Adopted Performance Plan

France

Third Reference Period (2020-2024)

Status: Final performance plan revised during the reference period (Art. 16 of IR 2019/317)

Date of issue: 16th December 2022

Signatories

Performance plan details	
State name	France
Status of the Performance Plan	Final performance plan revised during the reference period (Art. 16 of IR 2019/317)
Date of issue	16th December 2022
Date of adoption of Draft Performance Plan	*28th October 2022*
Date of adoption of Final Performance Plan	19th December 2022
This Final performance plan has been adopted by France pursuant to Article 1 of the COMMISSION DECISION of 14.12.2022 on the consistency of the performance targets contained in the revised draft performance plan submitted by France pursuant to Regulation (EC) No 549/2004 of the European Parliament and of the Council with the Union-wide performance targets for the third reference period, which states that "the performance targets included in the revised draft performance plan submitted by France on 28 October 2022, pursuant to Regulation (EC) No 549/2004, and listed in the Annex to this Decision, are consistent with the Union-wide performance targets for the third reference period set out in Implementing Decision (EU) 2021/891".	

We hereby confirm that the present performance plan is consistent with the scope of Regulation (EU) No 2019/317 pursuant to Article 1 of Regulation (EU) No 2019/317 and Article 7 of Regulation (EC) No 549/2004.

Name, title and signature of representative	
France	
Marc Borel **Directeur du Transport Aérien**	

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1 - INTRODUCTION

1.1 - The situation

NSAs responsible for drawing up the Performance Plan	French Civil Aviation Authority, Directorate for Safety of civil aviation; French Civil Aviation Authority, Air Transport Directorate

1.1.1 - List of ANSPs and geographical coverage and services

Number of ANSPs	2

ANSP name	Services	Geographical scope
DSNA	ATM	France
Météo France	MET	France

Cross-border arrangements for the provision of ANS services

Number CB arrangements whereDSNA provides services in an other State	5

ANSPs providing services in the FIR of another State	
ANSP Name	Description and scope of the cross-border arrangement
DSNA	ATS (LFSB) - ATS (LFEE) for Switzerland ATS (LFST) - ATS (LFSB) for Germany ATS (LFQQ) for Belgium ATS (LFQQ) - ATS (LFEE) for Great Britain ATS (LFMM) - ATS (LFMN) for Italy

Number CB arrangements where ANSPs from another State provide services in the State	5
ANA Luxembourg	ATS, FIS for France (DSNA)
SKEYES	ATS, FIS, Alerting service for France (DSNA)
DFS	ATC, FIS, Alerting service for France (DSNA)
SKYGUIDE	ATS, FIS, Alerting service for France (DSNA)
MUAC	ATS, FIS, Alerting service for France

1.1.2 - Other entities in the scope of the Performance and Charging Regulation as per Article 1(2) last para.

Number of other entities	1

Entity name	Domain of activity	Rationale for inclusion in the Performance Plan
French Civil Aviation Authority, Air Transport Directorate	Competent authority	Determined costs incurred in relation to the provision of air navigation services in accordance with the article 22(1) of Commission implementing regulation (EU)

1.1.3 - Charging zones (see also 1.4-List of Airports)

En-route	Number of en-route charging zones	1

En-route charging zone 1	France

Terminal	Number of terminal charging zones	2

Terminal charging zone 1	France - Zone 1
Terminal charging zone 2	France - Zone 2

1.1.4 - Other general information relevant to the plan

Relevant local circumstances with high significance for performance target setting and updated view on the impact of the COVID-19 crisis on the operational and financial situation of ANSPs covered in the performance plan

The Covid-19 pandemic affects performance and performance planning in a number of ways :

-> <u>Practical issues</u>

- **Financial impact**
- **Staff issues (protection, rostering,...)**
- **System implementation**
  * distancing constraints and remote working requirements affect practical elements of development, testing, validation and training
  * travel constraints limit presence and delivery by international suppliers
- **ATCO training and availability**
  * distancing constraints limit training capacity
  * increased pressure on simulators for training as well as currency
  * lack of high load traffic levels in OJT
  * working requirements following vaccination

-> <u>Uncertainty and data availability</u>

- **Ongoing pandemic**
- **Uncertainty and variability in traffic recovery**
- **short term volatility in traffic demand**

Further information on DSNA is provided either directly in the individual chapters of this performance plan when relevant or, when additional relevant information has to be provided for a specific performance area, in the various national Annexes R or T referred to in the plan. It has also been presented and discussed in detail during the various consultation meetings held by the French NSA and is reflected in the consultation material provided in Annex C.

Additional comments

Summary of COVID impact / actions in France

From March 2020, a huge traffic drop was observed. Detailed information and graphs presenting the monthly En route and Terminal actual traffic evolution up to September 2021 are available in *Annex R §1* . It may be noted that globally 2020 traffic was -61% of 2019.
As a consequence, associated huge revenue losses (about 1,5 b€) were faced leading to increased debts and loans for DSNA highlighted in *chapter 3.4.4* as well as *Annex R §2* and *Annex C (doc -FR-10 Slide 24)* .

This will have an impact on French 2023 onward En route and Terminal unit rates which will be increased in relation with the implementation of Reg (EU) 2020/1267 art. 5 (unit rate adjustment equally spread over 7 years which was adopted with airspace users). The estimated provisional impact is described in *Annex A & B Tables 2 and 3* .

The asset base was therefore mechanically increased (net current assets) as described in *Annex A & B Tables 1* .
In order to moderate the impact on airspace users, it was decided to set up a specific RP3 mechanism implementing multiple rates for the cost of capital computation depending on the nature of the asset to which it applies. A normal rate (based on Mazars study and updated parameters according to the latest available data) is applied to equity and usual working capital requirement (WCR) and 0% to 2020 charges deferral and other COVID impact related net current assets. Both the breakdown of net current assets per nature and parameters related to the cost of capital are presented in *Annex R §3.4* .
In order to face the traffic drop and related revenue losses, immediate as well as longer term cost saving measures were identified and implemented to mitigate the financial impact of COVID. They address all areas from staff costs to other operating costs, investments and cost of capital and are consolidated in *Annex R §3* .
This included an in-depth review of DSNA investment plan which was performed to focus on strategic elements aiming at improving capacity and accommodating future traffic recovery. Those aspects were discussed with airspace users during a dedicated consultation meeting held 25th June which detailed information is available in *Annex C (docs -FR-[2] & -FR-12)* .
Ultimately COVID also impacted the capacity provision in France in 2021, mostly during Summer, in relation with ATCO training (temporary academy closure, training duration increased due to low traffic, higher use of simulators), sickness and vaccination roll-out (including EASA 48 hours day-offs after vaccination). Detailed elements are aggregated in *chapters 3.3.1* as well as in the Capacity slides presented during the FABEC consultation on 2nd September.

1.2 - Traffic Forecasts

1.2.1 - En route

En route Charging zone 1	**France**
En route traffic forecast	Local forecast

Local Forecast	2017A	2018A	2019A	2020A	2021	2022	2023	2024	CAGR 2019-2024
IFR movements (thousands)	3 241	3 328	3 372	1 390	1 811	2 701	3 196	3 375	0.0%
IFR movements (yearly variation in %)		2.7%	1.3%	-58.8%	30.3%	49.1%	18.3%	5.6%	
En route service units (thousands)	20 862	21 450	21 782	8 547	10 969	16 990	21 020	22 464	0.6%
En route service units (yearly variation in %)		2.8%	1.5%	-60.8%	28.3%	54.9%	23.7%	6.9%	

Specific local factors justifying not using the STATFOR base forecasts (provide justification below or refer to Annex D for more detailed explanation)
STATFOR baseline traffic forecast published on 15 October 2021 has been reviewed and used except for Enroute in 2022 where local forecasts (rationale and justification documented in Annex D) have been used.

NOTE: Section 1.3 (Stakeholder Consultation) should include details on the consultation with airspace users' representatives and ANSPs concerned on the rationale for not using the STATFOR base forecasts.

Terminal Charging zone 1	**France - Zone 1**
Terminal traffic forecast	Local forecast

Local Forecast	2017A	2018A	2019A	2020A	2021	2022	2023	2024	CAGR 2019-2024
IFR movements (thousands)	357.4	360.6	363.3	152.7	185	312	337	357	-0.3%
IFR movements (yearly variation in %)		0.9%	0.7%	-58.0%	20.9%	69.2%	7.7%	6.2%	
Terminal service units (thousands)	581.1	593.7	603.7	267.1	313.9	492.5	560.3	592.2	-0.4%
Terminal service units (yearly variation in %)		2.2%	1.7%	-55.8%	17.5%	56.9%	13.8%	5.7%	

Specific local factors justifying not using the STATFOR base forecasts (provide justification below or refer to Annex D for more detailed explanation)
STATFOR baseline traffic forecast published on 15 October 2021 has been reviewed and used.

NOTE: Section 1.3 (Stakeholder Consultation) should include details on the consultation with airspace users' representatives and ANSPs concerned on the rationale for not using the STATFOR base forecasts.

Terminal Charging zone 2	**France - Zone 2**
Terminal traffic forecast	Local forecast

Local Forecast	2017A	2018A	2019A	2020A	2021	2022	2023	2024	CAGR 2019-2024
IFR movements (thousands)	566.4	571.7	579.1	287.1	386	551	569	591	0.4%
IFR movements (yearly variation in %)		0.9%	1.3%	-50.4%	34.3%	42.9%	3.3%	3.9%	
Terminal service units (thousands)	518.4	528.0	545.6	244.5	314.0	508.7	529.5	557.2	0.4%
Terminal service units (yearly variation in %)		1.8%	3.3%	-55.2%	28.4%	62.0%	4.1%	5.2%	

Specific local factors justifying not using the STATFOR base forecasts (provide justification below or refer to Annex D for more detailed explanation)
STATFOR baseline traffic forecast published on 15 October 2021 has been reviewed and used.

NOTE: Section 1.3 (Stakeholder Consultation) should include details on the consultation with airspace users' representatives and ANSPs concerned on the rationale for not using the STATFOR base forecasts.

1.3 - Stakeholder consultation

1.3.1 - Overall outcome of the consultation of stakeholders on the performance plan

Introductory remark
Information of this French national plan has been previously presented to the stakeholders through 2 consultation processes, a FABEC consultation process for operational targets (safety, environment, en-route capacity) as part of the initial 2019 & 2021 revised FABEC performance plan, and a national one for the cost-efficiency and the terminal capacity. **The initial FABEC stakeholder consultations and outcomes are listed and described below. The operational targets for France where already presented to the stakeholders during these consultations for the safety, environment and en route capacity performance areas.** **The national consultations on cost-efficiency, investments and terminal capacity and related outcomes are presented in the following chapter.**

Description of main points raised by stakeholders and explanation of how they were taken into account in developing the performance plan
SAFETY: airspace users fully support the targets set by FABEC and related national targets, but more transparency by NSA and ANSP is needed, in terms of information on the different ANSP targets.
ENVIRONMENT: the proposed KEA target and related national breakdown values, in line with the reference value is strongly supported. ANSPs have to build an efficient airspace by reducing complexities. Moreover, greater focus should be put on improving vertical flight efficiency to reduce CO2 emissions.
CAPACITY: the FABEC targets and related national breakdown values, which are in line with the reference values, are supported. Mitigation measures shall be identified and planned to manage volatility, staff availability, rostering, training, new ATC system implementation.
INCENTIVE SCHEME: airspace users strongly advocated for a penalty-only scheme. The CRSTMP limitation is not supported. Furthermore, only the achievement of both FAB and ANSP targets would drive the changes required by airspace users.
Although stakeholders commented on the challenging nature of the targets, the targets in the areas of safety, environment and capacity and related national and ANSPs breakdown values are in line with EU-wide targets, as well as the incentive scheme is consistent with EU Regulation 2019/317 laying down a performance and charging scheme in the single European sky. Therefore, the FABEC Council decided not to alter the proposed targets and incentive scheme.

1.3.2 - Specific consultation requirements of ANSPs and airspace users on the performance plan

Topic of consultation	Applicable	Results of consultation
Where applicable, decision to diverge from the STATFOR base forecast	Select	Not discussed at FABEC consultation; part of national level consultations.
Charging policy	Yes	Not discussed at FABEC consultation; part of national level consultations.
Maximum financial advantages and disadvantages for the mandatory incentive scheme on capacity	Yes	The FABEC en route incentive scheme uses a symmetrical maximum amount of bonus and penalty corresponding to 0,5% of the determined costs. Airspace User representatives strongly advocated for a penalty-only scheme. No bonus should be awarded unless there would be a siginificant improvment in CAP performance.
Where applicable, decision to modulate performance targets for the purpose of pivot values to be used for the mandatory incentive scheme on capacity	Yes	The FABEC en route incentive scheme will apply one point of the modulation mechanism as referred to the Annex XIII of the regulation IR (EU) 2019/317 to limit the scope of incentives to cover only CRSTMP delay causes. Airspace User representatives did not support the limitation of the scope to cover only CRSTMP delay causes.

