 and CZ2 has been done in consistency with
f CZ(54% vs 46%).

2016 D	2017 D	2018 D	2019 D
10%	10%	10%	10%
10%	10%	10%	10%

thresholds have been used.

o two distinct parts of the performance plan, aiming at optimising

nted at charging zone level (some of the data requested being pre-filled

y with, the EU-wide target and/or their contribution to the performance

.
n against STATFOR
fication against Eurostat/ IMF.

the performance scheme within the charging zones (ANSPs including MET

ormation, as per Annexes II, III, VI and VII of the charging Regulation, at

ity level for the purpose of the Performance Plans, as per Article 11 (3)

out the assessment of the performance plan.

3.1.(d).3 - Terminal Charging Zone #7

A - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

in EUR

	Germany	RP2 Performance Plan 2015 D	2016 D	2017 D	2018 D	2019 D	Avg pct var p.a. 2015D-2019D
Local currency (Nominal and 2012	Total terminal determined costs in nominal terms (in national currency)	240 938 212	228 762 834	183 533 387	181 581 437	179 750 173	-7,1%
	Inflation %	1,36%	1,60%	1,70%	1,70%	1,70%	
	Inflation index (Base = 100 in 2012)	103,80	105,46	107,26	109,08	110,93	1,7%
	Total terminal determined costs in real terms (in national currency at 2012 prices)	232 112 054	216 912 096	171 116 714	166 466 883	162 033 481	-8,6%
	Total terminal Service Units (TSU) used for the determined unit cost	1 332 800	1 357 300	1 362 100	1 376 000	1 392 200	1,1%
	Real terminal DUCs (in national currency at 2012 prices)	**174,15**	**159,81**	**125,63**	**120,98**	**116,39**	-9,6%
€2012 prices	2012 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in €$_{2012}$ prices)	232 112 054	216 912 096	171 116 714	166 466 883	162 033 481	-8,6%
	Trend in total terminal determined costs in real terms %n/n-1		-6,5%	-21,1%	-2,7%	-2,7%	
	Real terminal DUCs (in €$_{2012}$ prices)	174,15	159,81	125,63	120,98	116,39	-9,6%
	Trend in real terminal DUCs (in €$_{2012}$ prices) %n/n-1		-8,2%	-21,4%	-3,7%	-3,8%	
€2009 prices	Inflation index (Base = 100 in 2009)	109,94	111,69	113,59	115,52	117,49	
	2009 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in €$_{2009}$ prices)	219 163 171	204 811 176	161 570 590	157 180 161	152 994 086	-8,6%
	Trend in total terminal determined costs in real terms %n/n-1		-6,5%	-21,1%	-2,7%	-2,7%	
	Real terminal DUCs (in €$_{2009}$ prices)	164,44	150,90	118,62	114,23	109,89	-9,6%
	Trend in real terminal DUCs (in €$_{2009}$ prices) %n/n-1		-8,2%	-21,4%	-3,7%	-3,8%	

Description and justification of how the local targets contribute to the performance of the European ATM network	For the German cost base for the 2nd Reference Period (RP2) the cost base of DFS was subject to a top down regulation on the total cost basis. Due to that fact possibly the investment section of this Performance Plan do as far as DFS is concerned not reflect the current status after the top down regulation. The top down regulation of DFS is starting from the national equivalent of the EU-wide starting point of 2014 for DFS explained in detail in the consultation documentation (Annex A). To the level of this starting point the effect of the change of the interest rate for the valuation of the pension obligations of DFS from 4.65% in RP1 to 3.25% in RP2 is added. From this level the EU wide efficiency path of -2.1% in average per year of RP2 is applied to the cost base of DFS. Together with the planning of the other German entities participating in the performance scheme the above cost base and unit cost were determined for RP2.

B - Inflation assumptions

Germany	2015 D	2016 D	2017 D	2018 D	2019 D
Inflation %	1,36%	1,60%	1,70%	1,70%	1,70%
Inflation index (2012=100)	103,80	105,46	107,26	109,08	110,93
Eurostat HICP (actuals) and IMF CPI (forecasts)	1,36%	1,60%	1,70%	1,70%	1,70%
Inflation index (2012=100) HICP and IMF	104,38	106,05	107,85	109,69	111,55
Difference in percentage points		0,00	0,00	0,00	0,00
Cumulative difference in percentage points		-0,01	-0,01	-0,01	-0,01
Justification and data source in case of deviation from inflation references					

C - Service Units forecast for terminal

Germany	2015 D	2016 D	2017 D	2018 D	2019 D
Total terminal service units (TNSU)	1 332 800	1 357 300	1 362 100	1 376 000	1 392 200
Year on Year variation TNSU		1,8%	0,4%	1,0%	1,2%
STATFOR terminal service units forecast (Baseline scenario)	1 298 872	1 337 164	1 364 958	1 389 089	1 419 006
Year on Year variation TNSU STATFOR		2,9%	2,1%	1,8%	2,2%
Difference in percentage		-0,01	-0,02	-0,01	-0,01
Cumulative difference in percentage		0,02	0,00	-0,01	-0,02
Explanation of the differences (if any), justification, rationale and source	Consistent to the assumptions in En Route the STATFOR Low Case Scenario was choosen as basis for the traffic forecast.				

D - Alert thresholds (terminal service units)

Germany	2015 D	2016 D	2017 D	2018 D	2019 D
Local thresholds	10%	10%	10%	10%	10%
Local thresholds set by the European Commission	10%	10%	10%	10%	10%
Detailed justification in case of deviation					

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

1. In the body of the performance plan document, the information to be presented at charging zone level (some of the data requested being pre-filled by the PRB):
   - The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
   - The entries and justification requiring data from external sources i.e.
     - The traffic forecast used and, if applicable, their justification against STATFOR
     - The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - The local alert thresholds, if any, and their justification.
   - A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
   - The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
   - The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

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3.1.(d).3 - Terminal Charging Zone #8

A - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

in EUR

	Luxembourg	RP2 Performance Plan 2015 D	2016 D	2017 D	2018 D	2019 D	Avg pct var p.a. 2015D-2019D
Local currency (Nominal and 2012	Total terminal determined costs in nominal terms (in national currency)	11 377 701	12 361 275	12 794 627	13 192 688	13 524 467	4,4%
	Inflation %	1,84%	1,77%	1,84%	1,92%	1,92%	
	Inflation index (Base = 100 in 2012)	104,30	106,15	108,10	110,18	112,29	1,9%
	Total terminal determined costs in real terms (in national currency at 2012 prices)	10 908 591	11 645 143	11 835 381	11 974 056	12 044 299	2,5%
	Total terminal Service Units (TSU) used for the determined unit cost	41 322	42 989	44 732	46 898	49 046	4,4%
	Real terminal DUCs (in national currency at 2012 prices)	263,99	270,88	264,58	255,32	245,57	-1,8%
€2012 prices	2012 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in $€_{2012}$ prices)	10 908 591	11 645 143	11 835 381	11 974 056	12 044 299	2,5%
	Trend in total terminal determined costs in real terms %n/n-1		6,8%	1,6%	1,2%	0,6%	
	Real terminal DUCs (in $€_{2012}$ prices)	263,99	270,88	264,58	255,32	245,57	-1,8%
	Trend in real terminal DUCs (in $€_{2012}$ prices) %n/n-1		2,6%	-2,3%	-3,5%	-3,8%	
€2009 prices	Inflation index (Base = 100 in 2009)	114,41	116,44	118,59	120,86	123,18	
	2009 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in $€_{2009}$ prices)	9 944 464	10 615 919	10 789 343	10 915 761	10 979 797	2,5%
	Trend in total terminal determined costs in real terms %n/n-1		6,8%	1,6%	1,2%	0,6%	
	Real terminal DUCs (in $€_{2009}$ prices)	240,66	246,94	241,20	232,76	223,87	-1,8%
	Trend in real terminal DUCs (in $€_{2009}$ prices) %n/n-1		2,6%	-2,3%	-3,5%	-3,8%	

Description and justification of how the local targets contribute to the performance of the European ATM network	Although up to now no EU wide terminal cost efficiency targets are formulated Luxembourg aimed to reduce costs for its terminal services. In doing so, Luxembourg oriented its efforts on the EU wide targets for en route costs. The overall reduction of terminal costs during RP2 of -2,0 % reflects this. Luxembourg, for the first time, presents its determined costs for en route and terminal services in the frame of the European performance scheme. Luxembourg analyzes the outcome and impact of this exercise to establish more realistic local targets in the future. Further cost efficiency improvements in the forthcoming years are possible in the frame of a revised strategic vision and business plan for Luxembourg ATS and airport services. The STATFOR **BASE** traffic scenario was chosen consistent with the en-route situation in the common BELUX charging zone.

B - Inflation assumptions

Luxembourg	2015 D	2016 D	2017 D	2018 D	2019 D
Inflation %	1,84%	1,77%	1,84%	1,92%	1,92%
Inflation index (2012=100)	104,3	106,1	108,1	110,2	112,3
Eurostat HICP (actuals) and IMF CPI (forecasts)	1,84%	1,77%	1,84%	1,92%	1,92%
Inflation index (2012=100) HICP and IMF	105,25	107,12	109,09	111,18	113,32
Difference in percentage points		0,00	0,00	0,00	0,00
Cumulative difference in percentage points		-0,01	-0,01	-0,01	-0,01
Justification and data source in case of deviation from inflation references					

C - Service Units forecast for terminal

Luxembourg	2015 D	2016 D	2017 D	2018 D	2019 D
Total terminal service units (TNSU)	41 322	42 989	44 732	46 898	49 046
Year on Year variation TNSU		4,0%	4,1%	4,8%	4,6%
STATFOR terminal service units forecast (Baseline scenario)	41 322	42 989	44 732	46 898	49 046
Year on Year variation TNSU STATFOR		4,0%	4,1%	4,8%	4,6%
Difference in percentage		0,00	0,00	0,00	0,00
Cumulative difference in percentage		0,00	0,00	0,00	0,00
Explanation of the differences (if any), justification, rationale and source					

D - Alert thresholds (terminal service units)

Luxembourg	2015 D	2016 D	2017 D	2018 D	2019 D
Local thresholds	10%	10%	10%	10%	10%
Local thresholds set by the European Commission	10%	10%	10%	10%	10%
Detailed justification in case of deviation					

IMPORTANT NOTE

The data and justifications for the cost-efficiency targets at local level are split into two distinct parts of the performance plan, aiming at optimising workload and avoiding duplication of reporting. They comprise:

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   - The targets with a description of the contribution to, and consistency with, the EU-wide target and/or their contribution to the performance of the European ATM network;:
   - The entries and justification requiring data from external sources i.e.
     - The traffic forecast used and, if applicable, their justification against STATFOR
     - The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - The local alert thresholds, if any, and their justification.
   - A presentation of the consolidation of the targets at FAB level.

2. In Annex C, the information needed at the level of the entities submitted to the performance scheme within the charging zones (ANSPs including MET providers, National authorities…), as follows:
   - The data and justifications in the reporting tables and additional information, as per Annexes II, III, VI and VII of the charging Regulation, at entity level plus a consolidation at charging zone level;
   - The data and justifications relating to cost-efficiency required at entity level for the purpose of the Performance Plans, as per Article 11 (3) and Annexes II and IV of the performance Regulation,.

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3.1.(d).3 - Terminal Charging Zone #9

A - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

in EUR

		RP2 Performance Plan					Avg pct var p.a.
	Netherlands	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**	**2015D-2019D**
Local currency (Nominal and 2012	Total terminal determined costs in nominal terms (in national currency)	59 241 315	58 399 022	59 894 041	61 575 384	62 857 351	1,5%
	Inflation %	1,00%	1,24%	1,44%	1,49%	1,51%	1,34%
	Inflation index (Base = 100 in 2012)	103,94	105,23	106,74	108,33	109,97	1,4%
	Total terminal determined costs in real terms (in national currency at 2012 prices)	56 997 397	55 498 823	56 111 589	56 839 838	57 160 096	0,1%
	Total terminal Service Units (TSU) used for the determined unit cost	354 510	360 000	361 000	362 000	363 000	0,6%
	Real terminal DUCs (in national currency at 2012 prices)	160,78	154,16	155,43	157,02	157,47	-0,5%
€2012 prices	2012 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in $€_{2012}$ prices)	56 997 397	55 498 823	56 111 589	56 839 838	57 160 096	0,1%
	Trend in total terminal determined costs in real terms %n/n-1		-2,6%	1,1%	1,3%	0,6%	
	Real terminal DUCs (in $€_{2012}$ prices)	160,78	154,16	155,43	157,02	157,47	-0,5%
	Trend in real terminal DUCs (in $€_{2012}$ prices) %n/n-1		-4,1%	0,8%	1,0%	0,3%	
€2009 prices	Inflation index (Base = 100 in 2009)	110,61	111,99	113,60	115,29	117,03	
	2009 average exchange rate (1EUR=)	1	1	1	1	1	
	Total terminal determined costs in real terms (in $€_{2009}$ prices)	53 557 053	52 148 932	52 724 712	53 409 004	53 709 931	0,1%
	Trend in total terminal determined costs in real terms %n/n-1		-2,6%	1,1%	1,3%	0,6%	
	Real terminal DUCs (in $€_{2009}$ prices)	151,07	144,86	146,05	147,54	147,96	-0,5%
	Trend in real terminal DUCs (in $€_{2009}$ prices) %n/n-1		-4,1%	0,8%	1,0%	0,3%	

Description and justification of how the local targets contribute to the performance of the European ATM network	As yet no Union wide terminal cost efficiency target has been formulated. The total DUC reduction of -2.1% in RP2 is related to cost reductions previous to RP1 and RP2. In that sense the cost efficiency performance is good, although it still has to be improved.

B - Inflation assumptions

Netherlands	**2015 D**	**2016 D**	**2017 D**	**2018 D**	**2019 D**
Inflation %	1,00%	1,24%	1,44%	1,49%	1,51%
Inflation index (2012=100)	103,9	105,2	106,7	108,3	110,0
Eurostat HICP (actuals) and IMF CPI (forecasts)	1,00%	1,24%	1,44%	1,49%	1,51%
Inflation index (2012=100) HICP and IMF	104,46	105,75	107,27	108,87	110,52
Difference in percentage points		0,00	0,00	0,00	0,00
Cumulative difference in percentage points		-0,01	-0,01	-0,01	-0,01
Justification and data source in case of deviation from inflation references	Both mandatory sources of inflation have been used.				

C - Service Units forecast for terminal

Netherlands	2015 D	2016 D	2017 D	2018 D	2019 D
Total terminal service units (TNSU)	354 510	360 000	361 000	362 000	363 000
Year on Year variation TNSU		1,5%	0,3%	0,3%	0,3%
STATFOR terminal service units forecast (Baseline scenario)	354 400	365 200	375 800	358 800	397 200
Year on Year variation TNSU STATFOR		3,0%	2,9%	-4,5%	10,7%
Difference in percentage		-1,5%	-2,6%	4,8%	-10,4%
Cumulative difference in percentage		-1,4%	-3,9%	0,9%	-8,6%
Year on Year variation TNSU STATFOR (low scenario)	349 900	351 400	355 000	359 200	363 400
Year on Year variation TNSU STATFOR		0,4%	1,0%	1,2%	1,2%
Difference in percentage		1,12%	-0,7%	-0,9%	-0,9%
Cumulative difference in percentage		2,45%	1,69%	0,78%	-0,11%
Explanation of the differences (if any), justification, rationale and source	The Statfor medium term forecast February 2014, low scenario, is used. However, as the latest prognosis 2014 indicates a number of service units in the en route FIR the Netherlands charging zone above the Statfor low scenario, the use of the low scenario would have resulted in a decrease in the number of service units in 2015. To avoid such an illogical phenomenon, the latest prognosis is used as starting point on which the low scenario growth percentages have been applied to calculate the service unit development.				

D - Alert thresholds (terminal service units)

Netherlands	2015 D	2016 D	2017 D	2018 D	2019 D
Local thresholds	10%	10%	10%	10%	10%
Local thresholds set by the European Commission	10%	10%	10%	10%	10%
Detailed justification in case of deviation					

IMPORTANT NOTE

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     - The traffic forecast used and, if applicable, their justification against STATFOR
     - The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
   - The local alert thresholds, if any, and their justification.
   - A presentation of the consolidation of the targets at FAB level.

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3.1.(d).3 - Terminal Charging Zone #10

A - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

in CHF

	Switzerland	RP2 Performance Plan 2015 D	2016 D	2017 D	2018 D	2019 D	Avg pct var p.a. 2015D-2019D
Local currency (Nominal and 2012	Total terminal determined costs in nominal terms (in national currency)	98 654 883	91 827 842	93 196 484	93 781 285	95 413 139	-0,8%
	Inflation %	-1,00%	0,00%	0,50%	1,00%	1,00%	
	Inflation index (Base = 100 in 2012)	99,1	99,1	99,6	100,6	101,6	0,6%
	Total terminal determined costs in real terms (in national currency at 2012 prices)	99 551 846	92 662 733	93 575 939	93 230 813	93 913 949	-1,4%
	Total terminal Service Units (TSU) used for the determined unit cost	263 690	267 811	270 219	275 889	281 677	1,7%
	Real terminal DUCs (in national currency at 2012 prices)	377,53	346,00	346,30	337,93	333,41	-3,1%
€2012 prices	2012 average exchange rate (1EUR=)	1,20483	1,20483	1,20483	1,20483	1,20483	
	Total terminal determined costs in real terms (in $€_{2012}$ prices)	82 627 296	76 909 384	77 667 338	77 380 886	77 947 884	-1,4%
	Trend in total terminal determined costs in real terms %n/n-1		-6,9%	1,0%	-0,4%	0,7%	
	Real terminal DUCs (in $€_{2012}$ prices)	313,35	287,18	287,42	280,48	276,73	-3,1%
	Trend in real terminal DUCs (in $€_{2012}$ prices) %n/n-1		-8,4%	0,1%	-2,4%	-1,3%	
€2009 prices	Inflation index (Base = 100 in 2009)	99,09	99,09	99,59	100,59	101,59	
	2009 average exchange rate (1EUR=)	1,50898	1,50898	1,50898	1,50898	1,50898	
	Total terminal determined costs in real terms (in $€_{2009}$ prices)	65 975 779	61 410 172	62 015 379	61 786 655	62 239 388	-1,4%
	Trend in total terminal determined costs in real terms %n/n-1		-6,9%	1,0%	-0,4%	0,7%	
	Real terminal DUCs (in $€_{2009}$ prices)	250,20	229,30	229,50	223,96	220,96	-3,1%
	Trend in real terminal DUCs (in $€_{2009}$ prices) %n/n-1		-8,4%	0,1%	-2,4%	-1,3%	

Description and justification of how the local targets contribute to the performance of the European ATM network	Real term costs decrease by -1.4% p.a. and traffic increases by +1.7% p.a.based on STATFOR February 2015 low growth. This leads to an average DUC decrease of -3.1% p.a. which is a significant cost-efficiency improvement.

B - Inflation assumptions

Switzerland	2015 D	2016 D	2017 D	2018 D	2019 D
Inflation %	-1,00%	0,00%	0,50%	1,00%	1,00%
Inflation index (2012=100)	99,1	99,1	99,6	100,6	101,6
Eurostat HICP (actuals) and IMF CPI **April 2015** (forecasts)	-1,19%	-0,38%	0,41%	1,00%	1,00%
Inflation index (2012=100) HICP and IMF	100,80	100,42	100,83	101,84	102,86
Difference in percentage points		0,00	0,00	0,00	0,00
Cumulative difference in percentage points		-0,01	-0,01	-0,01	-0,01
Justification and data source in case of deviation from inflation references	The Swiss inflation rates forecasts for 2015-2019 were revised by the Swiss Federal Statistical Office and IMF since our first submission in June 2014 (www.bfs.admin.ch - March 2015 / IMF April 2014). Switzerland therefore used revised inflation rates in this second draft. Switzerland reflected the lower inflation rates by decreasing nominal determined costs.				