Symmetric range ("dead band") for the purpose of the mandatory incentive scheme on capacity	Yes	The FABEC en route incentive scheme is elaborated with a dead band around the pivot value in recognition of the volatile nature of performance at current delay levels. Only penalising does not serve the purpose of improving performance. Airspace User representatives did not agree such a symmetric approach. They consider that only a penalty scheme should be developed to manage performance.
Establishment or modification of charging zones	Select	Not discussed at FABEC consultation; part of national level consultations.
Establishment of determined costs included in the cost base for charges	Yes	Not discussed at FABEC consultation; part of national level consultations.
Where applicable, values of the modulated parameters for the traffic risk sharing mechanism	Select	Not discussed at FABEC consultation; part of national level consultations.
Where applicable, decision to apply the simplified charging scheme	Select	Not discussed at FABEC consultation; part of national level consultations.
New and existing investments, and in particular new major investments, including their expected benefits	Yes	Not discussed at FABEC consultation; part of national level consultations.

1.3.3 - Consultation of stakeholder groups on the performance plan

#1 - ANSPs	
Stakeholder group composition	FABEC ATSPs (ANA Luxembourg, DFS, DSNA, LVNL, MUAC, skeyes and Skyguide)
Dates of main meetings / correspondence	General FABEC stakeholder consultation meeting, 2 September
Main issues discussed	See minutes of the meeting
Actions agreed upon	See minutes of the meeting
Points of disagreement and reasons	See minutes of the meeting
Final outcome of the consultation	See minutes of the meeting

Additional comments

#2 - Airspace Users	
Stakeholder group composition	Air France, DLH, Ryanair,SWISS, Easyjet, Tuifly, IATA, A4E, ERAA
Dates of main meetings / correspondence	General FABEC stakeholder consultation meeting, 2 September
Main issues discussed	See minutes of the meeting
Actions agreed upon	See minutes of the meeting
Points of disagreement and reasons	See minutes of the meeting
Final outcome of the consultation	See minutes of the meeting

Additional comments

#3 - Professional staff representative bodies	
Stakeholder group composition	
Dates of main meetings / correspondence	
Main issues discussed	
Actions agreed upon	
Points of disagreement and reasons	
Final outcome of the consultation	

Additional comments

#4 - Airport operators	
Stakeholder group composition	ACI was invited to the FABEC stakeholder consultation meeting as representative body for the airports. No representative attended.
Dates of main meetings / correspondence	General FABEC stakeholder consultation meeting, 2 September
Main issues discussed	See minutes of the meeting
Actions agreed upon	See minutes of the meeting
Points of disagreement and reasons	See minutes of the meeting
Final outcome of the consultation	See minutes of the meeting

Additional comments

#5 - Airport coordinator	
Stakeholder group composition	
Dates of main meetings / correspondence	
Main issues discussed	
Actions agreed upon	
Points of disagreement and reasons	
Final outcome of the consultation	

Additional comments

#6 - Other (specify)	
Stakeholder group composition	
Dates of main meetings / correspondence	
Main issues discussed	
Actions agreed upon	
Points of disagreement and reasons	
Final outcome of the consultation	

Additional comments

1.3 - Stakeholder consultation fd

1.3.1 - Overall outcome of the consultation of stakeholders on the performance plan

Description of main points raised by stakeholders and explanation of how they were taken into account in developing the performance plan
The main points of concern raised by the different stakeholders were related to the uncertainties regarding future traffic developments and both AU and ANSP tresory issues and financial sustainability, how to maintain a balanced approach between cost saving measures to address the current revenue crisis and support air transport recovery while maintaining the ANSP priority investment and staffing plans necessary to cope with future traffic recovery and avoiding RP2 capacity shortages, the implementation of more flexibility and adaptation to traffic evolution, the practical details on the implementation of emergency measures and the impact on future RP3 and beyond unit rates. Detailed information is provided below and in the consultation material provided in annex to the plan.

1.3.2 - Specific consultation requirements of ANSPs and airspace users on the performance plan

Topic of consultation	Applicable	Results of consultation
Where applicable, decision to diverge from the STATFOR base forecast	No	The latest (Oct 2021) STATFOR scenario 2 has been used except for Enroute 2022 based on a local forecast (rationale and justification documented in Annex D)
Charging policy	Yes	No change
Maximum financial advantages and disadvantages for the mandatory incentive scheme on capacity	Yes	No change from the 2019 draft Performance plan
Where applicable, decision to modulate performance targets for the purpose of pivot values to be used for the mandatory incentive scheme on capacity	No	
Symmetric range ("dead band") for the purpose of the mandatory incentive scheme on capacity	Yes	No change from the 2019 draft Performance plan
Establishment or modification of charging zones	No	
Establishment of determined costs included in the cost base for charges	Yes	Mainly dealt during RP3 Users consultation meeting on 1 July. Some comments and requests for additional information have been handled and transmitted to airspace users (see detailed consultation summaries here under and follow up material).
Where applicable, values of the modulated parameters for the traffic risk sharing mechanism	No	
Where applicable, decision to apply the simplified charging scheme	No	
New and existing investments, and in particular new major investments, including their expected benefits	Yes	Mainly dealt during RP3 Users consultation meeting on 1 July. Some comments and requests for additional information have been handled and transmitted to airspace users (see detailed consultation summaries here under and follow up material).

1.3.3 - Consultation of stakeholder groups on the performance plan

#1 - ANSPs	
Stakeholder group composition	DSNA - DTA (NSA)
Dates of main meetings / correspondence	Numerous performance regulation monitoring and oversight bilateral meetings as well as regular exchanges on the revision RP3 draft Performance plan have been held mainly in May and June. DSNA also participated to the 2 main national stakeholder consultation meetings with AU held 21st June and 1st July 2021 described in #2 Additional coordination was required to address the outcome of the completeness check.
Main issues discussed	Main RP3 assumptions (traffic forecast, economics, staffing, 2020 actual costs and operational achievements) RP3 revised determined costs per cost item and related assumptions DSNA investment plan Cost of capital and WACC Cost allocation methodology RP2 exempted costs (carry-over split over RP3) 2020 - 2021 revenue gap coverage (vs 5 to 7 years)
Actions agreed upon	Initial agreement on the proposed RP3 revised draft Performance plan submitted to Airspace users for consultation 1st July 2021 and final updated RP3 revised draft Performance plan submitted to EC 1st October 2021
Points of disagreement and reasons	The revision of some initial assumptions has been asked by the NSA in order to address AU comments (see below)
Final outcome of the consultation	Updates have been made regarding investments costs and staff costs ; the cost of capital has been updated Traffic has been updated in the course of the completeness check.

Additional comments
N/A

#2 - Airspace Users	
Stakeholder group composition	Air Canada, Air France, BAR, Easyjet, FNAM, IATA, KLM, Lufthansa, SCARA - DSNA - DTA (NSA) Observers : PRB, Eurocontrol, BAF (German NSA)
Dates of main meetings / correspondence	[1] 21 June : French RP3 Users consultation meeting (focus on 2020 en route and terminal air navigation actual costs and cost saving measures, the adjustments due to implementation of traffic risk sharing and cost risk sharing mechanisms and 2022 provisional unit rates) [2] 25 June : DSNA Strategic consultation meeting [3] 1 July : French RP3 Users consultation meeting (focus on the revision of the RP3 draft Performance plan regarding cost efficiency and Terminal capacity) [4] 2 Sept : FABEC RP3 Users consultation meeting (focus on the revision of the RP3 draft Performance plan regarding all items except those elements addressed in [3]) [5] 8 Nov : French RP3 Users consultation by mail on the updates (mainly traffic) subsequent to the completeness check ... also addressed during a dedicated meeting with some Airspace users on 9 Nov Meeting [1] & [3] draft minutes sent out to users on 27 July. Meeting [2] report sent out to users on to users on 31 July together with follow-up material. Initial material, minutes and follow-up material have also been published on ESSKY. Material related to written consultation [5] available in Annex C.
Main issues discussed	2020 actual costs Revised RP3 determined costs for en route and terminal per cost item Traffic forecasts and current developments The level of ANSP savings vs the magnitude of traffic drop Users' request to get state subsidies to support and reduce costs of the ANSP ATCO staffing policy Investments plan (incl. its revision) vs costs / operational benefit (incl. capacity gain) Cost of capital and WACC methodology and parameters DSNA debt The planning for RP2 carry-overs and 2020 - 2021 gap revenue coverage Terminal capacity target and related incentive scheme
Actions agreed upon	Additional information requested has been preprared and sent to AU

Points of disagreement and reasons	RP3 level of cost is considered to high AU need more information on asset base evolution Cost of capital proposed by DSNA is not supported France shall outperform cost-efficiency EU targets The French government shall grant DSNA non-repayable funds to reduce 2020/2021 under-recovery or lower the unit rates Use of local traffic forecast for Enroute 2022
Final outcome of the consultation	AU have taken note of the information provided, expressed their concerns, asked for some additional information and requested changes in the draft plan. Some updates have been made accordingly regarding investments and staff costs ; the cost of capital has been updated ; additional information has been forwarded to AU on their request ; revised spreading of RP2 carry-overs to lower the increase of 2022 unit rate ; extension to 7 years of the time period to perform 2020 - 2021 unit rate adjustment

Additional comments

#3 - Professional staff representative bodies	
Stakeholder group composition	DGAC, DGAC main staff representative bodies, DSNA, DTA (French NSA)
Dates of main meetings / correspondence	2 July 2021 (Comité de suivi de la performance)
Main issues discussed	RP3 main assumptions (traffic, ...) DSNA RP3 determined costs The level of ANSP savings vs the magnitude of traffic drop ATCO staffing policy Investments plan (incl. its revision) vs costs / operational benefit (incl. capacity gain) RP2 exempted costs The planning for RP2 carry-overs and 2020 - 2021 gap revenue coverage DSNA revenues and sustainability, level of debt
Actions agreed upon	Staff representatives will be informed during the next steps of the process of the draft performance plan elaboration and submission
Points of disagreement and reasons	NA
Final outcome of the consultation	Staff representatives took note of the information provided and expressed their concern regarding DSNA RP3 revenue, staffing policy and major investment implementation

Additional comments
NA

#4 - Airport operators	
Stakeholder group composition	NA
Dates of main meetings / correspondence	NA
Main issues discussed	
Actions agreed upon	
Points of disagreement and reasons	
Final outcome of the consultation	

Additional comments
NA

#5 - Airport coordinator	
Stakeholder group composition	NA
Dates of main meetings / correspondence	NA
Main issues discussed	
Actions agreed upon	
Points of disagreement and reasons	
Final outcome of the consultation	

Additional comments
NA

#6 - Other (specify)	
Stakeholder group composition	NA
Dates of main meetings / correspondence	NA
Main issues discussed	
Actions agreed upon	
Points of disagreement and reasons	
Final outcome of the consultation	

Additional comments
NA

1.4 - List of airports subject to the performance and charging Regulation

1.4.1 - Airports as per Article 1(3) (IFR movements ≥ 80 000)

ICAO code	Airport name	Charging Zone	IFR air transport movements			
			2016	2017	2018	Average
LFPG	Paris/Charles-De-Gaulle	France - Zone 1	479 199	482 678	488 117	483 331
LFPO	Paris/Orly	France - Zone 1	237 708	232 139	232 374	234 074
LFMN	Nice/Côte d'Azur	France - Zone 2	139 549	142 623	143 599	141 924
LFLL	Lyon/Saint-Exupéry	France - Zone 2	110 638	112 331	113 434	112 134
LFML	Marseille/Provence	France - Zone 2	96 281	97 473	97 770	97 175
LFBO	Toulouse/Blagnac	France - Zone 2	90 977	98 991	97 154	95 707

Additional comments

1.4.2 Other airports added on a voluntary basis as per Article 1(4)

Number of airports	52		
ICAO code	Airport name	Charging Zone	Additional information
LFSB	Bale/Mulhouse	France - Zone 2	
LFBD	Bordeaux/Merignac	France - Zone 2	
LFPB	Paris/Le Bourget	France - Zone 2	
LFRS	Nantes/Atlantique	France - Zone 2	
LFMT	Montpellier/Méditerranée	France - Zone 2	
LFST	Strasbourg/Entzheim	France - Zone 2	
LFOB	Beauvais/Tillé	France - Zone 2	
LFQQ	Lille/Lesquin	France - Zone 2	
LFRN	Rennes/St-Jacques	France - Zone 2	
LFKJ	Ajaccio/Napoléon-Bonaparte	France - Zone 2	
LFLC	Clermont-Ferrand/Auvergne	France - Zone 2	
LFRB	Brest/Bretagne	France - Zone 2	
LFMD	Cannes/Mandelieu	France - Zone 2	
LFKB	Bastia/Poretta	France - Zone 2	
LFBZ	Biarritz/Bayonne-Anglet	France - Zone 2	
LFBP	Pau/Pyrénées	France - Zone 2	
LFPN	Toussus/Le-Noble	France - Zone 2	
LFTH	Hyères/Le-Palyvestre	France - Zone 2	
LFKF	Figari/Sud-Corse	France - Zone 2	
LFLY	Lyon/Bron	France - Zone 2	
LFMP	Perpignan/Rivesaltes	France - Zone 2	
LFBL	Limoges/Bellegarde	France - Zone 2	
LFRH	Lorient/Lann-Bihoué	France - Zone 2	
LFBT	Tarbes-Lourdes/Pyrénées	France - Zone 2	
LFLB	Chambéry/Aix-les-Bains	France - Zone 2	
LFBH	La-Rochelle/Ile de Ré	France - Zone 2	
LFLS	Grenoble/Isère	France - Zone 2	
LFCR	Rodez/Marcillac	France - Zone 2	
LFKC	Calvi/Sainte-Catherine	France - Zone 2	
LFMV	Avignon/Caumont	France - Zone 2	
LFMK	Carcassonne/Salvaza	France - Zone 2	
LFBI	Poitiers/Biard	France - Zone 2	
LFMU	Béziers/Vias	France - Zone 2	
LFRK	Caen/Carpiquet	France - Zone 2	
LFBA	Agen/La-Garenne	France - Zone 2	
LFBE	Bergerac/Roumanière	France - Zone 2	
LFMI	Istres/Le-Tubé	France - Zone 2	
LFRD	Dinard/Pleurtuit-Saint-Malo	France - Zone 2	
LFRG	Deauville/Normandie	France - Zone 2	
LFTW	Nîmes/Garons	France - Zone 2	
LFLP	Annecy/Meythet	France - Zone 2	
LFGJ	Dole/Tavaux	France - Zone 2	
LFRQ	Quimper/Pluguffan	France - Zone 2	
LFOK	Châlons/Vatry	France - Zone 2	
LFMH	Saint-Etienne/Bouthéon	France - Zone 2	
LFSL	Brive/Souillac	France - Zone 2	
LFOT	Tours/Val-de-Loire	France - Zone 2	
LFRZ	Saint-Nazaire/Montoir	France - Zone 2	