	2014 A	2015	2016	2017	2018	2019	Average 2014/19
Inflation rate V2	0.0%	-1.0%	0.0%	0.5%	1.0%	1.0%	0.3%
Inflation rate V1	0.2%	0.5%	1.0%	1.0%	1.0%	1.0%	0.8%
V2 source	*Actual*	*Based on Swiss Statistical Office (March 2015) and IMF April 2015*					
V1 source		*IMF April 2014*					

C - Service Units forecast for terminal

Switzerland	2015 D	2016 D	2017 D	2018 D	2019 D
Total terminal service units (TNSU)	263 690	267 811	270 219	275 889	281 677
Year on Year variation TNSU		1,6%	0,9%	2,1%	2,1%
STATFOR terminal service units forecast (Baseline scenario)	265 342	279 073	287 971	298 634	308 719
Year on Year variation TNSU STATFOR		5,2%	3,2%	3,7%	3,4%
Difference in percentage		-0,04	-0,02	-0,02	-0,01
Cumulative difference in percentage		-0,04	-0,06	-0,08	-0,09
Explanation of the differences (if any), justification, rationale and source	In 2014 we used actual figures.Switzerland's traffic forecast were based on STATFOR February 2015 low growth scenario. We believe that a traffic growth between 1 % and 2% is very optimistic given the capacity limitation of Zurich and Geneva airports and the traffic evolution during RP1 and before (average traffic growth 2001-2014 = -0.4%).				

D - Alert thresholds (terminal service units)

Switzerland	2015 D	2016 D	2017 D	2018 D	2019 D
Local thresholds	10%	10%	10%	10%	10%
Local thresholds set by the European Commission	10%	10%	10%	10%	10%
Detailed justification in case of deviation					

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     - The inflation assumptions used and, if applicable, their justification against Eurostat/ IMF.
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3.2 - Consistency of the performance targets with the relevant Union-wide performance targets or, when there is no Union-wide target, contribution to the performance of the European ATM network

This section has been integrated within each individual KPI.

3.3 - Description of KPAs interdependencies and trade-offs

It is commonly recognized that interdependencies between all KPAs and related targets exist.
The key performance indicators in this Performance Plan should not be considered in isolation, as performance in one area will affect performance in other areas. A balance should be found, specifically between the KPAs on capacity and cost efficiency. Capacity investments will in most cases result in cost increases and should only be considered if a capacity shortage is expected. Whereas a higher target for cost-efficiency will have an effect on capacity as this would most likely result in the reduction of the number of ATCOs or reducing investments. The lack of a model to properly analyse and address the interdependencies between KPAs/KPIs causes an important limitation in the maturity of this performance scheme. As a consequence, FABEC has carried out only a qualitative assessment as was also done with the EU-wide targets.

3.4 - Contribution of each air navigation service provider

This section has been integrated within each individual KPI.

SECTION 4: INCENTIVE SCHEMES

Mapping between the template for the FAB performance plan and Annex II of the performance Regulation				
Structure of ANNEX II of the performance Regulation	Link with PRB Performance Plan template			
	Body of Performance Plan	Annex C For cost-effiency		Other annexes
		RT ref.	AI ref.	
4. INCENTIVE SCHEMES	4			
4.1. Description and explanation of the incentive schemes to be applied on air navigation service providers.	4.1			

4 - INCENTIVE SCHEMES

4.1 - Incentive schemes for the environment targets

Number of incentive schemes	1

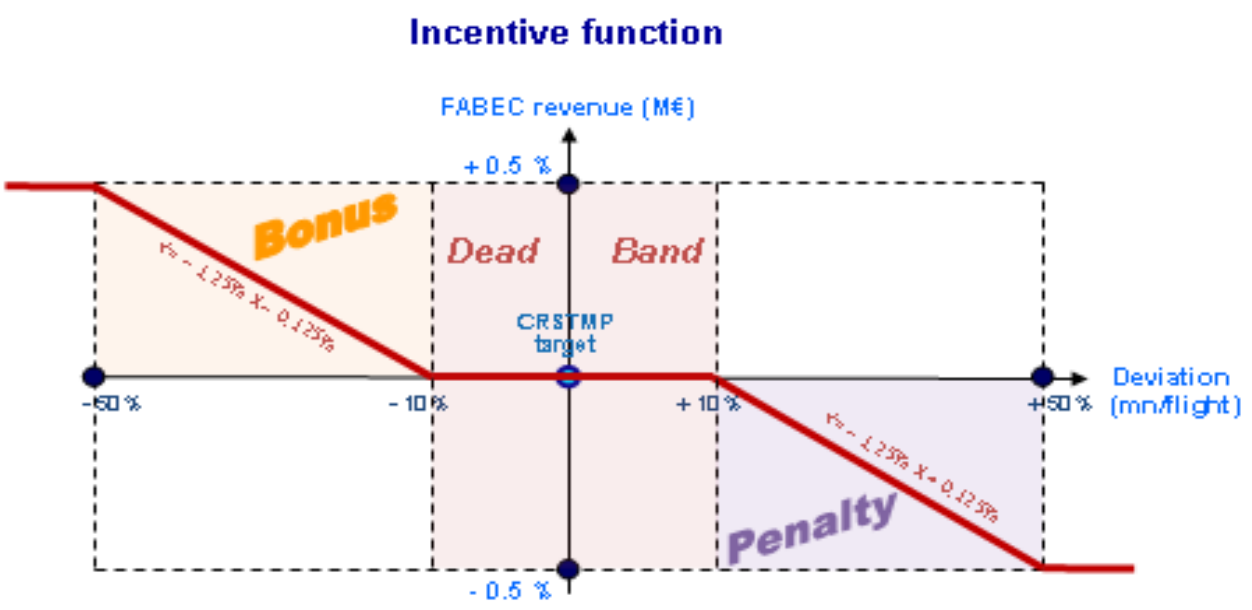
FABEC Environment Incentive Scheme	
Entity being incentivised	ANSP
KPI description	Environment KPI #1: Horizontal en route flight efficiency (KEA)
Type of incentive	not financial
Formula	No formula is used. Description as follows below.
Justification	N/A
Description of performance variation levels and the applicable level of bonuses and penalties	In case the EU-wide environment target would not be met after a given year, the initiative for corrective actions lies within the Network Manager. In case the FABEC environment target after corrective actions by the ANSPs would not be met at the end of the reference period, the FPC (assisted by the NSAC) shall trigger the incentive mechanism, consisting of: **i)** identifying whether implementation of airspace design improvements planned at FABEC and national level was delayed from original plans, and the areas most concerned; **ii)** identifying the contribution of airlines to the sub-performance; **iii)** identifying corrective actions, at FABEC level and/or at local level; **iv)** requiring from the ANSPs concerned an action plan to address the identified underperformance, taking due account of the other developments planned both at local and at FABEC level. In case the action plan would impact other developments planned the concerned ANSPs should be associated to the action plan. Where appropriate, links between this action plan and any other action plan as may be decided in the EUROCONTROL and/or the EU Network Management framework, shall be described; **v)** setting checkpoints with dates for specific reports in a proportionate manner, assessing the progress made at predetermined intervals. Depending on the situation the FPC could take any other appropriate action deemed necessary. It is noted that some of such corrective actions at ANSP level (implementation of FABEC OPS initiatives, recruitment, investment) may have a lead time which exceeds the duration of RP2, so that their effect will not, in part, become visible before RP3.
Additional comments	Further details can be found in the current version of the FABEC FPC States Performance Process description.

4.1 - Incentive schemes for the capacity targets

Number of incentive schemes	6

FABEC Capacity Incentive Scheme (en route)	
Entity being incentivised	*ANSPs*
KPI description	*Capacity KPI #1: En route ATFM delay per flight*
Type of incentive	financial
Formula	f(x) = -1,25% x - 0,125% (bonus quadrant) f(x) = -1,25% x + 0,125% (penalty quadrant)
Justification	The FABEC incentive scheme for the en route ATFM delay KPI has been established in accordance with the requirements of IR (EU) No. 390/2013 as well as IR (EU) No. 391/2013. The incentive is of a financial nature, commensurate with the set targets and symmetric. It consists of bonuses or penalties for over- or underachieving the target level. The bonus or penalty amount will be added to or deducted from the determined costs in year n+2. Furthermore, the incentive scheme is in line with Article 15 (1) of IR (EU) No. 391/2013: according to letter g of this paragraph the incentive scheme can be based on the delay causes related only to the CRSTMP codes of the ATFCM user manual. FABEC has decided to focus on the CRSTMP target for the scheme, as the ANSPs are responsible only for these reasons and therefore the incentive should be based on this responsibility. Accordingly, the scheme for en route ATFM delay is based on the FABEC CRSTMP target. This target is set at FABEC level as a ratio (78%) of the FABEC ATFM delay target (all causes). This ratio comes from a fair and consistent study related to historical data, taking into account planned introduction of new systems during RP2 and previous experience with the impact of such introductions on ATFM delays. The incentive calculation is executed in a four steps approach. In the first step it has to be determined whether the target is achieved at FABEC level, while in the second step the FABEC incentive is defined on the basis of a linear function with a symmetrical dead band +/- 10% around the FABEC CRSTMP target for en route ATFM delay. In a third step it will be determined to what extent the individual ANSPs have contributed to the overall FABEC performance (over or under-performance). In the fourth step, the incentive (bonus or penalty) is distributed exclusively to those ANSPs who have contributed to the over or under performance.
Description of performance variation levels and the applicable level of bonuses and penalties	In consistency with the charging regulation, both at FABEC and at individual ANSP level the maximum amount of the incentive is capped at 0.5% of the en route revenues of all FABEC ANSPs and at 0.5% of the individual ANSPs en route revenues. This additional capping at ANSP level could imply that the sum of penalties/bonuses of all ANSP(s) involved may be lower than the FABEC reference figure originally defined in the second step. Main reason not to consider the maximum allowed at 1% is the lack of experience in the application of an incentive scheme. The application of the incentive scheme in RP2 has to be seen as a learning phase by keeping a limitation of financial risk. The functioning of the scheme and its impact will be evaluated during this period. The maximum level of the incentive is achieved at a 50% deviation from the FABEC CRSTMP target. For MUAC the capping and distribution on revenues is calculated on the determined costs of MUAC in the relevant year (as included in the FABEC performance plan in the various national cost efficiency Annexes).

Additional comments	**Step 1: Target achievement on FABEC level** The FABEC CRSTMP en route ATFM delay target for year (n) in the FABEC performance plan for the second reference period will be compared to the actual achieved performance in year (n), resulting in a FABEC over- or under performance, which in turn results in a bonus or a penalty. Delay data used for step 1 will be the Capacity data provided by the Network Manager and reported in the annual monitoring report in accordance with Article 18 (4) of IR (EU) No. 390/2013. **Step 2: FABEC incentive** The FABEC incentive is based on a linear function for determining whether a bonus or a penalty has to be considered, while no financial incentive accrues for any yearly achievement of +/- 10% around the FABEC CRSTMP target. A deviation from FABEC CRSTMP target of the incentive function provides a FABEC reference figure used for the calculation of each ANSP involved by a financial incentive amount. The x-axis represents the value achieved by FABEC in minutes per flight, whereas the maximum incentive level is achieved by a 50% deviation from the FABEC CRSTMP target in minutes per flight. The y-axis shows the amount of the incentive in Euros whereas the maximum amount of bonuses and penalties is limited to the value of 0.5% of the FABEC ANSPs en route services revenues in year (n). The intersection of the x-axis and the y-axis represents the FABEC CRSTMP target in year (n): this is the point as of which positive or negative deviating values result in a bonus or penalty. The actual revenue of year (n) used for calculation will be the amount of revenues reported in the annual monitoring report in accordance with Regulation n° 391/2013. Regarding the bonus quadrant, formula of the linear function is: Y= – 1,25% X – 0,125% Regarding the penalty quadrant, formula of the linear function is: Y= – 1,25% X + 0,125%



Step 3: ANSPs participating in FABEC performance
The ANSPs which contributed to the FABEC over- or under- performance will be determined in step 3 and are called “ANSPs participating in FABEC performance”. Therefore, ANSPs targeted capacity contribution values, not completely in line with FABEC reference values from the Network Operations Plan (2014 – 2018/2019) as long as top-down and bottom-up figures will not be equal, have to be compared with the ANSPs actual capacity performance in year (n). The difference asserts whether an individual ANSP contributed to the overall FABEC performance mentioned in step 1.

	2015 Target	2016 Target	2017 Target	2018 Target	2019 Target
FABEC Targets for application of the financial incentive scheme (CRSTMP delay causes)	0,37	0,38	0,33	0,33	0,34
FABEC Targets (all delay causes)	*0,48*	*0,49*	*0,42*	*0,42*	*0,43*
FABEC Reference values (all delay causes)	*0,43*	*0,42*	*0,42*	*0,42*	*0,43*

ANSPs targeted capacity contributions values (CRSTMP delay causes)	2015 Value	2016 Value	2017 Value	2018 Value	2019 Target
ANA LUX	N/A	N/A	N/A	N/A	N/A
Belgocontrol	0,07	0,07	0,07	0,07	0,07
DFS	0,27	0,27	0,24	0,24	0,23
DSNA	0,29	0,31	0,22	0,21	0,23
LVNL	0,14	0,14	0,14	0,14	0,14
MUAC	0,14	0,14	0,14	0,15	0,15
Skyguide	0,17	0,17	0,17	0,18	0,18

Step 4: Incentive amount related to ANSPs involved

The incentive amount distributed to the ANSPs involved is based on a two parameter system. One parameter is related to the collective performance by taking into account the individual ANSPs' revenues, the other parameter is based on the difference (mn/flight) of the actual capacity performance by an individual ANSP and its national capacity contribution value (see above). The weight of each parameter (collective and individual) is fixed respectively at 25% and 75%. The dead band is not applied to the individual contribution of ANSPs.

For the collective parameter, the reference figure (see step 2) has to be multiplied by 25% to weight this first parameter. The outcome then has to be multiplied for each ANSP that contributed to the FABEC over-/underperformance by the value of the individual ANSPs share to the total FABEC en route revenue. The result gives a first intermediate amount (€) of each ANSP involved

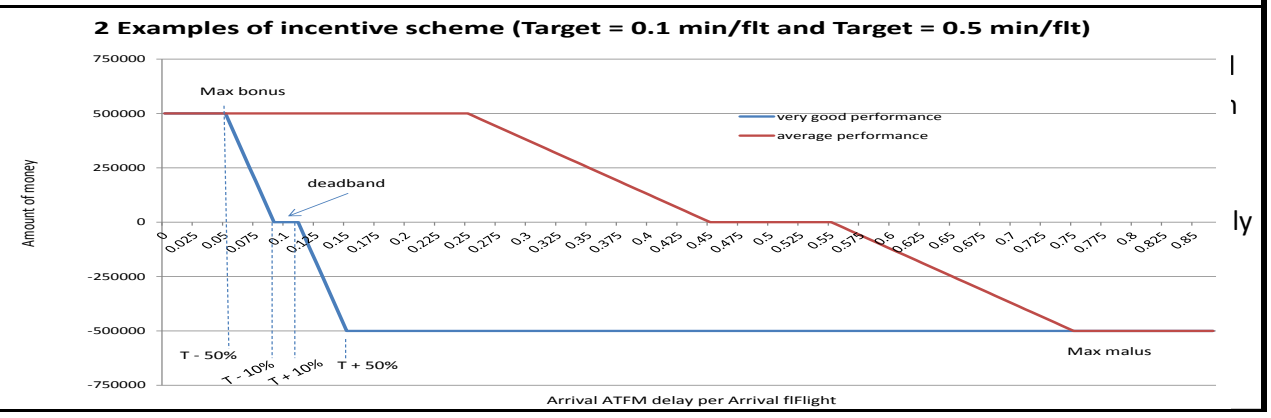
For the individual parameter, the reference figure (see step 2) has to be multiplied by 75% to weight this second parameter. The outcome then has to be multiplied for each ANSP that contributed to the FABEC over-/underperformance by the value of the individual ANSPs share to the FABEC over-/underperformance. The share is namely the deviation of the ANSPs performance from the target and calculated by dividing the ANSPs deviation from the ANSPs target value (in %) by the sum of ANSPs deviation from the individual targets. The result gives a second intermediate amount (€) of each ANSP involved.

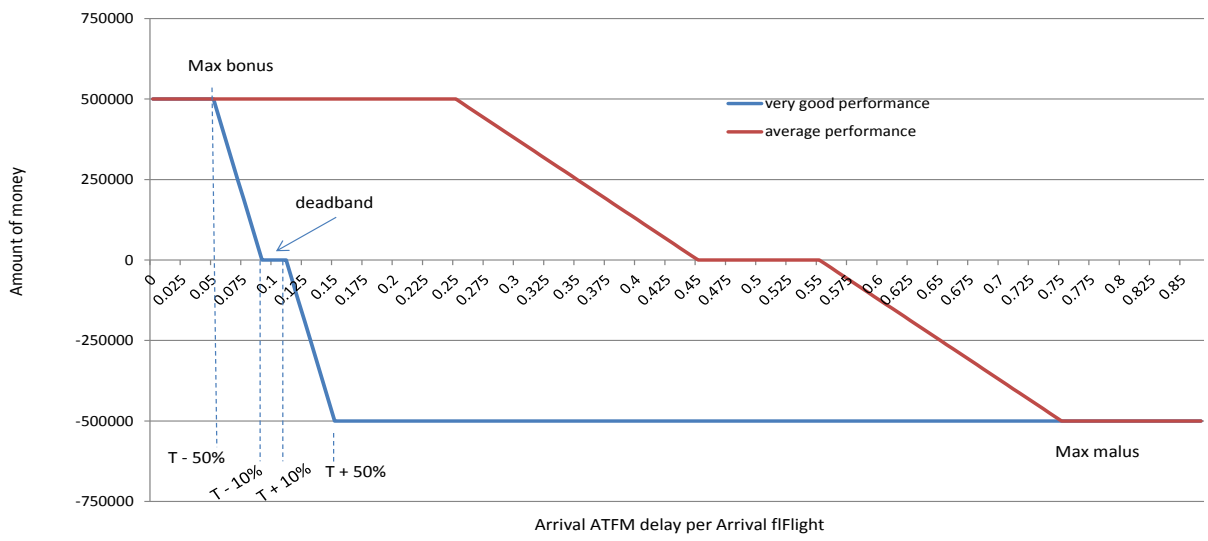
To determine the individual ANSP's amount of bonus or penalty, the sum of both intermediate amounts are compared to the above stated 0.5% cap of the individual ANSPs en route revenues in order not to overshoot this maximum of contribution for each ANSP involved.

German Terminal and Airport Incentive Scheme	
Entity being incentivised	*ANSP (DFS)*
KPI description	*Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight*
Type of incentive	financial
Formula	Function is partly defined (corresponding graph is shown in Annex C): A) from x (=delay) =0 to x= 25% of target: f(x) (=incentive amount) = max. amount of bonus (b) B) from x= 25% of target to x= target: f(x)=a*(x- 25% of target)^(1/2)+ b C) from x= target to x= 175% of target: f(x) = (a*(175% of target - x)^(1/2)+ b)*(-1) D) from x= 175% of target to x=∞: f(x)= - b (max. amount of malus)