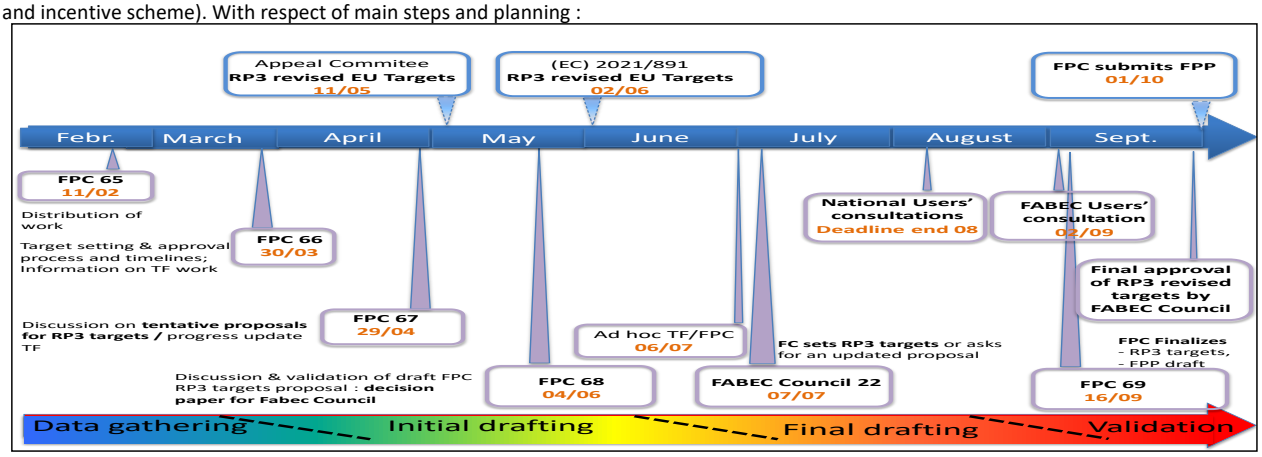
LFLX	Châteauroux/Déols	France - Zone 2	
LFAQ	Albert/Bray	France - Zone 2	
LFOP	Rouen/Vallée-de-Seine	France - Zone 2	
LFJL	Metz-Nancy/Lorraine	France - Zone 2	

Additional comments

1.5 - Services Under Market Conditions

Number of services under market conditions	0

1.6 - Process followed to develop and adopt a Performance Plan

Description of the process
In order to prepare the initial 2019 and 2021 and revised FABEC performance plans, the following process has been developped within the FABEC Financial and Performance Committee (FPC), setting up Task forces (TF) to : - coordinate and/or to liaise with any other States or ANSP committees, including the military, or task forces to be involved and with national representatives for local targets ; - gather required data and material in the appropriate format from ANSP and national representatives; - draft initial performance plan chapters ; - consolidate national chapters when drafted locally ; - ensure integration with final consolidated FABEC performance plan. 9 TF were set up (TF1 – General coordination and consultation management, TF2 – Introduction, FABEC organisation and processes, TF3 – Costs, investments and SESAR, TF4 – Safety, TF5 – Capacity, TF6 – Environment, TF7 – Cross-border, TF8 – Military dimension, TF9 – Traffic risk sharing and incentive scheme). With respect of main steps and planning :    **This revised national performance plan has been elaborated by the French NSA on the basis of the information relating to the French targets, breakdowns and national contributions proposed by France for the operational areas of performance contained in the latest FABEC performance plan submitted 13th July 2022 and which where deemed consistent with the EU wide targets by EC in its 13th April decision and are provided here again at national level unchanged**. **French en-route and terminal cost-efficiency information and targets were already split at national level in the previous FABEC performance plan and have also been considered as consistent with the EU wide targets by EC in the above mentioned 13th April EC decision and is provided here unchanged.** **No change to values and qualitative information has been made, only additional information regarding some national processes have been added in order to precise the national background.**

1.7 - Establishment and application of a simplified charging scheme

Is the State intending to establish and apply a simplified charging scheme for any charging zone/ANSP?	No

SECTION 2: INVESTMENTS

2.1 - Investments - DSNA

2.1.1 - Summary of investments

2.1.2 - Detail of new major investments

2.1.3 - Other new and existing investments

2.1 - Investments - Météo-France

2.2.1 - Summary of investments

2.2.2 - Detail of new major investments

2.2.3 - Other new and existing investments

Annexes of relevance to this section

ANNEX E. INVESTMENTS

NOTE: The requirements as per Annex II, 2.2.(c) are addressed in item 4.1.2

2.2 - Investments - DSNA

2.2.1 - Summary of investments

Number of new major investments	9

#	Name of new major investment (i.e. above 5 M€)	Total value of the asset (capex or contractual leasing value)	Value of the assets allocated to ANS in the scope of the PP	**Determined costs** of investment (i.e. depreciation, cost of capital and cost of leasing) (in national currency)					Lifecycle (Amortisation period in years)	Allocation (%)*		Planned date of entry into operation
				2020	2021	2022	2023	2024		Enroute	Terminal	
1	4-FLIGHT	853 400 000	284 099 000	9 797 000	15 292 000	24 491 000	33 291 000	41 985 000	8	100%	0%	2021 to 2025
2	AIS/AIM	34 000 000 + N/A (MCO)	26 588 000	2 285 000	3 500 000	3 115 000	3 416 000	4 054 000	8	81%	19%	2018 - 2024 + Recur. Activ.
3	CDM/AMAN/DMAN/XMAN	100 000 000	26 016 000	1 468 000	2 587 000	2 811 000	3 594 000	4 540 000	8	81%	19%	From 2015
4	COFLIGHT	350 000 000	126 104 000	10 016 000	13 588 000	18 886 000	24 452 000	28 570 000	4	81%	19%	2021 to 2025
5	CSSIP	81 000 000	9 601 000	4 833 000	1 815 000	945 000	559 000	538 000	8	81%	19%	Up to 2022
6	NVCS	72 000 000	41 936 000	2 905 000	6 788 000	4 561 000	6 561 000	6 747 000	8	96%	4%	2019-2025
7	SYSAT	500 500 000	111 482 000	5 343 000	12 435 000	14 321 000	15 434 000	16 174 000	8	63%	37%	2021-2030
8	MCO and evol CNS/ATM	N/A (MCO)	617 296 000	60 381 000	74 651 000	87 259 000	97 741 000	109 776 000	8	81%	19%	Recurrent activities
9	CATIA	39 900 000	29 611 000	588 000	1 719 000	2 839 000	5 353 000	8 121 000	8	81%	19%	2021-2027
Sub-total of **new major investments** above (1)		1 996 800 000	1 272 733 000	97 616 000	132 375 000	159 228 000	190 401 000	220 505 000				
Sub-total **other new investments** (2)			108 445 000	17 668 000	8 758 000	14 904 000	14 663 000	14 521 000				
Sub-total **existing investments** (3)				202 733 000	178 785 000	141 371 000	122 733 000	111 057 000				
Total new and existing investments (1) + (2) + (3)		1 996 800 000	1 381 178 000	318 017 000	319 918 000	315 503 000	327 797 000	346 083 000				

** The total % enroute+terminal should be equal to 100%.*

2.2.2 - Detail of new major investments

NOTE: Section 1.3 (Stakeholder Consultation) should include details on the consultation with airspace users' representatives on new major investments.

Name of new major investment 1	***4-FLIGHT***	Total value of the asset	***853 400 000 €***

Description of the asset	4-FLIGHT represents the heart of the modernization of the French ATM system. The programme will make it possible to put into operation in the French en-route control centers a complete new generation control system, taking up all the functionalities of the current system, CAUTRA, while bringing new potential for developments aligned with the strategic roadmap of the European SESAR programme and the related European regulations. The functional content of the 4-FLIGHT system consists in the integration of a European radar processing system (ARTAS provided by Eurocontrol), a new human-machine interface (G-HMI, developed by Thales for the renewal of its range of ATM systems), to which are added a large number of peripherals used by controllers or technical supervisors and finally a modern system for volumic processing of flight plans (COFLIGHT, programme launched by DSNA in cooperation with its Italian counterpart ENAV, developed by a consortium formed by Thales and Leonardo). The evolutions of versions of the 4-FLIGHT system that are planned within the scope of the program (development costs during the period 2020-2025) for entry into service after the first operational commissioning of the system (2022/2023) will take into account in particular the following improvements and functional evolutions: 1. The integration of the innovations developed within the framework of the ATC Tools project, in particular the implementation of an additional safety barrier, the Medium Term Conflict Detection (MTCD) which will notify potential conflicts between flights with an even longer notice than in the commissioning version. 2. Additional functionalities in support of the longer-term steps of the SESAR Free Route roadmap (full capacity of the cross-border Free Route in particular thanks to the future IOP interoperability standard currently being validated by the SESAR programme). 3. The enrichment of the 4D trajectory calculated by COFLIGHT by elements of the trajectories calculated and transmitted by the aircraft's on-board computers (so-called EPP functionality, currently at the stage of proof of concept and standard by the SESAR program).							
The investment is mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)? Ref. to the Regulation and, if funded through Union assistance programmes, ref. to the relevant grant agreement.)	Yes	ATM Master Plan CP1 SGA n°INEA/CEF/TRAN/M2014/1037259 - Action 2014-EU-TM-0136-M SGA n°INEA/CEF/TRAN/M2015/1131871 - Action 2015-EU-TM-0193-M						
Specify links to the PCP/CP1/Interoperability Regulations (add the sub-AF number(s) under each relevant box)	AF1	AF2	AF3	AF4	AF5	AF6	Interoperability	
			3.7, 3.8.2			6.1, 6.3	Data-Link	
Benefits for airspace users and results of the consultation of airspace users' representatives	4-Flight 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. With respect to capacity, and based in particular on the return on experience of the implementation of the ERATO system in Brest and Bordeaux in 2016, the ultimate – i.e. after up to three years to fully materialize - benefit expected is estimated between 20 to 25% in successively Reims, Marseille and Paris, and between 10 to 15% in Bordeaux and Brest (since those two already experience an electronic environment thanks to ERATO). Airspace users' have been consulted on investments during the DSNA Consultation Strategic meeting on the 25th June. Questions have been raised regarding the delay of the program, the timeline and expected gains in term of productivity. DSNA answered and also provided (on a follow up action on 31st August) some strategic roadmaps of main key projects with expected benefits (see consultation annex C).							
Joint investment / partnership	No							
Investment in ATM systems	Yes							
If investment in ATM system, type?	New system	The French FDPS (Flight Data processing System), named CAUTRA, can no longer support evolutions led by SESAR.						
If investment in ATM system, Reference to European ATM Master Plan / PCP	Master Plan (non-PCP)	ATC12.1, ITY-AGDL, ATC07.1						

Name of new major investment 2	***AIS/AIM***	Total value of the asset	***34 000 000***