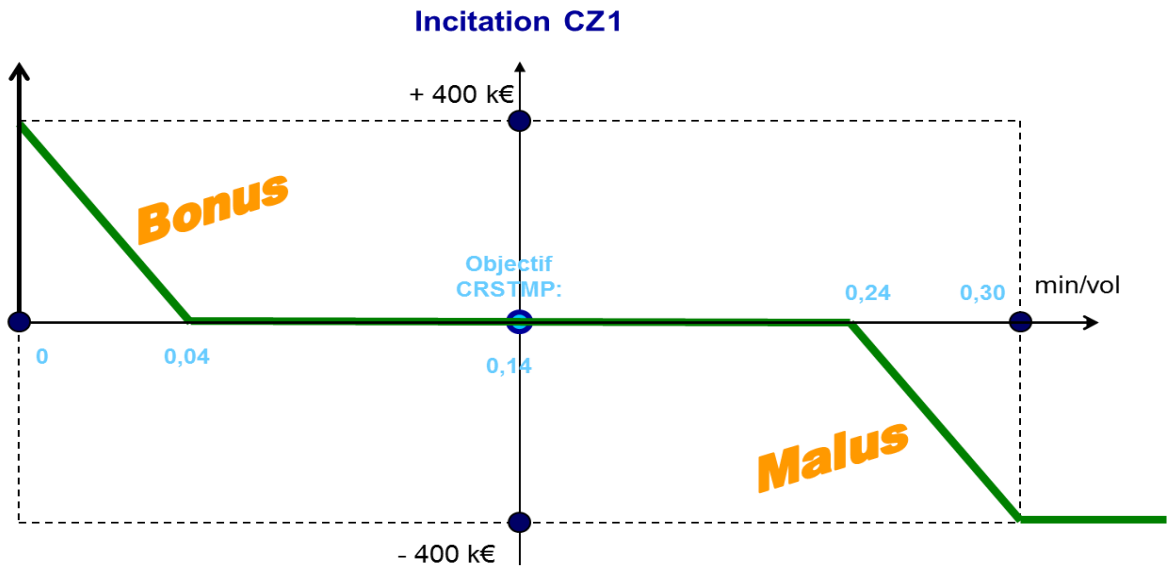
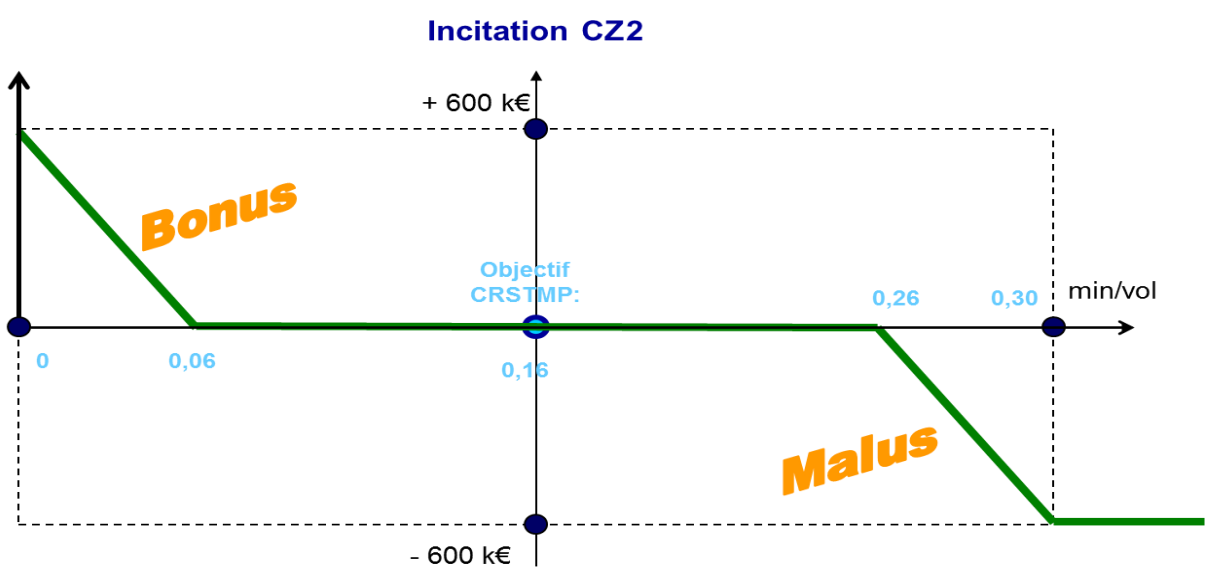
Justification	The German incentive scheme for the national arrival ATFM delay KPI has been established in conjunction with the requirements of IR (EU) No. 390/2013 as well as IR (EU) No. 391/2013. In this regard the incentive is of a financial nature, commensurate with the set targets and symmetric. It consists in bonus or penalties for exceeding or under achieving the target level and the amount will be added to or deducted from the adopted determined costs in year (n+2). Furthermore, the incentive scheme is in line with Article 15 (1) of IR (EU) No. 391/2013. According to Article 15 (1) (g) of IR (EU) No. 391/2013 the incentive scheme is be based on the delay causes related to codes CRSTMP of the ATFCM user manual since the accountability of ANSPs for the arisen delay is of major relevance. The national Incentive scheme on arrival ATFM delay is applied only to DFS, providing as only ANSP services at the 16 airports included in the performance scheme.
Description of performance variation levels and the applicable level of bonuses and penalties	**Incentive determination** The national incentive scheme for the arrival ATFM delay target is executed in a two step approach. Therefore, in a first step it has to be figured out if the target is achieved to calculate in the second step the amount of the incentive. **Step 1 target achievement** Based on the arrival ATFM delay target set on national level for each year compared to the actual achieved performance in year (n) the result will induce if there was an over- or an underperformance which leads to a bonus or penalty for DFS. In this regard the ANSP is incentivised for exceeding or under achieving the target level as given by Article 12 (3) IR (EU) 390/2013. Actual performance [min/arrival] < reference value = over performance; bonus Actual performance [min/arrival] > reference value = under performance; malus Actual performance [min/arrival] = reference value = neutral; neither bonus nor malus Delay data used for step 1 will be the Capacity data provided by the Network Manager and reported in accordance with Article 18 (4) IR (EU) 390/2013. **Step 2 incentive calculation** The amount of the incentive is calculated by a partly defined function. To describe the graph a coordinate system is used, where the x-axis represents the delay value achieved by the ANSP from 0.0 to ∞ min./flight while the y-axis shows the amount achieved from the max. malus to the max. bonus in EUR. The maximum amount of the incentive is capped at 0.5% of DFS total revenue for Terminal services since there is not enough experience in applying an incentive scheme and this can be seen as a learning phase for the application and the resulting impact of such scheme. The outer sections of the incentive function are discrete (A,D). Following the assumption that it is not optimal to achieve a delay of 0.0 min/arrival, the max. level of bonus is already achieved at a 75% deviation from the national CRSTMP target. As the target is set at 0.09 min/arrival, this means that already with a delay of 0.0225 min/arrival the max. bonus is achieved. For symmetrical reasons given by Article 15 (1) (c) of IR (EU) 391/2013 also the max. amount of malus is achieved at a 75% deviation from the target (at 0.1575 min/arrival). The two continuous parts of the incentive function are represented by a degressive (B) respectively progressive (C) falling function. As the function starts at the max. bonus amount it falls with a decreasing slope (B). That means marginal deviations of delay are the less effective (in regard to the incentive amount) the closer they are to the target value. The target (coordinates: x= 0.09 and y=0.0) determines the graphs intersection with the x-axis. Afterwards the function is falling with an increasing slope (C), meaning that marginal deviations are more effective the farer they realise to the target value. Therefore, minor deviations from the target are little rewarded/ penalized and vice versa since major deviations assume more efforts or in opposite poor performance. By using a degressive/ progressive function, the bonus/ malus equals the ANSPs performance without the need for setting a dead band.

Additional comments	**Mathematical derivation of part B of the incentive function:** Exponentially developing function is described by the following expression: f(x) = a*(x-0.25*c)^e+b The graph is given by setting the exponent (e), the reference value of each year (n) of RP2 and the maximum amount of the incentive of each year. The exponent of ½ (e=1/2) has been chosen since it reflects the gently increase evolving to a larger growing increase the more the target value removes from the reference value of year (n). This equals the premise that the level of bonus and penalty shall be commensurate with targets to be reached and the performance achieved as of Article 15 (1) (b) of IR (EU) 391/2013. The independent parameter (x) is given by the achieved value in year (n) by the ANSP. For the calculation of the incentive amount this achieved value is set in relation with the reference value (c =target at 0.09 min/arrival). Maximum amount of incentive (0.5% revenue year (n)) is expressed by (b). The gradient (a) is calculated with: a = -b/(x-0.25*c)^(½) respectively simplified with x=c to: a = -b/(0.75*c)^(½). As the minus sign suggests, the function is falling.

Swiss Terminal and Airport Incentive Scheme	
Entity being incentivised	skyguide
KPI description	*Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight*
Type of incentive	financial
Formula	see below
Justification	

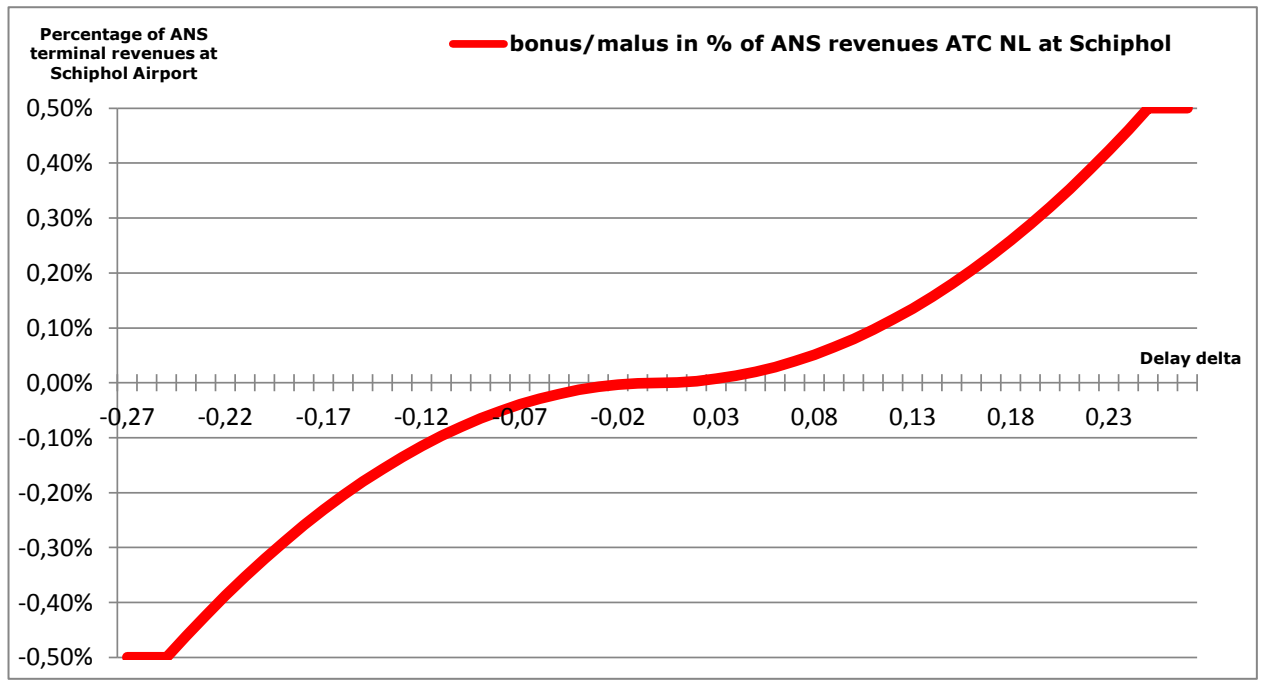
Description of performance variation levels and the applicable level of bonuses and penalties	To make the non-CRSTMP delay classification more verifiable and transparent for all stakeholders. The Swiss NSA has established a method of verification, which is described below: Materially the total relevant number of the total non-CRSTMP regulations identified by skyguide will be subject to an analysis under the direction of the Swiss NSA. The total number will consist of both regulations causing the highest delay during year n (5% of the non-CRSTMP regulations) as well as of regulations on 5 sampled days in the same year. The sample days of year n, selected by the Swiss NSA, will be communicated to skyguide by mid-January of year n+1 at the latest. In order to perform the analysis, skyguide will have to prepare and transmit all relevant information such as regulation justification and weather reports, between others for the proof of a non-CRSTMP cause of the selected regulations to the Swiss NSA by mid-March of year n+1 at the latest. It is planned to start with the analysis of the regulations in the second half of March and to produce the final validation result around mid-April. In case inconsistencies are detected the Swiss NSA will inform Skyguide in due time to solve the issue collectively. The Swiss NSA will make the validation of the delivered information at the start of May in year n +1 before the annual performance monitoring report will become due. Step 1: **Target achievement at all regulation causes level** The Swiss ARR ATFM delay per ARR movement target (n) is dependent on traffic evolution and will be compared to the actual achieved performance in year (n), resulting in a Swiss airports over- or under performance. For each year of RP2, if the observed value for all regulation causes is greater than the target, a malus will be computed and if the observed value for all regulation causes is lower than the target a bonus will be computed. Step 2: T**arget achievement at CRSTMP regulation causes level.** The Swiss CRSTMP ARR ATFM delay per ARR movement target (n) is dependent on traffic evolution and will be compared to the actual achieved performance in year (n), resulting in a Swiss airports over- or under performance. Step 3: **Determination if bonus or malus is applicable**. • If the 'all regulation causes' target (Step 1) is reached, then, if and only if, the CRSTMP regulation causes target (Step 2) is reached, a bonus is computed according to the graph below. For each year of RP2, if the observed value (CRSTMP) is lower than target - 10%, then the amount of bonus is : Max Incentive * [-
Additional comments	**2 Examples of incentive scheme (Target = 0.1 min/flt and Target = 0.5 min/flt)** 