Description of the asset	Advanced data exchange services are required to communicate up to date aeronautical information (e.g. about flight plans, weather, airport data etc.) that help operational stakeholders to maximize the benefits of new ATM systems and tools. The Aeronautical Information Exchange Model (AIXM) and System Wide Information Management (SWIM) concept set out specifications that enable the distribution of key data in a common digital format. The AIM and SWIM concepts are being delivered via the SESAR programme to provide more accurate and efficient digital aeronautical information to civil and Military ANSPs, airspace users, airport operators, Meteorological service providers and the European Network Manager. Addtional costs corresponding to this major investment are MCO costs related to recurrent activities are necessary to be able to operate the AIS/AIM systems: annual obstacle surveys, corrective, preventive and evolutive maintenance.							
The investment is mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)? Ref. to the Regulation and, if funded through Union assistance programmes, ref. to the relevant grant agreement.)	Yes	ATM Master Plan CP1 SGA n°INEA/CEF/TRAN/M2015/1132363 - Action 2015-EU-TM-0196-M SGA n°INEA/CEF/TRAN/M2016/1349619 - Action 2016-EU-TM-0117-M SGA n°INEA/CEF/TRAN/M2017/1602559 - Action 2017-EU-TM-0076-M						
Specify links to the PCP/CP1/Interoperability Regulations (add the sub-AF number(s) under each relevant box)	AF1	AF2	AF3	AF4	AF5	AF6	Interoperability	
			3.1		5.3, 5.4, 5.6, 5.8, 5.10		ADQ	
Benefits for airspace users and results of the consultation of airspace users' representatives	Airspace users' have been consulted on investments during the DSNA Consultation Strategic meeting on the 25th June. Discussion and exchanges took place regarding how the risk on this complex program will be managed.							
Joint investment / partnership	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.						
Investment in ATM systems	Yes							
If investment in ATM system, type?	Replacement							
If investment in ATM system, Reference to European ATM Master Plan / PCP	Master Plan (non-PCP)	ITY-ADQ						

Name of new major investment 3	***CDM/AMAN/DMAN/XMAN***	Total value of the asset	***100 000 000 €***
Description of the asset	Airport Collaborative Decision Making (ACDM) 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 at improving the overall efficiency of operations at an airport, with a particular focus on the aircraft turn-round and pre-departure sequencing process. Tools for Collaborative Decision Making: CPDS (Collaborative Pre-Departure Sequence), DMAN (Departure Manager), AMAN (Arrival manager) ACDM tools involve the introduction of new systems and processes at larger airports that focus on: • the creation, refinement and exchange of information at airport and with the network • The progress of each flights' arrival plan and turnaround • Up to date timings shared for each flight to push back, taxi out and take off; and • An optimized departure sequence ACDM systems allow air traffic controllers to construct an optimized sequence of departures tailored to the prevailing conditions of the runway and the surrounding airspace. ACDM systems also gather the latest estimated landing times for inbound flights (using AMAN and XMAN tools) to improve the management of ground operations that are often the cause of air traffic delays. The systems also provide data sharing services with airspace users, airport and network, to support collaborative decision making and increase resilience during adverse conditions and congested situation.		

The investment is mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)? Ref. to the Regulation and, if funded through Union assistance programmes, ref. to the relevant grant agreement.)	Yes	ATM Master Plan CP1 SGA n°INEA/CEF/TRAN/M2015/1131871 - Action 2015-EU-TM-0193-M SGA n°INEA/CEF/TRAN/M2015/1132363 - Action 2015-EU-TM-0196-M SGA n°INEA/CEF/TRAN/M2016/1349619 - Action 2016-EU-TM-0117-M SGA n°INEA/CEF/TRAN/M2017/1602559 - Action 2017-EU-TM-0076-M						
Specify links to the PCP/CP1/Interoperability Regulations (add the sub-AF number(s) under each relevant box)	AF1	AF2	AF3	AF4	AF5	AF6	Interoperability	
	1.2.2	2.6.2		4.1, 4.2, 4.3, 4.4, 4.5	5.3			
Level of impact of the investment	Network	Better flow management effoiciency, increase in cpacity and less delays.						
	Local	more effective airside and landside perations management.						
	Non-performance							
Quantitative impact per KPA	Safety	The more effective airside and landside operations management, improved situational awareness of all actors and resulting reduced congestion has a positive effect on safety.						
	Environment	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.						
	Capacity	Enhanced airport capacity through optimal use of airside and landside facilities and services, better use of airport and ATFM slots. Improved airport/TMA capacity.						
	Cost Efficiency	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.						
Benefits for airspace users and results of the consultation of airspace users' representatives	Airspace users' have been consulted on investments during the DSNA Consultation Strategic meeting on the 25th June. Punctuality improvements for all Stakeholders will reduce operating costs.							
Joint investment / partnership	No							
Investment in ATM systems	Yes							
If investment in ATM system, type?	New system							
If investment in ATM system, Reference to European ATM Master Plan / PCP	Master Plan (non-PCP)	ATC15.1, ATC07.1						

Name of new major investment 4	***COFLIGHT***	Total value of the asset	***350 000 000 €***
Description of the asset	COFLIGHT is the next generation automated flight plan processing system that will replace the STPV (CAUTRA 4 Flight Plan Processing System - Automatic Air Traffic Coordinator). Its commissioning will be concurrent with that of the 4-FLIGHT system in the first 3 en route control centers of the DSNA (Reims in the 1st half of 2022, Marseille in the 2nd half of 2022 and Paris in 2023). Beyond being a response to the obsolescence of CAUTRA, COFLIGHT aims above all to strengthen safety and fluidity within the framework of the SESAR 2035 roadmap(Single European Sky Air traffic Management Research,technological component of the Single European Sky). In particular, COFLIGHT will replace the static flight plan exchanged from control position to control position at the spaces crossed, by a 4D trajectory of the flight (the "Flight Object") updated in real time by the computer taking into account the control instructions entered by the air traffic controller through his electronic interface (4-FLIGHT) and the actions that the pilot enters into his on-board computer. This 4D trajectory will be interoperable, which means that the control instructions entered by the controller of another European control center will also be taken into account to update the flight data presented to the French controller and vice versa. COFLIGHT deployment is synchronized with 4-FLIGHT entry into service at Reims, Aix and Paris ACCs.		

The investment is mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)? Ref. to the Regulation and, if funded through Union assistance programmes, ref. to the relevant grant agreement.)	Yes	ATM Master Plan CP1 SGA n°INEA/CEF/TRAN/M2014/1037259 - Action 2014-EU-TM-0136-M SGA n°INEA/CEF/TRAN/M2017/1602559 - Action 2017-EU-TM-0076-M						
Specify links to the PCP/CP1/Interoperability Regulations (add the sub-AF number(s) under each relevant box)	AF1	AF2	AF3	AF4	AF5	AF6	Interoperability	
			3.4	4.3	5.4, 5.6, 5.9		FMTP Data-Link	
Benefits for airspace users and results of the consultation of airspace users' representatives	Airspace users' have been consulted on investments during the DSNA Consultation Strategic meeting on the 25th June. Questions have been raised regarding the delay of the program, the timeline and expected gains in term of productivity. DSNA answered and also provided (on a follow up action on 31st August) some strategic roadmaps of main key projects with expected benefits (see consultation annex C).							
Joint investment / partnership	Yes	Partnership with ENAV						
Investment in ATM systems	Yes							
If investment in ATM system, type?	New system							
If investment in ATM system, Reference to European ATM Master Plan / PCP	Master Plan (non-PCP)	ITY-FMTP, ITY-AGDL, ATC07.1						

Name of new major investment 5	***CSSIP***					Total value of the asset		***81 000 000 €***
Description of the asset	The CSSIP (Ground-Ground Communications under Internet Protocol) program implements a national telecommunications network of new generation based on IP protocols for voice digital conversion and the migration of voice and data communications from the previous network to the new one called RENAR-IP. It provides all voice and data exchanges for the traffic control purposes. Connected to PENS, it is able to exchange data with various international networks and simplifies the systems and application interoperability between adjacent ANSPs.							
The investment is mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)? Ref. to the Regulation and, if funded through Union assistance programmes, ref. to the relevant grant agreement.)	Yes	PCP ATM Functionalities : AF4, AF6 A dual telecom architecture, outlined in SESAR PCP, will ensure consistent availability with the future operational and services requirements to support (SWIM)						
Specify links to the PCP/CP1/Interoperability Regulations (add the sub-AF number(s) under each relevant box)	AF1	AF2	AF3	AF4	AF5	AF6	Interoperability	
				X		X		
Benefits for airspace users and results of the consultation of airspace users' representatives	Airspace users' have been consulted on investments during the DSNA Consultation Strategic meeting on the 25th June.							
Joint investment / partnership	No							
Investment in ATM systems	No							
If investment in ATM system, type?	New system							
If investment in ATM system, Reference to European ATM Master Plan / PCP	Click to select							

Name of new major investment 6	***NVCS***	Total value of the asset	***72 000 000 €***

Description of the asset	The NVCS (New Voice Communication System) program aims at replacing the current safety voice communications system of the DSNA's five metropolitan en route control centres (first deployments atBrest and Bordeaux ACCs) and Roissy-CDG, as part of a joint acquisition with FABEC partners, in particular the Maastricht International Control Centre (MUAC) of the Eurocontrol agency. Although the introduction of Data Link exchange functionalities between controllers and pilots will ultimately reduce the number of voice exchanges, radio is and will remain for a long time the ultimate critical link between an air traffic controller and a pilot. It is therefore a critical component for flight safety and the architecture and design of these systems is subject to a particularly high level of requirements in terms of software assurance. In addition, the transition to the Internet Protocol (IP) standard of voice transmission reinforces the challenge of securing these systems against the cyber threat and taking into account the new related regulatory framework (military programming law and European NIS directive). This high technology system brings major changes: - end to end communications using voice on IP network(VoIP) - voice services on our ground to ground long distance communication network under IP (RENAR IP), compatible with the current telecomunication infrastructures - integration of radio and phone communication system - integrated radio and telephone backup system offering nearly euivalent features compatred to the main system - new functionalities permitting notably to supply a VCS service on a remote system.							
The investment is mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)? Ref. to the Regulation and, if funded through Union assistance programmes, ref. to the relevant grant agreement.)	Yes	ATM Master Plan CP1 Grant Agreement INEA/CEF/TRAN/M2014/1026773 - Action 2014-EU-TM-0322-W						
Specify links to the PCP/CP1/Interoperability Regulations (add the sub-AF number(s) under each relevant box)	AF1	AF2	AF3	AF4	AF5	AF6	Interoperability	
			X				8.33 kHz VCS	
Benefits for airspace users and results of the consultation of airspace users' representatives	Airspace users' have been consulted on investments during the DSNA Consultation Strategic meeting on the 25th June and also during the French NSA consultation meeting 1st July on new VCS. Airspace users took note of this project aiming at modernizing ACC voice communication systems (see consultation annex C).							
Joint investment / partnership	Yes	Joint investment with MUAC						
Investment in ATM systems	No							
If investment in ATM system, type?	Overhaul of							
If investment in ATM system, Reference to European ATM Master Plan / PCP	Master Plan (non-PCP)	ITY-AGVCS2						

Name of new major investment 7	***SYSAT***	Total value of the asset	***500 500 000 €***

Description of the asset	The SYSAT program is aiming at modernizing ATM systems at Approach and Tower level. The systems developed within this program will interface with the 4-FLIGHT system for IFR flights and cover specific needs such as advanced management of VFR flights, ground traffic, landing, take-off, as well as collaboration and data exchange with airport systems. DSNA has opted to acquire an existing off-the -shelf industrial system, which will be adapted to DSNA's operational technical environment. The program has nevertheless been divided into two groups, Group 1 (G1) covering the perimeter of the major Parisian airports, and Group 2 (G2) covering the other metropolitan airports. This strategy enables in particular to have an enhanced priority given to the Paris region due to the more critical obsolescence of certain components of the ATM system, particularly at Roissy-CDG, and to take into account the specifics of the G2 perimeter (number of sites, variability of operational configurations, different functional needs). In accordance with the recommendations of the CGEDD (General Council for the Environment and Sustainable Development) and before any contract was notified, the SYSAT/Group 2 program has been the subject of an in-depth program review in june 2019. This review has in particular assessed the different options in the area of differentiation by geographic zones and global or modular architecture. A scenario for SYSAT group 2 has been elaborated at the time with a new cost-scheme reducing the overall cost of the program. The planning has been re-assessed for group 2 due to the sanitary crisis and associated budget constraints.							
The investment is mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)? Ref. to the Regulation and, if funded through Union assistance programmes, ref. to the relevant grant agreement.)	Yes	ATM Master Plan CP1 SGA n° INEA/CEF/TRAN/M2014/1037259 - Action 2014-EU-TM-0136-M						
Specify links to the PCP/CP1/Interoperability Regulations (add the sub-AF number(s) under each relevant box)	AF1	AF2	AF3	AF4	AF5	AF6	Interoperability	
		2.1, 2.2, 2.3, 2.5			5.3, 5.4, 5.6			
Level of impact of the investment	Network	Better use of the available network capacity., punctuality increase						
	Local	Punctuality increase						
	Non-performance	Increase of attractivity for CDG long haul flights hub.						
Quantitative impact per KPA	Safety	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.						
	Environment	Enabler to the generalisation of CDAs at CDG airport. Support system to the design of low noise procedures on regional airports						
	Capacity	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.						
	Cost Efficiency	More cost efficient maintenance due to centralised architecture.						
Benefits for airspace users and results of the consultation of airspace users' representatives	Airspace users' have been consulted on investments during the DSNA Consultation Strategic meeting on the 25th June and users sent some additional questions afterwards. DSNA answered on the 31st August on the reassessment of the project and current status (see consultation annex C).							
Joint investment / partnership	No							
Investment in ATM systems	Yes							
If investment in ATM system, type?	New system							
If investment in ATM system, Reference to European ATM Master Plan / PCP	Master Plan (non-PCP)	AOP04.1, AOP05, FCM03, AOP04.2						