French Terminal and Airport Incentive Scheme	
Entity being incentivised	*ANSP (DSNA)*
KPI description	*Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight*
Type of incentive	financial
Formula	*See below*
Justification	The French incentive scheme for the national arrival ATFM delay KPI has been established in compliance with IR (EU) No. 390/2013 and IR (EU) No. 391/2013. According to Article 15 (1) (g) of IR (EU) No. 391/2013 the French NSA decided that the incentive scheme shall be based on the delay causes related to codes CRSTMP of the ATFCM user manual. The scheme consists in bonus or penalties of a maximum amount of 400 k€ for CZ1 and 600 k€ for CZ2 for exceeding or under achieving the target level and the amount will be added to or deducted from the adopted determined costs in year (n+2). The national Incentive scheme on arrival ATFM delay is applied to DSNA, providing services at the 61 airports included in the performance scheme.

Description of performance variation levels and the applicable level of bonuses and penalties for French CZ1 (CZ6 in FABEC Performance Plan)	For each year of RP2, if the CRSTMP achievement is greater than 0,3 min/flight, then the maximum of malus is applied. For each year of RP2, if the CRSTMP achievement is between 0,24 min/flight and 0,3 min/flight, then the amount of malus is : (-20/3*CSTMP achievement + 1,6) M€ . For each year of RP2, if the CRSTMP achievement is within a deadband (0,04 min/flight - 0,24 min/flight) then no malus / no bonus is distributed. For each year of RP2, if the CRSTMP achievement is lower than 0,04 min/flight, then the amount of bonus is : (0,4-10*CSTMP achievement) M€. 
Description of performance variation levels and the applicable level of bonuses and penalties for French CZ2 (CZ6 in FABEC Performance Plan)	For each year of RP2, if the CRSTMP achievement is greater than 0,3 min/flight, then the maximum of malus is applied. For each year of RP2, if the CRSTMP achievement is between 0,26 min/flight and 0,3 min/flight, then the amount of malus is : (-15*CRSTMP achievement +3,9) M€. For each year of RP2, if the CRSTMP achievement is within a deadband (0,06 min/flight - 0,26 min/flight) then no malus / no bonus is distributed. For each year of RP2, if the CRSTMP achievement is lower than 0,06 min/flight, then the amount of bonus is : (0,6-10*CSTMP achievement) M€. 

Dutch Terminal and Airport Incentive Scheme	
Entity being incentivised	*LVNL*
KPI description	*Average minutes of airport all causes ATFM delay per arrival attributable to terminal and airport ANS and caused by landing restrictions at the destination airport. This target will only be applicable on Schiphol Airport.* *In conjunction with the small market share of these airports neither a capacity target nor a capacity incentive will be implemented for these airports.*
Type of incentive	Financial
Formula	*f (x) = ((delay delta in %^2)*2)/100*

Justification	The incentive scheme for the terminal ATFM delay at Schiphol Airport is compliant with IR (EU) No. 390/2013 and IR (EU) No. 391/2013. The incentive is of a financial nature, commensurate with the set targets and symmetric. It consists of a bonus or a penalty for over- or underachieving the target level. The amount of the bonus or the penalty will be added to or deducted from the determined costs in year n+2. The incentive scheme is also in line with Article 15 (1) (g) IR (EU) No. 391/2013: according to this paragraph the incentive scheme will be based on the delay causes related only to the CRSTMP codes of the ATFCM user manual, as LVNL can only be responsible for these causes. The national incentive scheme in respect of the arrival ATFM delay target is executed in two steps: in the first step the over or under performance is determined. In the next step the bonus or malus is calculated. The incentive scheme is characterized by: 1. An average terminal CRSTMP delay target per controlled flight: 0.5 minute; 2. A maximum bonus/malus equal to 0.5% of terminal ANS revenues at Schiphol Airport, meaning: a. a maximum malus at 0.75 minute (= delta of 50% = -0.25 minute) and b. a maximum bonus at 0.25 minute (= delta of 50% = +0.25 minute); The formula used for the incentive scheme reads as follows: f (x) = ((DA -/- Dt) ^ 2) * 2)/100, where as: f (x) = amount of incentive; DA = actual ATFM delay with CRSTMP reason Dt = CRSTMP delay target (DA -/- Dt)/Dt = difference between Da and Dt, expressed in %. 1. The average terminal CRSTMP target (1) and the maximum bonus or malus (2) are set taking into account: a. The already achieved level of controllable ATFM capacity performance; b. Possible noise related capacity restrictions of routes to/from and of runways at Schiphol Airport; New legislation on noise abatement will be introduced during RP2. The effects on the total arrival delay are uncertain. c. Possible physical runway and gate capacity restrictions related to bunching (more demand for arrival/departure than available) and peak departure times (same requested departure times of planes to the same destination); LVNL is held accountable for an announcement of a regulation, while the cause of the regulation could be completely out of LVNL's control; LVNL has brought this issue (once again) to Eurocontrol's attention. d. Actions by other parties involved in the ANS-process (miscommunications between airport's gate control and ANSP's ground control) e. the lack of experience in the application of an incentive scheme and the lack of sufficiently reliable data in combination with the perception that an incentive scheme could result in an increase in possibly dangerous situations; f. The application of the incentive scheme in RP2 is mainly considered as a learning phase. The functioning of the scheme, its impact and its relation to the level of sustainability will be monitored and evaluated during this period. 2. Symmetric incentive scheme: equal percentage under or over performance results in the same percentage malus or bonus; 3. Both bonus and malus asymptotic irt X-axis (no dead band); 4. Rising degressive/progressive incentive scheme: a. more under performance results in a progressively higher malus;

Description of performance variation levels and the applicable level of bonuses and penalties	
Additional comments	The definition is the same as PRB's definition; The target is customised to specific ANS terminal activities at Schiphol. The terminal CRSTMP causes delay target is not related to the en route CRSTMP causes delay target.

Belgian Terminal and Airport Incentive Scheme	
Entity being incentivised	*Belgocontrol*
KPI description	*Average minutes of airport all causes ATFM delay per arrival attributable to terminal and airport ANS and caused by landing restrictions at the destination airport.*
Type of incentive	Financial
Formula	*See below*
Justification	The Belgian incentive scheme for the arrival ATFM delay KPI has been established in accordance with the requirements of IR (EU) No. 390/2013 as well as IR (EU) No. 391/2013. The amount of bonus or penalty will be added to or deducted from the determined costs in year n+2. The incentive scheme is also in line with Article 15 (1) (g) of IR (EU) No. 391/2013, where the incentive scheme will be based on the delay causes related only to the CRSTMP codes of the ATFCM user manual. Belgium has decided to focus on the CRSTMP target for the scheme, as the Belgocontrol is responsible only for these reasons and therefore the incentive should be based on this responsibility.
Description of performance variation levels and the applicable level of bonuses and penalties	The maximum amount of bonuses/penalties will be calculated for each individual airport and will not exceed 0.25 % of the revenue from air navigation services of the concerned airport. Considering the absence of robust target setting methodology, a deadband of +- 50% will be applied to the target of each airport. The amount of penalties/bonuses will be calculated with a linear function between +-50% and +-100% of the target.
Additional comments	The target has been set at 2 of 5 airports for the following reason. There is no robust target setting methodology available to be applied for this indicator. However, a pragmatic approach has been followed to derive targets which are covering the CRSTMP delay causes. Therefore, those targets are not covering all causes of delay. The pragmatic approach consists in considering per airport, on the basis of the historic data of the last five years (2009-2013), the average delay of the worst year (highest delay) and the best year (lowest delay). The individual airport targets are calculated by dividing this average amount of delay by the expected arrival movements considering the STATFOR Medium-Term Forecast (February 14) Low scenario, and are aimed at keeping this level of performance during RP2 despite of traffic growth. The national target is the aggregation of the airport targets, obtained by dividing the sum of the individual average amounts of delay by the sum of the respective expected arrival movements. Although five airports should be subject to target setting, this was not possible at three of them due to the absence of ad hoc traffic volumes. The two airports on which a draft target has been set represent almost 80% of total IFR flights.

4.1 - Incentive schemes for the cost-efficiency targets

The parameters used by the Member States in the setting of the risk-sharing mechanism defined in Article 13 and 14 of the Charging Regulation (IR (EU) No. 391/2013) will be detailed under lines 3.13 and 3.14 of Reporting Table 2 as per Annex VI of the same Regulation.
Therefore, the information is included in the Reporting Tables attached in Annex C.