Name of new major investment 8	***MCO and evol CNS/ATM***		Total value of the asset	***N/A (MCO)***
Description of the asset	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. It also Includes costs related to operational (corrective, preventive and evolutive) maintenance for NAV/COM/Surveillance/ATM systems			
The investment is mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)?	No			
Level of impact of the investment	Network			
	Local			
	Non-performance			
Quantitative impact per KPA	Safety	Safety is maintained by performing preventive MCO. MCO activities are assessed and prioritized in order to be able to maintain safety		
	Environment			
	Capacity	Safety is maintained by performing preventive MCO. MCO activities are assessed and prioritized in order to be able to maintain		
	Cost Efficiency			
Results of the consultation of airspace users' representatives	Airspace users' have been consulted on investments during the DSNA Consultation Strategic meeting on the 25th June. Discussion and exchanges took place on the implication of delaying programs (such as 4-FLIGHT / COFIGHT) on the Maintenance on Operating Conditions of current tools (like CAUTRA) and how to limit such situations.			
Joint investment / partnership	No			
Investment in ATM systems	Yes			
If investment in ATM system, type?	Overhaul of			
If investment in ATM system, Reference to European ATM Master Plan / PCP	Master Plan (non-PCP)	NAV10		

Name of new major investment 9	***CATIA***					Total value of the asset	***39 900 000 €***
Description of the asset	Radio is a critical component for flight safety and the architecture and design of radio communication systems is subject to a particularly high level of software assurance. In addition, the transition to the Internet Protocol (IP) standard for voice transmission increases the challenge of securing these systems against cyber threat. The CATIA project (Chaine rAdio Téléphone IP des Approches) is part of DSNA's strategy to modernize its radio / telephone systems implemented through three projects corresponding to three industrial products: NVCS (for the 5 CRNA and CDG), CATIA (for large approaches except CDG) and CLEOPATRE (for small isolated control towers). The main differences between these three projects lie on the one hand in their capacities (the number of radio frequencies needed to manage the spaces of a centre-en route or the four runways of CDG airport is much greater than for a control tower at an average airport) and on the other hand in their architecture and in particular in the level of availability requirements for the emergency backup chain (the safety and economic impact of a temporary deterioration in the level of service is obviously not the same for both). The objective of the CATIA project is to acquire and deploy a new voice communications systems (radio and telephone) in the 14 metropolitan main approach centers (excluding CDG but including Orly). This new VCS (Voice Communication System) will replace the RAIATEA systems in Large Approaches, and will replace GAREX in ORLY						
The investment is mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)? Ref. to the Regulation and, if funded through Union assistance programmes, ref. to the relevant grant agreement.)	Yes	ATM Master Plan CP1					
Specify links to the PCP/CP1/Interoperability Regulations	AF1	AF2	AF3	AF4	AF5	AF6	Interoperability

Specify links to the PCP/CP1/Interoperability Regulations (add the sub-AF number(s) under each relevant box)			X				8.33 kHz VCS	
Benefits for airspace users and results of the consultation of airspace users' representatives	Airspace users' have been consulted on investments during the DSNA Consultation Strategic meeting on the 25th June and also during the French NSA consultation meeting 1st July on CATIA. Airspace users took note of this new project aiming at modernizing APP & TWR voice communication systems (see consultation annex C).							
Joint investment / partnership	No							
Investment in ATM systems	Yes							
If investment in ATM system, type?	Replacement							
If investment in ATM system, Reference to European ATM Master Plan / PCP	Master Plan (non-PCP)	ITY-AGVCS2						

2.2.3 - Other new and existing investments

2.2.3.1 - Overall description and justification of the costs nature and benefits of other new and existing investments in fixed assets planned over the reference period

Other investments are oriented towards Innovation, data management and UAV traffic management systems. One of DSNA's strategic goals is to remain in the lead in terms of innovation and emerging new technologies. Along that, it is also DSNA's strategy to be as much cost-efficient as possible: in the current worldwide situation, investments in management supporting tools will be of help to achieve this. Investing in Remote Control Centers is also a way to reduce costs in terms of infrastructure maintenance as well as it increases our resilience to sudden variation of traffic such as the one we have experienced these past years.

2.2.3.2 - Details of the main other new investments in fixed assets planned over the reference period

Number of new other investments	0

2.8 - Investments - Météo France

2.8.1 - Summary of investments

Number of new major investments	0

2.8.3 - Other new and existing investments

2.8.3.1 - Overall description and justification of the costs nature and benefits of other new and existing investments in fixed assets planned over the reference period

As sole provider of meteorological services to air navigation designated in France, Meteo France has to ensure to plan dedicated investments. In that respect, Meteo France expects to plan yearly a level of depreciation costs of approximately 18M€ (see RP3 table costs).
During RP3, new and existing investments are mainly related to the modernization of meteorological radar network, weather observation stations and the implementation of a supercomputer (not dedicated to aeronautical services) for enhancing the computing power.

2.8.3.2 - Details of the main other new investments in fixed assets planned over the reference period

Number of new other investments	0

SECTION 3: PERFORMANCE TARGETS AND MEASURES FOR THEIR ACHIEVEMENT

3.1 - Safety targets

3.1.1 - Safety KPI #1: Level of Effectiveness of Safety Management achieved by ANSPs

3.2 - Environment targets

3.2.1 - Environment KPI #1: Horizontal en route flight efficiency (KEA)

3.3 - Capacity targets

3.3.1 - Capacity KPI #1: En route ATFM delay per flight

3.3.2 - Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight

3.4 - Cost efficiency targets

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

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

3.4.3 - Pension assumptions

3.4.4 - Interest rate assumptions for loans financing the provision of air navigation services

3.4.5 - Restructuring costs

3.4.6 - Additional determined costs related to measures necessary to achieve the en route capacity targets

3.5 - Additional KPIs / Targets

3.6 - Description of KPAs interdependencies and trade-offs including the assumptions used to assess those trade-offs

3.6.1 - Interdependencies and trade-offs between safety and other KPAs

3.6.2 - Interdependencies and trade-offs between capacity and environment

3.6.3 - Interdependencies and trade-offs between cost-efficiency and capacity

3.6.4 - Other interdependencies and trade-offs

Annexes of relevance to this section

ANNEX A. REPORTING TABLES & ADDITIONAL INFORMATION (EN-ROUTE)

ANNEX B. REPORTING TABLES & ADDITIONAL INFORMATION (TERMINAL)

ANNEX F. BASELINE VALUES (COST-EFFICIENCY)

ANNEX H. RESTRUCTURING MEASURES AND COSTS

ANNEX M. COST ALLOCATION

ANNEX J. OPTIONAL KPIs AND TARGETS

ANNEX O. JUSTIFICATIONS FOR THE LOCAL SAFETY TARGETS

ANNEX P. JUSTIFICATIONS FOR THE LOCAL ENVIRONMENT TARGETS

ANNEX Q. JUSTIFICATIONS FOR THE LOCAL CAPACITY TARGETS

ANNEX R. JUSTIFICATIONS FOR THE LOCAL COST-EFFICIENCY TARGETS

ANNEX U. VERIFICATION BY THE NSA OF THE COMPLIANCE OF THE COST BASE

SECTION 3.1: SAFETY KPA

3.1 - Safety targets

3.1.1 - Safety KPI #1: Level of Effectiveness of Safety Management achieved by ANSPs

a) Safety national performance targets

b) Detailed justifications in case of inconsistency between local and Union-wide safety targets

c) Main measures put in place to achieve the safety performance targets

Annexes of relevance to this section

ANNEX O. JUSTIFICATIONS FOR THE LOCAL SAFETY TARGETS

3 - PERFORMANCE TARGETS AT LOCAL LEVEL

3.1 - Safety targets

3.1.1 - Safety KPI #1: Level of Effectiveness of Safety Management achieved by ANSPs

a) Safety performance targets

	Number of Air Traffic Service Providers	1

		2020A	2020	2021	2022	2023	2024
		Actual	Target	Target	Target	Target	Target
DSNA	Safety policy and objectives	*C*	C	C	C	C	C
	Safety risk management	*D*	D	D	D	D	D
	Safety assurance	*C*	C	C	C	C	C
	Safety promotion	*C*	C	C	C	C	C
	Safety culture	*B*	B	B	C	C	C
	Additional comments						

b) Detailed justifications in case of inconsistency between local and Union-wide safety targets

** Refer to Annex O, if necessary.*

c) Main measures put in place to achieve the safety performance targets

DSNA decided to put in place following measures:

- Safety culture assessment and promotion;
- Review and update of the hazard identification and analysis processes;
- Management of improvements in safety that address key risks;
- Application of data science to systematically learn from safety II data;
- Update of Safety Risk Target document and corresponding Unit Safety Case.

On the Competent Authority level, the compliance verification of Commission Implementing Regulation (EU) 2017/373 is considered an effective means by inspecting the current safety performance and thus also anticipating if a set target is endangered. As the EoSM results are directly linked to aforementioned regulation's compliance verification, this is clearly depicting an early indicator of EoSM maturity and its necessary improvement.

Furthermore, FABEC Competent Authorities meet regularly (three times a year) in a dedicated working group, the Safety Performance and Risk Coordination Task Force (SPRC TF), to gather Safety Performance data, to compare the ANSPs' performance among each other and to jointly determine whether and where catch-up demand is necessary. Additionally, the SPRC TF has established cooperation with the Standing Committee Safety (SC-SAF) to guarantee a holistic approach including all 7 FABEC ANSPs.

** Refer to Annex O, if necessary.*

SECTION 3.2: ENVIRONMENT KPA

3.2 - Environment targets

3.2.1 - Environment KPI #1: Horizontal en route flight efficiency (KEA)

a) National environment performance targets

b) Detailed justifications in case of inconsistency between National targets and National reference values

c) Main measures put in place to achieve the environment performance targets

Annexes of relevance to this section

ANNEX P. JUSTIFICATIONS FOR THE LOCAL ENVIRONMENT TARGETS

3.2 - Environment targets

3.2.1 - Environment KPI #1: Horizontal en route flight efficiency (KEA)

a) National environment performance targets

	2020A	2020	2021	2022	2023	2024
National reference values	*3.25%*	n/a	2.92%	2.83%	2.83%	2.83%

	2020	2021	2022	2023	2024
	Target	Target	Target	Target	Target
National targets	3.33%	2.92%	2.83%	2.83%	2.83%

b) Detailed justifications in case of inconsistency between National targets and National reference values

** Refer to Annex P, if necessary.*

c) Main measures put in place to achieve the environment performance targets

In addition to the initiatives launched prior to the COVID crisis, the following actions have been taken to deal with the unexpected situation and drive the performance up :

- RAD constraints canceled/modified : more than 300 constraints have been modified that impacted positively the KEA/KEP
- Validation/Research projects to evaluate and improve the performance (ALBATROSS, PROVERT, OCTAVIE)
- Launch of the PBN to ILS project at Orly airport for CDO generalisation, following the PBN to ILS project at CDG airport
- New indicators based on IA/Machine learning to better assess and improve the environmental performance
- Most penalized City pairs improvement (EDDF-LEMD...)

The following initiatives will have an impact on flight efficiency during RP3:

- New sets of night DCT in DSNA airspace.
- Shorter route for traffic to Chambery Airport, SMART SKI process.
- Change in division level of LMH in Paris airspace (dynamic sectorisation).
- XStream in Paris ACC.
- YB sector in Reims (dynamic sectorisation).
- IAG project to improve interface of Marseille ACC with Geneva ACC.
- PBNtoILS at CDG airport : CDO H24. Live trials 1st trimester 2021, deployment end 2023
- Opening of UL10 and UL15 routes to new Airports
- Creation of DCT PENDU-ERADI-OBOKA between LFEE and KUAC

- FUA improvement (see FABEC FUA improvements implementation under end of chap. 3.2.1 c) enhancement of the FUA concept).
- RAD FUA (possibility to relax RAD restrictions by using FUA and have a daily basis)

- Full FRA implementation supported by new ATM system 4-Flight planned by 2025 with COFLIGHT IOP and mid-term conflict detection tools; meanwhile FRA initial implementation in France, which has begun through DCT compliance (PCP) during RP2, will take place end 2021 in Brest ACC Atlantic sector, Bordeaux ACC and in Paris ACC.
Preliminary evaluation of the 1st implementation step (Dec. 2021) shows an improvement of 0,3/0,5% of the KEP (-36 000t CO2/year). KEA should remain stable."

In addition, a full list of projects improving horinzontal flight efficiency within France airspace including additional information might be found in the ERNIP Part 2 (https://www.eurocontrol.int/publication/european-route-network-improvement-plan-ernip-part-2). For further information on FRA development as well as Extended Arrival Management XMAN, please consult the FABEC-webpage under https://www.fabec.eu/strategy/operations.