SECTION 5: MILITARY DIMENSION OF THE PLAN

Mapping between the template for the FAB performance plan and Annex II of the performance Regulation				
Structure of ANNEX II of the performance Regulation	Link with PRB Performance Plan template			
	Body of Performance Plan	Annex C For cost-effiency		Other annexes
		RT ref.	AI ref.	
5. MILITARY DIMENSION OF THE PLAN	5			
Description of the civil-military dimension of the plan describing the performance of FUA application in order to increase capacity with due regard to military mission effectiveness, and if deemed appropriate, relevant performance indicators and targets consistent with the indicators and targets of the performance plan.				

5 - MILITARY DIMENSION OF THE PLAN

The ongoing military contribution in regard to the application of the five principles of FUA as described in Article 3 of FUA Regulation (EU) No. 2150/2005 influences FABEC performance.
FABEC States and ANSPs (Civ and Mil) make best use of the available airspace by

- Having implemented all 3 levels of FUA Art 3 a
- Having established all three levels of ASM Art 3 b
- Applying Art 3 c by optimizing booking principles, activating the airspace temporary and releasing it as soon as possible
- Having CBA arrangements in place and further developing them in future airspace design projects

The application of all these principles was and remains a big effort for the national defense organizations in FABEC. The military contributions, to improve FABEC performance, shall be reflected against Military Mission Effectiveness (MME) as described in the FABEC States Treaty. MME shall not degrade, which will be assessed at national level, taking into consideration new weapon systems and their airspace requirements.
The performance development of FABEC for RP 2 is mainly derived from the implementation of the FABEC
There are actually 3 airspace design projects with military contribution:
The CBA-Land / CW project is a stepwise design and implementation of a new structure for Air Traffic Services in a part of the airspace located above the North West of Germany and the North East of the Netherlands. Important aspects are the implementation of military Cross Border Area Land airspace and the optimisation of civil routes. By implementing that, both air forces gain a large training area with sufficient dimensions for new generation fighter aircraft . As a result, RNLAF plans to give up TRA 12 which gives more route options mainly for traffic in/outbound EHAM and EDDF and which will be an enabler for further development for MUAC Free Route Concept.
The IP SE / CBA 22 project mainly tackles airspace along the Swiss, French, Belgian, German and Luxemburgian boundaries. By the implementation of the French-German CBA 22, the size and shape of the present military
This will allow to change flows of the ATS-Routes UN 852 and UN 853 and to solve the actual problem of a double crossing on these routes.
These changes impact in-/ outbound traffic to Geneva, Basel and the French-Swiss CBA 25.
In its final stage, the new CBA 22 will result in a larger exercise area, however it must be taken into consideration that this area is now shared between 3 air forces (incl. USAFE). This will oblige the affected air forces to improve their booking principles and priority rules. The third airspace design project is the implementation of a free route airspace for FABEC. With the step 2 level 3 (S2L3) phase, it is planned to create FABEC-wide plannable direct routings above FL 365, available 24/7, even during military activities. Even though concept details are still under discussion, it is obvious that special FUA procedures in that airspace above FL 365 could play a major enabling role for this concept resulting in positive contributions to the KPA Environnement (horizontal Flight Efficiency). However, this shall be well balanced against the necessity of new
Besides these 3 airspace design projects, harmonization work will continue between FABEC partners in the area of ASM and FUA.
The common use of PRISMIL tool (which will be in place for all FABEC partners prior to RP 2), will allow a better and closer monitoring of the FUA PI.

Additional (Key) Performance Indicators (and targets) relevant to civil military performance

SECTION 6: ANALYSIS OF SENSITIVITY AND COMPARISON WITH THE PREVIOUS PERFORMANCE PLAN

Mapping between the template for the FAB performance plan and Annex II of the performance Regulation				
Structure of ANNEX II of the performance Regulation	Link with PRB Performance Plan template			
	Body of Performance Plan	Annex C For cost-effiency		Other annexes
		RT ref.	AI ref.	
6. ANALYSIS OF SENSITIVITY AND COMPARISON WITH THE PREVIOUS PERFORMANCE PLAN	6			
6.1. Sensitivity to external assumptions.	6.1			
6.2. Comparison with previous performance plan.	6.2			

6 - ANALYSIS OF SENSITIVITY AND COMPARISON WITH THE PREVIOUS PERFORMANCE PLAN

6.1 - Sensitivity to external assumptions

Although no quantitative sensitivity analysis has been carried out, it is obvious that the FABEC Performance Plan could be impacted by different external factors, beyond those already addressed provided in IR (EU) No. 390/2013 and IR (EU) No. 391/2013 through carry-overs and other risk-sharing mechanisms. This is explained in the following with regard to the respective Key Performance Areas.

KPA Safety:

RAT usage: Reaching the assigned targets on RAT usage doesn't means that for every single occurrence (SMI, RI or ATM-SE) the ATM ground severity and/or ATM overall severity will be available.
The RAT methodology provides three pieces of information:
1. ATM ground severity,
2. ATM overall severity and ,
3. The occurrence repeatability.

The last one is not requested by the current performance regulation.

KPA Environment:

In an assessment of the validity of the target values and the performance of ANSPs the following issues have to be taken into account as they might diminish the accuracy of the assessment:The use of a higher radar data accuracy (e.g. 30 sec instead of 2min) to determine the flown trajectory will have a significant impact on the measured flight efficiency level, by increasing the measured distances . It is unclear how the PRB will deal with this issue. Target values could turn out to be far too challenging when being confronted to actual data with a tighter granularity.
The flight efficiency benefit from FABEC projects is being measured through fast-time-simulations at FABEC or Network level. These simulations can only measure the improvement of the route system, hence they show the benefit in terms of KEP. A general improvement on KEA can only be derived by approximation, but some uncertainties will remain. How will airlines make use of the new route system? How will air traffic controllers make use of the new route system? These uncertainties need to be taken into consideration when the network contribution of new projects is predicted and/or used to determine targets.There are strong indications that there is an important relation between flight efficiency and the number of flights. An increase of the number of flights is expected to put additional pressure on the flight efficiency values.

KPA Capacity:

It is widely recognized that a capacity indicator - such as En-route ATFM delay per flight - is very dependent on the traffic evolution and that this relation is not linear. Therefore, what was observed during RP1 (an increase in capacity and a decrease in traffic resulting in a big positive impact on this type of indicators) cannot be considered as normal system behaviour. Moreover, with new Flight Planning systems used by Aircraft Operators, AOs have begun to file flight plans in a new way (more dependent on cheapest routes and/or routes with lesser delays and less dependent on shortest routes) creating new capacity issues in some network areas where historically there were no capacity issues at all.
This phenomenon increases the long-term uncertainty linked with capacity planning, whilst it could also have a direct impact on flight efficiency since the Network Manager is inclined to assume a strong relationship between flight efficiency and capacity in case of important and substantial capacity issues. However, this link was not taken into consideration during RP1 and should require very specific attention during RP2, more particularly during the implementation of Free Route Airspace initiatives.

KPA Cost-Efficency:

German KPA Cost-Efficiency:

The following external assumptions are recognized as relevant:

a) Traffic evolution

During RP1 traffic evolution had via the traffic risk sharing mechanism the most significant influence on the revenues of DFS. In contrast to the assumptions in the Performance Plan for RP1, stating an annual SU increase of 3%, the traffic was actually 6.5% lower in 2012, 8.8% lower in 2013, and even 9.3% lower in 2014

increase of 3%, the traffic was actually 6.3% lower in 2012, 8.8% lower in 2013, and even 9.3% lower in 2014 (compared to PP RP1). According to the traffic risk sharing mechanism layed down in Art. 14 IR (EU) No 390/2013 DFS had to face a loss of revenues over RP1 in the total amount of m€ 96.8 . This deviation reflects the sensitivity of the regulation model on changes in the forecasted traffic evolution.
b) Changes in Air Traffic Management
Effects of airspace-changes caused e.g. by FABEC airspace projects were not taken into account by developing the national cost efficiency KPA for RP2.

French KPA Cost-Efficiency:
Under Commission implementing decision of 11 March 2014 setting the Union-wide performance targets for the air traffic management network and alert thresholds for the second reference period 2015-2019, the traffic assumptions for the second reference period have been taken from the low case scenario of STATFOR forecast February 2015.
In France, this scenario has been confirmed by national forecasts which are deemed more accurate at national level, while taking into account a degree of uncertainty regarding the long forecasting period until the end of 2019. This low scenario has also considered the major need for investment and modernization of ATM tools planned during RP2 in compliance with SESAR deployment (see French additional information in Annex C).

The Netherlands KPA Cost-Efficiency:
1. The low traffic scenario is applied for the cost efficiency performance in line with Commission Decision of 11 March 2014 setting the Union-wide performance targets for the air traffic management network and alert thresholds for the second reference period 2015-19. The current economic prospects and political developments were also taken into consideration in the decision process. The substantial uncertainty which is inherent in a five year forecast was taken into account, too.
2. The base scenario is used by LVNL for the capacity performance. This was decided to limit delay effects as much as possible because delays are very costly to users. If however the traffic increase will be below the base scenario, this will have a negative effect on the cost efficiency performance.

Belgian KPA Cost-Efficiency:
It is obvious that forecasting a cost and revenue evolution over more than 5 years is a highly sensitive exercise. Although a sensitivity analysis is not conducted we do want to highlight several crucial elements.
1. Inflation
In Belgium wages and salaries are automatically linked to the cost of living evolution. And as staff costs are the most important component of ANS provision cost the inflation forecasted is highly critical. This is certainly the case over a five year period. Although for the moment inflation seems to be under control we have to be aware that for an open economy like Belgium international evolutions can drastically overhaul the forecasted evolution.
2. Traffic forecast
RP1 illustrates the crucial role of the traffic for the cost evolution. As for RP1 the base scenario prove to be far too optimistic we took the low growth scenario during RP2. Given the length of RP2 this introduces an additional critical issue.
This is certainly the case for the MUAC part of the cost base.
Given the fact that MUAC handles almost exclusively overflights their activity is determined more by the growth in other traffic zones than the European countries.
As the ab initio intakes are based on the low growth scenario we take a well known risk that needs to be monitored closely. If necessary additional budgetary means will have to be made available to MUAC.
3. FABEC air spaces design project
FABEC is working on the implementation of several air spaces design projects that could be implemented during RP2. At this stage the performance plans have not considered the possible consequences of this projects. As the first AD projects seem to have a considerable impact on the en route charges and revenues in the BELUX airspace this item could have a serious impact on the cost efficiency development during RP2.
4. BELGOCONTROL new management
In Belgium a new management for Belgocontrol has been put in place recently. It is expected that this could

In Belgium a new management for Belgocontrol has been put in place recently. It is expected that this could have a considerable influence on Belgocontrols position and functioning during the coming years. At this very moment the new management team is defining a new strategic vision that could change significantly the future activity.
The RP2 performance plan was NOT able to take this into account.
Ones this new strategic plan will be put in practice the forecasted evolution could change drastically.