** Refer to Annex P, if necessary.*

SECTION 3.3: CAPACITY KPA

3.3 - Capacity targets

3.3.1 - Capacity KPI #1: En route ATFM delay per flight

a) National capacity performance targets

b) Detailed justifications in case of inconsistency between National targets and National reference values

c) Main measures put in place to achieve the target for en-route ATFM delay per flight

d) ATCO planning

3.3.2 - Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight

a) National performance targets

b) Contribution to the improvement of the European ATM network performance

c) Main measures put in place to achieve the target for terminal and airport ANS ATFM arrival delay per flight

Annexes of relevance to this section

ANNEX Q. JUSTIFICATIONS FOR THE LOCAL CAPACITY TARGETS

3.3 - Capacity targets

3.3.1 - Capacity KPI #1: En route ATFM delay per flight

a) National capacity performance targets

	2020A	2020	2021	2022	2023	2024
National reference values	*0.61*	n/a	0.18	0.25	0.25	0.25

	2020	2021	2022	2023	2024
	Target	Target	Target	Target	Target
National targets	3.12	0.18	0.25	0.25	0.25

b) Detailed justifications in case of inconsistency between National targets and reference values

Capacity targets for 2021 to 2024 are consistent with the reference values set by NM. There has been no capacity issues in 2020 and beginning 2021 due to the massive drop of traffic after the COVID-19 pandemic outbreak in March 2020 and currently used May 2021 STATFOR forecast for 2024 is at the level of year 2017. Actual July 2021 traffic recovery showed high traffic peaks (similar to 2019 traffic figures) in some sectors still impacted by capacity and staffing issues (remaining ATCO shortages and additional impact of the vaccination plan implementation and isolation measures in Reims and Marseille ACC) and resulted in some delays.

RP2 Staffing and capacity issues have been addressed through progressive implementation of more flexible rostering schemes in French ACCs and additional recruitments initiated end RP2 and by maintaining ATCO hiring to a minimum level in order to prepare traffic recovery end RP3 and in RP4.

However, the new ATM system implementation, which is one of the main level to enhance capacity provision in French ACCs, planned in 2021, 2022 and 2023 could require temporary reductions of available capacity for training, validation, safety and commissionning purposes. Some delays could be generated during these phases and regulations or rerouting planned could be needed and will be coordinated with NM and adjacent ANSPs. As from 2022 the DSNA targets will remain challenging and traffic evolution (faster recovery but also structure of traffic flows and impact of peak hours) could create unforseen bottlenecks.

In addition, new Environmental measures to enhance horizontal and vertical flight efficiency at local and regional scale might somehow challenge and counter balance some capacity improvements leading to trade-offs to be found, keeping in mind that Safety will always be the most prevailing criteria.

During RP1, and at the time of developing RP2 plans, traffic growth was lower than forecasts and its future was uncertain. As a result, the main focus of all stakeholders was on cost-efficiency, and ANSPs aimed to control costs, i.a. through reducing or delaying recruitments and investments. In reality, French airspace - like the rest of Europe - has experienced unforeseen high traffic growth since 2015, as well as significant traffic shifts. DSNA has reacted to this but measures required to increase capacity in a structural manner need time to be implemented and become effective (e.g. hiring and qualifying new ATCO need around 5 years), investment and related operational changes for additional capacity also need several years and may imply provisional capacity reduction for training and safe commissioning purposes. During RP2, DSNA experienced high delays, while some major measures for capacity within DSNA will be implemented during RP3 - but take time to deliver.

In the current context of the crisis and the resulting low taffic demand, ATCO training facilities were subject to COVID restrictions (where in some cases the maximum training capacity was already reached in some facilities). Licenced ATCOs were required to train high traffic load scenarios in simulators to keep proficiency, and on-the-job trainingspots for ab initio's were limited. As a result the capacity building measures were slowed down.

It is still expected that, In the next years, despite extensive efforts, some French ACCs could still be facing an imbalance between traffic and capacity (the targets are challenging and performance will also depend on the traffic evolution which is currently still very uncertain) or staffing issues. Although some good progress is being witnessed in some French ACCs, measures enabling capacity to match the demand will be implemented during or till end RP3.

DSNA has already planned major capacity enhancement measures for RP3 to remedy this situation, including implementing global and local individual ACCs measures agreed with the NM (see list of main contributive measures below and detailed individual measures in the latest NOP 2022 – 2024 edition).

The main drivers such as ATCO hiring and training will progressively deliver benefits during the period.

Major 4-Flight new ATM system implementation in France is planned 2022 in Reims and Marseille, end 2023 in Paris and beginning of RP4 in Brest and Bordeaux. Training phase for ATCO and transition plans for commissioning phase will impact local capacity provision.

Major uncertainties remain regarding further traffic development and volatility. It is important to consider that, if an ACC operates close to its capacity limits, minor variations in traffic levels can lead to significant changes in the amount of delay. The impact can be exponential on delays of the traffic evolution. In some cases, even without more traffic in total, just a local traffic shift is enough to overload sectors and to create a large amount of delays.

Other uncertainties must also be considered, such as the delayed implementation of ATCO hiring plans, the success conversion rates of ab-initios, the relatively high number of upcoming retirements, the outcomes of the next national or local social agreements and, the continuation and local impact of eNM measures/ANSPs summer plan if implemented.

** Refer to Annex Q, if necessary.*

c) Main measures put in place to achieve the target for en-route ATFM delay per flight

Full set of detailed measures implemented by DSNA and contributing to local capacity improvements will be listed in the European Network Operations Plan (NOP) 2022-2024 and updated in the Network Operations Plan 2022-2026 which elaboration work has now started. All capacity measures detailed in the NOP and in this performance plan and their impact on capacity provision, delay forecast, and target setting are based on values provided and calculated by the Network Manager and Eurocontrol in general. This is the case at ANSP level to ensure consistency: DSNA reference values are respectively calculated by NM and consistent with the EU-wide capacity targets. As the DSNA targets strictly stick to the NM reference values, consistency is ensured as well. The capacity profile computed in the NOP – and all the proposed associated measures - are based on the high traffic scenario of the STATFOR Forecast published mid-October 2021 (future versions of the NOP will be updated according to future STATFOR publications, this could increase the gap between the capacity profiles and the PP). In case of assessment of the Performance Plan based on the NOP, due consideration shall be given to the differences between the traffic forecasts. The main measures providing capacity enhancement planned to be implemented by DSNA to achieve the FABEC targets are described here under.

DSNA strategy to address RP2 capacity issues and avoid future delays when traffic will recover is mainly based on a major investment plan aiming at modernizing ATM systems and tools and on a full set of human ressources measures addressing both ATCO shortage and better productivity.

Full data link services will be implemented in all French ACC in 2021 enabling 10% capacity increase (according to the initial assumption of 75% connected flights made by EUROCONTROL).

After ERATO implementation in Brest (2015) and Bordeaux (2016) ACCs which have provided 5 to 25% additional capacity in those ACC in RP2 (even if the effect was absorbed by the traffic increase), 4-Flight new ATM system (including Coflight new FPS) will be implemented in Reims and Marseille ACCs in April 2022 and end November 2022 (20 to 25% additional capacity is expected whithin the three years after commissioning), December 2023 in Paris ACC (20 to 25% additional capacity expected). Final implementation in Brest and Bordeaux ACCs and upgrades in Marseille and Reims ACCs, including mid-term conflicts detection tools, are planned beginning of RP4 (after Paris olympic games) and should deliver additional 10 to 15% capacity in these French ACCs. More detailed desciption and information on these programs and their benefits is given in chapter 2.2: DSNA new major investment 1&4.

Regarding Human ressources, which is the second main driver for enhancing capacity:
- after an increased recruitments and training (over 100 ATCO/year) implemented end RP2, taking into account the traffic drop due to the COVID-19 crisis and related cost saving measures, but also the need to maintain a good quality of service and prepare future traffic recovery, considering also an increase in ATCO retirement as from end or RP3, an adapted recruitment plan should be implemented during RP3 (1 class of 16 ab-initio trainees in 2021, 2 classes of 32 ab-initio trainees in 2022 and 2023 and factoring in traffic evolution 2 to 4 classes of 32 ab-initio trainees in 2024). Those RP2&RP3 hiring plans combined should enable to reduce previous staffing issues in French ACCs and ATCO in OPS in 2024 are expected to be 100 more than in 2019.
- New rostering evolution and flexibility measures have been designed for some French ACCs during RP2 and will be implemented according to traffic evolution.

- New initiatives launched in RP2 and being achieved in RP3 in order to enhance productivity (tranfer of some airspaces under level 195 in Paris, Reims, Bordeaux and Brest ACCs to approaches, local adaption of current rostering), to adapt ATCO initial training and qualification time (new training design, intermediate qualification, use of simulator) reducing at least by 6 months the complete ATCO training by 2025.

All those combined measures should provide between 30 and 50% overall additional capacity during RP3.

This capacity enhancement plan has an impact on the DSNA cost base and the related interdependencies are described and assesssed in chapters 3.4.1 and 3.4.6 regarding cost-efficiency and interdependencies with capacity provision and 3.6 regarding general interdependencies.

More detailed information regarding the DSNA investment plan and its implementation timeline is provided in the updated "DSNA Strategic Master Plan 2019-2025" and in the "French ATM Strategy" (FAS) defined in collaboration with IATA. Both documents, which have been presented to users during the consultation phase, are annexed (Annex C) to this performance plan and are currently under review by DSNA and the airspace users to reflect the impact of the pandemic on the investment plan.

An online version of the current FAS is available: https://www.ecologie.gouv.fr/en/dsna-customer-relations

Change management measures implemented by DSNA to secure the investment plan are addressed in chapter 4.3.

** Refer to Annex Q, if necessary.*

d) DSNA ATCO planning

	Actual	Planning					
Bordeaux (LFBB ACC)	2018	2019	2020	2021	2022	2023	2024
# of additional ATCOs in OPS planned to start working in the OPS room (FTEs)	8	12.6	17	14	17	9	13
# of ATCOs in OPS planned to stop working in the OPS room (FTEs)	5	20	5.8	5	11.7	6.6	9.7
# of ATCOs in OPS planned to be operational at year-end (FTEs)	225.4	218	229.2	238.2	243.5	245.9	249.2

	Actual	Planning					
Brest (LFRRACC)	2018	2019	2020	2021	2022	2023	2024
# of additional ATCOs in OPS planned to start working in the OPS room (FTEs)	18	14.6	10	9	7	11	8
# of ATCOs in OPS planned to stop working in the OPS room (FTEs)	5	11	11.6	3	9	5.9	10
# of ATCOs in OPS planned to be operational at year-end (FTEs)	245.6	249.2	247.6	253.6	251.6	256.7	254.7

	Actual	Planning					
Marseille (LFMM ACC)	2018	2019	2020	2021	2022	2023	2024
# of additional ATCOs in OPS planned to start working in the OPS room (FTEs)	15	16	23	26	22	13	12
# of ATCOs in OPS planned to stop working in the OPS room (FTEs)	22	24.4	15.2	7	13.7	10.6	10.7
# of ATCOs in OPS planned to be operational at year-end (FTEs)	291.8	283.4	291.2	310.2	318.5	320.9	322.2

	Actual	Planning					
Paris (LFFF ACC)	2018	2019	2020	2021	2022	2023	2024
# of additional ATCOs in OPS planned to start working in the OPS room (FTEs)	5	18	16	17	28	14	28
# of ATCOs in OPS planned to stop working in the OPS room (FTEs)	27	32.8	24.6	11	19.8	20.2	18.8
# of ATCOs in OPS planned to be operational at year-end (FTEs)	271.6	256.8	248.2	254.2	262.4	256.2	265.4

	Actual	Planning					
Reims (LFEE ACC)	2018	2019	2020	2021	2022	2023	2024
# of additional ATCOs in OPS planned to start working in the OPS room (FTEs)	3	6	8	14	12	23	23
# of ATCOs in OPS planned to stop working in the OPS room (FTEs)	16	25	17.2	12	17.8	14.2	15.8
# of ATCOs in OPS planned to be operational at year-end (FTEs)	214.4	195.4	186.2	188.2	182.4	191.2	198.4

Additional comments
En Route capacity target has strong interdependencies with Safety and Environment targets and with Cost-efficiency target. Those are addressed in Chapter 3.6 of this performance plan. The financial incentive scheme implemented by France regarding this En Route capacity target is fully described in chapter 5.2.1. Regarding ATCO planning, the French NSA note that there is no legal requirement for ATCO planning figures to be included in the performance plans for RP3. In addition, it questions if ACC level is the right level of detail to be monitored by the EC. Technically the plans are and will always be subject to change, creating the unnecessary burden of tracking, supervising and explaining the figures within the SES performance scheme domain. In addition, the details of the planned evolution of ATCO numbers within an ANSP with several ACCs like DSNA are socially sensitive. However ATCO hiring and assigment is one of the major driver for current capacity and staffing issues solving. Nevertheless, France considers that they cannot be considered as a commitment due to the high level of uncertainties related to such ATCO recruitement plans management. These figures, even when provided on annual basis, can only be regarded as snapshot information, i.e. a situation at one point in time which does not guarantee a realistic view throughout the entire duration of RP3. There are many factors with a high level of uncertainty that have an impact on the ATCO planning: first of all there are classical uncertainty factors of general staff planning like the actual rate of retirement, the absence rate of employees, as well as maternity and parent leave. Moreover, ATCOs mobility has become a severe issue recently, leading to high rate of unforeseen leaves. Another factor which cannot be significantly mitigated further impacting the availability of ATCOs is the number of suitable applicants, the failure rate of the theoretical training at the academies and the success rate during the on-the-job training phases of trainees. The final retirement age is firmly set by law, but in DSNA can only assume a certain amount of people opting out/in. It is common culture now that companies offer varying working hours to enable employees to adjust their work to different phases of their life. Again, ANSPs can only assume a certain amount of people opting in/out. On top of all that, future social agreements will significantly determine the ATCO availability per person and by that the total available FTE. Any benchmarking should also consider that the demographic situation can also evolve and might require to hire to an extent not aligned to the traffic demand. FTE refers to a different amount of working time per year/ANSP. FTE is not harmonised among ANSPs but are subject to national laws and labour regulations. Before the planned ATCO FTE can reasonably be reported in an harmonized way, a revised specification for information disclosure is required, clearly describing how to count ATCOs partially working in projects (another uncertainty factor) and (very important) standardising the assumptions for the uncertainties mentioned above. For an ANSP having more than one national ACC, ATCO hiring plan are managed at ANSP level but changes in traffic volumes or flows and volatility or local human ressources factors can influence the assignment to different ACCs. It should also be noted that some social agreements regarding numbers of additional ATCO to be recruited during RP3 and working conditions (salaries, extra hours, rostering) will be renegociated after the submission of this performance plan. Outcomes of such negociations, in which ANSP and unions but also Ministeries of Finance or Public administration are involved, will have an impact on those figure. Additional information regarding ATCO hiring plans and their impact on cost-efficiency for some ANSP is also provided in chapters 3.4 (cost-efficiency) & 3.6 (interdependencies) and in annexes of this Performance Plan.

3.3.2 - Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight

a) National capacity performance targets

	2020A	2020	2021	2022	2023	2024
	Actual	Target	Target	Target	Target	Target
National level	*0.30*	0.40	0.4	0.4	0.4	0.4

Additional comments

According to the latest EUROCONTROL Forecast published by the Network Manager, for CZ1 (resp. CZ2), the traffic is expected to get back to 2019 levels in 2025 (resp. 2024).

The national capacity targets have been set taking into account the actual RP2 and 2020 performance for terminal capacity. They are set constant over the period, implying that DSNA shall deliver during RP3 a better level of performance than achieved during RP2 accommodating future traffic recovery. This capacity improvement will be implemented on the main French airports during the whole RP3 building on implementations of new ATM terminal systems and/or airspace design projects while local works are also planned during RP3 (on runways, taxiways or towers) as well as international events management (Olympic Games 2024 organized in France from 26th July to 11th August).
Performance targets and achievements in RP2 and 2020:

Terminal capacity yearly target	2015	2016	2017	2018	2019	2020	RP3
Average ATFM delay Target (min/flight)	0,6	0,6	0,6	0,6	0,6	0,4	0,4
CRSTMP pivot value for incentive	*0,15*	*0,15*	*0,15*	*0,15*	*0,15*	*0,1*	*0,1*
Actual All causes delays	0,34	0,59	0,48	0,4	0,42	0,3	N/A
Actual CRSTMP	0,06	0,11	0,17	0,1	0,08	0,07	N/A

Based on these performance [illegible] targets are set at 0.4 mn/flight.

	LFPG-Paris/Charles-De-Gaulle	*0.11*	0.80	0.30	0.30	0.32	0.35
	Airport contribution to national targets	As the first French airport in terms of IFR movements and passengers, Paris-CDG remains the major contributor to the French terminal capacity target. The runway 09L/27R has been renovated during summer 2020 and runway 09/27L will be renovated during Summers 2022 and 2023 with limited impact on capacity. Initial planned implementation of the new tower system (SYSAT) is replaced by an upgarde of the local A-SMGCS system in 2022/2023 without strong expected impact on the capacity. An airspace project implementation aimaing at restructuring CDG airspace to enhance CDO provision is planned in 2023. In this context, ATFM regulations will be needed but minimized to enable ATCO training phases and the adapatation process of such a new airspace project.					
	LFPO-Paris/Orly	*0.96*	1.20	1.00	1.10	1.15	1.20
	Airport contribution to national targets	Some infrastructures works are planned during RP3 (rebuilding at the West of the airport platform, work on taxiways). The work will impact significantly the capacity airside. Besides , a new TWR system, so-called SYSAT, will be implemented as from 2023 for training phases in two steps (eTWR: Winter 2023/2024 ; eAPP: Winter 2024/2025). PBN to ILS is planned in 2023 (West) and 2025 (East) with ATCO training planned as from 2022.					
	LFMN-Nice/Côte d'Azur	*0.13*	0.40	0.20	0.25	0.30	0.30
	Airport contribution to national targets	In terms of enhancement of the capacity, the Collaborative Decision Making (CDM@Nice) concept has been implementated in 2020 and will optimize in RP3 the airside resources such as parkings or taxiways. In addition, an evolution of A-SMGCS will be implemented in RP3.					
	LFLL-Lyon/Saint-Exupéry	*0.03*	0.44	0.10	0.10	0.15	0.10

	Airport contribution to national targets	Lyon Saint-Exupéry airport has no major infrastructure work planned during RP3. As from 2021, a resectorisation project will be implemented in order to enhance CDO and CCD procedures in 2023. No significant impact is expected on capacity for this implementation. New airlines will operate flights at the airport during RP3 (Corsair, Air Sénégal, Anadolujet, Sky Up and Sky Express) but Air France will reduce its activity (2 daily hubs instead of 3 and reduction from 20 average flights per hub down to 14).					
	LFML-Marseille/Provence	*0.10*	0.16	0.10	0.15	0.20	0.20
	Airport contribution to national targets	During RP3, the technical projects concern the renovation of the main runway which has been done in summer 2020, the renovation of the Terminal 1 building between launched in 2020 and planned for final implementation in 2023. Works on Taxiway C innitially planned in 2023 have been cancelled due to COVID-19 crisis. New airline bases will be created during RP3 (Volotea, Ryanair) and new scheduled flights will be operated by Aeroflot and Sun Express. Some ATFM regulations are expected as from 2022 due to staffing issues (retiring staff not replaced.)					
	LFBO-Toulouse/Blagnac	*0.16*	0.30	0.25	0.25	0.25	0.25
	Airport contribution to national targets	A new SID/STAR GNSS network is planned for implementation between 2021 and 2024 in order to address local environment issues (noise) which could slightly decrease the airport capacity. Airspace restructuration in French SW FIR and related changes in procedures and working arangement could generate ATFM regulation in order to address training, experimental validation and implementation needs, combined with a staff reduction due to retirements (-10%).					
	Other airports	*0.37*	0.20	0.37	0.37	0.35	0.35
	LFSB-Bale/Mulhouse						
	Airport contribution to national targets						
	LFBD-Bordeaux/Merignac						
	Airport contribution to national targets						
	LFPB-Paris/Le Bourget						
	Airport contribution to national targets						
	LFRS-Nantes/Atlantique						
	Airport contribution to national targets						
	LFMT-Montpellier/Méditerranée						
	Airport contribution to national targets						
	LFST-Strasbourg/Entzheim						
	Airport contribution to national targets						
	LFOB-Beauvais/Tillé						
	Airport contribution to national targets						
	LFQQ-Lille/Lesquin						
	Airport contribution to national targets						
Airport level	***LFRN-Rennes/St-Jacques***						
	Airport contribution to national targets						
	LFKJ-Ajaccio/Napoléon-Bonaparte						
	Airport contribution to national targets						
	LFLC-Clermont-Ferrand/Auvergne						
	Airport contribution to national targets						
	LFRB-Brest/Bretagne						
	Airport contribution to national targets						
	LFMD-Cannes/Mandelieu						
	Airport contribution to national targets						
	LFKB-Bastia/Poretta						
	Airport contribution to national targets						
	LFBZ-Biarritz/Bayonne-Anglet						
	Airport contribution to national targets						
	LFBP-Pau/Pyrénées						
	Airport contribution to national targets						
	LFPN-Toussus/Le-Noble						
	Airport contribution to national targets						
	LFTH-Hyères/Le-Palyvestre						
	Airport contribution to national targets						
	LFKF-Figari/Sud-Corse						
	Airport contribution to national targets						
	LFLY-Lyon/Bron						
	Airport contribution to national targets						
	LFMP-Perpignan/Rivesaltes						
	Airport contribution to national targets						

	LFBL-Limoges/Bellegarde						
	Airport contribution to national targets						
	LFRH-Lorient/Lann-Bihoué						
	Airport contribution to national targets						
	LFBT-Tarbes-Lourdes/Pyrénées						
	Airport contribution to national targets						
	LFLB-Chambéry/Aix-les-Bains						
	Airport contribution to national targets						
	LFBH-La-Rochelle/Ile de Ré						
	Airport contribution to national targets						
	LFLS-Grenoble/Isère						
	Airport contribution to national targets						
	LFCR-Rodez/Marcillac						
	Airport contribution to national targets						
	LFKC-Calvi/Sainte-Catherine						
	Airport contribution to national targets						
	LFMV-Avignon/Caumont						
	Airport contribution to national targets						
	LFMK-Carcassonne/Salvaza						
	Airport contribution to national targets						
	LFBI-Poitiers/Biard						
	Airport contribution to national targets						
	LFMU-Béziers/Vias						
	Airport contribution to national targets						
	LFRK-Caen/Carpiquet						
	Airport contribution to national targets						
	LFBA-Agen/La-Garenne						
	Airport contribution to national targets						
	LFBE-Bergerac/Roumanière						
	Airport contribution to national targets						
	LFMI-Istres/Le-Tubé						
	Airport contribution to national targets						
	LFRD-Dinard/Pleurtuit-Saint-Malo						
	Airport contribution to national targets						
	LFRG-Deauville/Normandie						
	Airport contribution to national targets						
	LFTW-Nîmes/Garons						
	Airport contribution to national targets						
	LFLP-Annecy/Meythet						
	Airport contribution to national targets						
	LFGJ-Dole/Tavaux						
	Airport contribution to national targets						
	LFRQ-Quimper/Pluguffan						
	Airport contribution to national targets						
	LFOK-Châlons/Vatry						
	Airport contribution to national targets						
	LFMH-Saint-Etienne/Bouthéon						
	Airport contribution to national targets						
	LFSL-Brive/Souillac						
	Airport contribution to national targets						
	LFOT-Tours/Val-de-Loire						
	Airport contribution to national targets						
	LFRZ-Saint-Nazaire/Montoir						
	Airport contribution to national targets						
	LFLX-Châteauroux/Déols						
	Airport contribution to national targets						
	LFAQ-Albert/Bray						
	Airport contribution to national targets						
	LFOP-Rouen/Vallée-de-Seine						
	Airport contribution to national targets						
	LFJL-Metz-Nancy/Lorraine						
	Airport contribution to national targets						

b) Contribution to the improvement of the European ATM network performance

The improvement of the European ATM network performance will take into consideration the gate-to-gate efficiency. Regarding the main French airports, the following supporting projects or enablers have already contributed in some airports and should also contribute in the other ones to this expected enhancement:

- New TWR system, so-called SYSAT,
- PBN to ILS,
- Airport Collaborative Decision Making (A-CDM),
- Departure manager (DMAN), Continuous climb operations (CCO),
- Continuous descent operation (CDO),
- Arrival manager (AMAN/XMAN),
- Time-Based Separation (TBS) and
- Advanced Surface Movement Guidance and Control System (A-SMGCS).

** Refer to Annex Q, if necessary.*

c) Main measures put in place to achieve the target for terminal and airport ANS ATFM arrival delay per flight

During RP3, high performing airport and terminal area operations as well as advanced air traffic services will be implemented for the benefit of the main French airports performance.

However it should be noted that priority given to French en route ACC for ATCO hiring and high level of retirement expected as from end of RP3 will affect the capacity provision at some French airports.

The French Local Single Sky ImPlementation (LSSIP) describes yearly the implementation objectives progress of these main measures which contribute to the ongoing improvement of ATM network performance, according to PCP/CP1 timeline.

** Refer to Annex Q, if necessary.*

SECTION 3.4: COST-EFFICIENCY KPA

3.4 - Cost efficiency targets

3.4.1 - Cost efficiency KPI #1: Determined unit cost (DUC) for en route ANS
3.4.2 - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS
3.4.3 - Pension assumptions
3.4.4 - Interest rate assumptions for loans financing the provision of air navigation services
3.4.5 - Restructuring costs

Annexes of relevance to this section

ANNEX A. REPORTING TABLES & ADDITIONAL INFORMATION (EN-ROUTE)
ANNEX B. REPORTING TABLES & ADDITIONAL INFORMATION (TERMINAL)
ANNEX F. BASELINE VALUES (COST-EFFICIENCY)
ANNEX H. RESTRUCTURING MEASURES AND COSTS
ANNEX M. COST ALLOCATION
ANNEX R. JUSTIFICATIONS FOR THE LOCAL COST-EFFICIENCY TARGETS
ANNEX U. VERIFICATION BY THE NSA OF THE COMPLIANCE OF THE COST BASE

NOTE: The following requirements as per Annex II, 3.3 are addressed in the Annexes A and B:

Point 3.3 (d) on cost-allocation;
Point 3.3 (e) on the return on equity and cost of capital;

Point 3.3 (f) on assumptions for pension costs and interest on debt for other entities, inflation forecast and adjustments beyong IFRS;
Point 3.3 (g) on adjustments to the unit rates carried over from previous reference periods;
Point 3.3 (h) on costs exempt from cost-sharing;
Point 3.3 (k) reporting tables and additional informations.