Luxembourg KPA Cost-Efficiency:
The traffic assumptions for the second reference period are based on the base case scenario of STATFOR's most recent forecast, published in February 2015.

6.2 - Comparison with previous performance plan

Derogating from RP1 assumptions, where the base case scenario by STATFOR was used as traffic forecast, the planning for RP2 is based almost exclusively on the STATFOR low case scenario (see 1.2 Macroeconomic Scenario).
In line with the development of the regulatory framework (IR (EU) No. 390/2013) the target-setting was extended to Safety performance and terminal air navigation services in the area of Cost-Efficiency: Determined unit cost (DUC) for terminal air navigation services and the area of Capacity: Average minutes of arrival ATFM delay per flight. In addition and in accordance with Article 15 of the IR (EU) No. 391/2013, financial Incentive Schemes for the KPA Capacity are introduced.

Switzerland:
Switzerland further improves cost-efficiency despite the low growth traffic. RP1 was based upon traffic evolution following the STATFOR baseline patterns whereas RP2 is based upon more realistic evolution following the trends between STATFOR low growth and baseline scenarios. RP2 will be dedicated to launch the Virtual centers that should be the trigger to further improve cost efficiency beyond RP2.
In the RP2 performance plan, the DUC starting point was set according to European regulation (Common Implementation Decision 2014/132/EU (12)). It is calculated by dividing RP1 Determined costs for 2014 (DC as if RP1 target 100% achieved) by 2014 actual traffic.

France:
Differently from RP1 assumptions, where a baseline scenario by STATFOR was used as traffic forecast, the presented planning for RP2 is based almost exclusively on the STATFOR low growth scenario (see 1.2 Macroeconomic Scenario).
In line with the development of the regulatory framework (IR (EU) No. 390/2013) the target-setting was extended to Safety performance and terminal air navigation services in the area of Cost-Efficiency: Determined unit cost (DUC) for terminal air navigation services and the area of Capacity: Average minutes of arrival ATFM delay per flight. In addition and in accordance with Article 15 of the IR (EU) No. 391/2013, financial incentive scheme for the KPA Capacity is mandatory for both KPI (ATFM en route delay and ATFM arrival delay).
In the previous performance plan, additional KPI and PI were introduced and are currently monitored for RP1. The scope of performance indicators (KPI and PI) for RP2 remains limited to only those required by the regulations.

The Netherlands:
1. The low traffic scenario is used in RP2, contrary to the first reference period, in which the base scenario was manditorily used.
2. LVNL did not calculate a Return on Equity (RoE) in RP1. As LVNL has at the start of RP2 an equity capital of around M€ 33.1, it includes a RoE in its RP2 cost base.

Belgium:
BELUX cost efficiency plan for RP2 is difficult to compare with the RP1 PP for several reasons.
First is that for en route cost efficiency ANALUX costs have be included for the first time. This was not the case in RP1 so that costs are not comparable in absolute figures between RP2 and RP1.
When for the sake of comparison ANA's virtual cost for 2014 are included in the starting point for RP2 we continue to realize a considerable DUC reduction but to a lesser extent than during RP1 (- 8.5 in RP2; - 10.1 in RP1).
Secondly, in RP2 all Belgian airports are submitted to the performance scheme on an individual basis with different charging zones.
Terminal cost efficiency targets have been set at each airport but due to a political decision the part of these costs to be charged to the users need to be fixed every year in September for the next year. Therefore , airlines remain in uncertainty about the unit rates to be paid for terminal services in all Belgian airports

all ports.

Luxembourg:
Luxembourg for the first time provides separate full cost information and therefore a direct comparison

SECTION 7: IMPLEMENTATION OF THE PERFORMANCE

Mapping between the template for the FAB performance plan and Annex II of the performance Regulation				
Structure of ANNEX II of the performance Regulation	Link with PRB Performance Plan template			
	Body of Performance Plan	Annex C For cost-effiency		Other annexes
		RT ref.	AI ref.	
7. IMPLEMENTATION OF THE PERFORMANCE PLAN	7			
Description of the measures put in place by the national supervisory authorities to achieve the performance targets, such as:				
(i) monitoring mechanisms to ensure that the ANS safety programmes and business plans are implemented;				
(ii) measures to monitor and report on the implementation of the performance plans including how to address the situation if targets are not reached during the reference period.				

7 - IMPLEMENTATION OF THE PERFORMANCE PLAN

This chapter focuses on the general notions on monitoring and reporting and on measures put in place to implement the FABEC Performance Plan through the monitoring and the reporting process. A detailed description of the process is to be found in the current version of the FABEC FPC States Performance Process description.
The corrective actions described in this chapter are different from the corrective actions which will be activated as incentive schemes when the targets set and/or the annual reference/indicative values are not met. This kind of corrective actions (incentives) are described in section 4.1. Those described here are the corrective actions resulting from monitoring findings and recommendations of the FPC and taken by the ANSPs themselves in order to ensure that the achieving of the target set is on the good track.

Objectives of the monitoring:

The main objectives of the monitoring are the following:

a. to check that performance complies, or is on the right track to comply with the targets set, and, in case it does not, to trigger any suitable action;
b. to ensure transparency towards the users, the PRB and the European Commission, and to feed user consultation;
c. to prepare the future target setting and/or the implementation of additional KPIs;
d. to ensure, at operational level, that actual performance matches with the reporting;
e. to feed the FPC with proposals for improvements of performance that will have to be discussed with AFG/PMG.

General Organisation of the Monitoring and Reporting:

The monitoring will be carried out under the auspices of the FPC, assisted by the NSA Committee (NSAC) as appropriate.
The FPC is the counterpart of the European Commission at the States side. Doing this the FPC will consult and/or report to the FABEC Council appropriately.
The NSAC is responsible for the monitoring of the implementation of safety indicators by the national NSAs and relevant administrations.
The ANSPs agree on a process among themselves to address delay issues and, where appropriate, environment issues identified at local and FABEC level, whether as part of the corrective action plans imposed by NSAs, or as own improvement actions.

Scope of Monitoring:

The performance monitoring will in particular focus on the issues described hereafter:
1) The achievement of the performance related issues (if any) defined in the ANS State Safety Programme(s) and ANSP business plans. The monitoring of the non performance related issues in the ANS State Safety Programme(s) and ANSP business plans are carried out through the normal oversight in accordance with Regulation (EU) No. 1034/2011 (Oversight Regulation) and Regulation (EU) No. 1035/2011 (Common Requirements).
2) The actual performance of the indicators listed in section 3 and their comparison against the targets set.
3) The actual achievements of external assumptions and external factors affecting key performance indicators to which the performance is deemed to be sensitive as set out in section 6.1. On the basis of quarterly reports of the AFG/PMG, the FPC will draft a report on the achievements of these assumptions and external factors. The FPC shall present its findings to the FABEC Council and to the European Commission as part of its annual report (see below).
4) The reaching of the EU-wide and FABEC alert thresholds beyond which alert mechanism may be activated. The ANSPs will quarterly report the development of the traffic volume expressed in total service units and via the AFG/PMG to the FPC. When the traffic volume alert threshold, at EU-wide level or at FABEC level, is reached, the FPC will in liaison with the European Commission initiate a situation review procedure on the basis of Article 19 of IR (EU) No. 390/2013.
5) Furthermore, it is important that the FPC receives periodically information on the progress in developing the KPIs for the third reference period and the harmonisation of the definitions, methods and systems to be used, e.g. in the field of safety.

Reporting and Corrective Actions:

On a quarterly basis and through the AFG/PMG the ANSPs shall collectively submit a report to the FPC on their joint progress in achieving the FABEC targets set and reference or indicative values and on the results and analysis of the capacity and environment, while safety performance is done on a half year basis.
In case the FABEC targets set and/or the annual/reference values are threatened not to be met the AFG/PMG's report shall include any action which the ANSPs determine fit to react to weaker performance in the parts of FABEC mostly affected by delays, at FAB, national and/or ACC level, in order to remedy the situation. In this report the ANSPs will also describe to which extent they have complied with the findings of and the recommendations made by the FPC during the monitoring process.

The FPC shall analyze the reports, assess the actions considered by the ANSPs together with the necessity of appropriate measures to be taken by the States or the NSAs and shall make an advice to the proposals, made by the AFG/PMG, to the FABEC Council for such appropriate measures, after consultation with the AFG/PMG. The measures to be taken shall take into account the seriousness of the risk of not meeting the targets set and/or the annual/reference values. They could include an activation of a higher frequency of monitoring and reporting of the FABEC ANSPs and, where appropriate, ACCs, which are causing the under-achievement of the targets or the annual/reference values.
In its annual report to the European Commission the FPC will report on the measures taken to ensure that the Performance Plan is appropriately implemented. The report will also include information, if any, regarding external assumptions and external factors affecting key performance indicators to which the performance is deemed to be sensitive.

If at the end of the year and/or the reference period the targets and/or annual values set have not been achieved the incentives described in sections 4 shall apply.

Adoption of the Performance Plan:
In case it is decided to adapt the Performance Plan due to the meeting of the alert thresholds, a new Performance Plan will be drafted in an orderly process, which is organised the same as for the initial Performance Plan.

NSA commitment for data provision

	Active			Inactive
	Date of implementation	Periodicity	Focal point	
Airport dataflow				
Civil Military dataflow				

Number of other dataflows	Click to select number of other dataflows

Additional comments

8 - ANNEXES

The following annexes should be provided as part of the local performance plans. These should be completed with any other documentation relevant for the targets justifications.

Annex A. Public consultation material

Annex B. Relevant documentation in line with the NSP

Annex C. Reporting Tables

Reporting Table 1 (Total costs) and Table 2 (Unit rate calculation) and "additional information" as per Article 9 of the charging Regulation (Transparency of costs and of the charging mechanism) for each entity and consolidated at national/charging zone/FAB level from June 2015.

Annex D. ANSPs investment plans

Annex E. Additional material