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

En Route Charging Zone #1 - France

a) RP3 revised cost-efficiency performance targets (IR 2020/1627)

En route charging zone France	Baseline 2014 2014 B	Baseline 2019 2019 B	RP3 revised cost-efficiency targets (determined 2020-2024) 2020/2021 D	 2022 D	 2023 D	 2024 D	2024 D vs. 2014 B	2024 D vs. 2019 B
Total en route costs in nominal terms (in national currency)	1 194 806 122	1 332 578 058	2 668 216 818	1 356 571 126	1 382 095 349	1 407 430 933	17.8%	5.6%
Total en route costs in real terms (in national currency at 2017 prices)	1 209 671 162	1 297 829 674	2 577 332 466	1 293 612 485	1 305 142 346	1 315 459 035	**8.7%**	**1.4%**
Total en route costs in real terms (in EUR2017) [1]	1 209 671 162	1 297 829 674	2 577 332 466	1 293 612 485	1 305 142 346	1 315 459 035	8.7%	1.4%
YoY variation			98.6%	-49.8%	0.9%	0.8%		
Total en route Service Units (TSU)	18 542 996	21 836 563	19 516 384	16 989 960	21 020 185	22 464 259	21.1%	2.9%
YoY variation			-10.6%	-12.9%	23.7%	6.9%		
Real en route unit costs (in national currency at 2017 prices)	65.24	59.43	132.06	76.14	62.09	58.56	**-10.2%**	**-1.5%**
Real en route unit costs (in EUR2017) [1]	65.24	59.43	132.06	76.14	62.09	58.56	**-10.2%**	**-1.5%**
YoY variation			122.2%	-42.3%	-18.5%	-5.7%		

National currency	**EUR**
[1] Average exchange rate 2017 (1 EUR=)	**1.00**

b) Information on the baseline values for the determined costs and the determined unit costs

En route charging zone France	Baseline 2014 2014 B	Baseline 2019 2019 B	Actuals 2014 2014 A	Actuals 2019 2019 A	2014 Baseline adjustments	2019 Baseline adjustments
Total en route costs in nominal terms (in national currency)	1 194 806 122	1 332 578 058	1 194 806 122	1 332 578 058	0	0
Total en route costs in real terms (in national currency at 2017 prices)	1 209 671 162	1 297 829 674	1 209 671 162	1 297 829 674	0	0

Total en route costs in real terms (in EUR2017) [1]	1 209 671 162	1 297 829 674	1 209 671 162	1 297 829 674	0	0
Total en route Service Units (TSU)	18 542 996	21 836 563	18 496 754	21 782 108	46 242	54 455

c) Detailed justifications for the adjustments to the baseline values

c.1) Adjustments to the 2014 baseline value for the determined costs

Number of adjustments	0

c.2) Adjustments to the 2014 service units

Impact of transition to actual route flown	Coefficient M2/M3	Source	Service units
	-	CRCO correction factor May 2019 (on 12 months)	46 242

Other adjustment to the 2014 service units	No

Total adjustments to the 2014 service units	46 242

c.3) Adjustments to the 2019 baseline value for the determined costs

Number of adjustments	0

c.4) Adjustments to the 2019 service units

Impact of transition to actual route flown	Coefficient M2/M3	Source	Service units
	-	CRCO correction factor May 2019 (on 12 months)	54 455

Other adjustment to the 2019 service units	No

Total adjustments to the 2019 service units	54 455

d) Description and justification of the consistency between local and Union-wide cost-efficiency targets

The French NSA views and analysis of the consistency between local and en route Union-wide cost-efficiency targets and detailed justification of deviation due to additional costs of measures to achieve the capacity targets for RP3 are given in the Annex R for France to this plan.

** Refer to Annex R, if necessary.*

e) Where a deviation from the Union-wide performance targets is observed, please indicate if the NSA considers those deviations to be necessary and proportionate under:

Additional costs of measures necessary to achieve the capacity targets for RP3	Yes	Detailed in part 3.4.6 of the performance plan
Restructuring costs planned for RP3	No	

f) Main measures put in place to achieve the targets for determined unit cost (DUC) for en route ANS

The detailed measures put in place to achieve the targets for determined unit cost (DUC) for en route ANS are described in the Annex R for France to this plan.

** Refer to Annex R, if necessary.*

g) Findings of the verification by the NSA (under Art. 22(7) of IR 2019/317) of the compliance of the cost base for charges with the requirements of Article 15(2) of Reg. 550/2004 and Article 22 of IR 2019/317, and where applicable identification of corrections applied to the cost base as a result of this verification

The French NSA performs annually the verification of actual costs i.a.w. Reg EU 2019/317 Art. 22 (7), 23 and 28(7).
Due consideration to the guidance and supporting material developed over 2019 / 2020 by EY on behalf of the EC resulted in an upgrade of the proceedings. The verification conducted in 2021 on 2020 actual costs and the implementation of the overall process will trigger additional finetuning for subsequent years, and fully addressed the similar exercise required as part of RP3 draft performance plan revision.

Transparency is ensured and information is regularly exchanged with the EC, Eurocontrol and airspace users as required by Reg EC 550/2004 and Reg EU 2019/317.
However the detailed presentation of potential findings and related corrections resulting from the NSA oversight in this report would be deemed to be infringing the confidentiality provided for in Reg EC 550/2004 Art. 18.

** Refer to Annex U, if necessary.*

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

Terminal Charging Zone #1 - France - Zone 1

a) RP3 revised cost-efficiency performance targets (IR 2020/1627)

Terminal charging zone France - Zone 1	Baseline 2019 2019 B	RP3 revised cost-efficiency targets (determined 2020-2024) 2020/2021 D	 2022 D	 2023 D	 2024 D	2024 D vs. 2019 B
Total terminal costs in nominal terms (in national currency)	59 137 558	114 049 362	58 939 208	60 366 031	61 594 406	4.2%
Total terminal costs in real terms (in national currency at 2017 prices)	57 630 256	110 312 661	56 375 904	57 265 874	57 925 436	0.5%
Total terminal costs in real terms (in EUR2017) [1]	57 630 256	110 312 661	56 375 904	57 265 874	57 925 436	0.5%
YoY variation		91.4%	-48.9%	1.6%	1.2%	
Total terminal Service Units (TNSU)	603 664	581 099	492 532	560 294	592 207	-1.9%
YoY variation		-3.7%	-15.2%	13.8%	5.7%	
Real terminal unit costs (in national currency at 2017 prices)	95.47	189.83	114.46	102.21	97.81	2.5%
Real terminal unit costs (in EUR2017) [1]	95.47	189.83	114.46	102.21	97.81	2.5%
YoY variation		98.8%	-39.7%	-10.7%	-4.3%	

National currency	**EUR**
[1] Average exchange rate 2017 (1 EUR=)	**1.00**

b) Information on the baseline values for the determined costs and the determined unit costs

Terminal charging zone France - Zone 1	Baseline 2019 2019 B	Actuals 2019 2019 A	2019 Baseline adjustments
Total terminal costs in nominal terms (in national currency)	59 137 558	59 137 558	
Total terminal costs in real terms (in national currency at 2017 prices)	57 630 256	57 630 256	

Total terminal costs in real terms (in EUR2017) [1]	57 630 256	57 630 256	
Total terminal Service Units (TNSU)	603 664	603 664	

c) Detailed justifications for the adjustments to the baseline values

c.1) Adjustments to the 2019 baseline value for the determined costs

Number of adjustments	0

c.2) Adjustments to the 2019 service units

Adjustment to the 2014 service units	No

d) Description and justification of the contribution of the the local targets to the performance of the European ATM network

The French NSA views and analysis of the terminal local cost-efficiency targets are provided in Annex R of this performance plan.

** Refer to Annex R, if necessary.*

e) Main measures put in place to achieve the targets for determined unit cost (DUC) for terminal ANS

The detailed measures put in place to achieve the targets for determined unit cost (DUC) for terminal ANS are described in the Annex R for France to this plan.

** Refer to Annex R, if necessary.*

f) Findings of the verification by the NSA (under Art. 22(7) of IR 2019/317) of the compliance of the cost base for charges with the requirements of Article 15(2) of Reg. 550/2004 and Article 22 of IR 2019/317, and where applicable identification of corrections applied to the cost base as a result of this verification

The French NSA performs annually the verification of actual costs i.a.w. Reg EU 2019/317 Art. 22 (7), 23 and 28(7).
Due consideration to the guidance and supporting material developed over 2019 / 2020 by EY on behalf of the EC resulted in an upgrade of the proceedings. The verification conducted in 2021 on 2020 actual costs and the implementation of the overall process will trigger additional finetuning for subsequent years, and fully addressed the similar exercise required as part of RP3 draft performance plan revision.

Transparency is ensured and information is regularly exchanged with the EC, Eurocontrol and airspace users as required by Reg EC 550/2004 and Reg EU 2019/317.
However the detailed presentation of potential findings and related corrections resulting from the NSA oversight in this report would be deemed to be infringing the confidentiality provided for in Reg EC 550/2004 Art. 18.

** Refer to Annex U, if necessary.*

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

Terminal Charging Zone #2 - France - Zone 2

a) RP3 revised cost-efficiency performance targets (IR 2020/1627)

Terminal charging zone France - Zone 2	Baseline 2019 2019 B	RP3 revised cost-efficiency targets (determined 2020-2024) 2020/2021 D	 2022 D	 2023 D	 2024 D	2024 D vs. 2019 B
Total terminal costs in nominal terms (in national currency)	198 129 879	382 449 681	190 383 772	191 305 181	192 111 965	-3.0%
Total terminal costs in real terms (in national currency at 2017 prices)	192 403 991	368 086 058	180 553 386	179 399 599	178 028 515	-7.5%
Total terminal costs in real terms (in EUR2017) [1]	192 403 991	368 086 058	180 553 386	179 399 599	178 028 515	-7.5%
YoY variation		91.3%	-50.9%	-0.6%	-0.8%	
Total terminal Service Units (TNSU)	547 128	558 444	508 702	529 498	557 181	1.8%
YoY variation		2.1%	-8.9%	4.1%	5.2%	
Real terminal unit costs (in national currency at 2017 prices)	351.66	659.13	354.93	338.81	319.52	-9.1%
Real terminal unit costs (in EUR2017) [1]	351.66	659.13	354.93	338.81	319.52	-9.1%
YoY variation		87.4%	-46.2%	-4.5%	-5.7%	

National currency	**EUR**
[1] Average exchange rate 2017 (1 EUR=)	**1.00**

b) Information on the baseline values for the determined costs and the determined unit costs

Terminal charging zone France - Zone 2	Baseline 2019 2019 B	Actuals 2019 2019 A	2019 Baseline adjustments
Total terminal costs in nominal terms (in national currency)	198 129 879	198 129 879	
Total terminal costs in real terms (in national currency at 2017 prices)	192 403 991	192 403 991	

Total terminal costs in real terms (in EUR2017) [1]	192 403 991	192 403 991	
Total terminal Service Units (TNSU)	547 128	547 128	

c) Detailed justifications for the adjustments to the baseline values

c.1) Adjustments to the 2019 baseline value for the determined costs

Number of adjustments	0

c.2) Adjustments to the 2019 service units

Adjustment to the 2014 service units	No

d) Description and justification of the contribution of the the local targets to the performance of the European ATM network

The French NSA views and analysis of the terminal local cost-efficiency targets are provided in Annex R of this performance plan.

** Refer to Annex R, if necessary.*

e) Main measures put in place to achieve the targets for determined unit cost (DUC) for terminal ANS

The detailed measures put in place to achieve the targets for determined unit cost (DUC) for terminal ANS are described in the Annex R for France to this plan.

** Refer to Annex R, if necessary.*

f) Findings of the verification by the NSA (under Art. 22(7) of IR 2019/317) of the compliance of the cost base for charges with the requirements of Article 15(2) of Reg. 550/2004 and Article 22 of IR 2019/317, and where applicable identification of corrections applied to the cost base as a result of this verification

The French NSA performs annually the verification of actual costs i.a.w. Reg EU 2019/317 Art. 22 (7), 23 and 28(7).
Due consideration to the guidance and supporting material developed over 2019 / 2020 by EY on behalf of the EC resulted in an upgrade of the proceedings. The verification conducted in 2021 on 2020 actual costs and the implementation of the overall process will trigger additional finetuning for subsequent years, and fully addressed the similar exercise required as part of RP3 draft performance plan revision.

Transparency is ensured and information is regularly exchanged with the EC, Eurocontrol and airspace users as required by Reg EC 550/2004 and Reg EU 2019/317.
However the detailed presentation of potential findings and related corrections resulting from the NSA oversight in this report would be deemed to be infringing the confidentiality provided for in Reg EC 550/2004 Art. 18.

** Refer to Annex U, if necessary.*

3.4.3 - Pension assumptions

3.4.3.1 Total pension costs (in nominal terms in '000 national currency)

Pension costs	2020D	2021D	2020/2021D	2022D	2023D	2024D
Total pension costs	203 755	207 314	411 069	209 499	210 761	212 527
En-route activity	165 345	170 219	335 564	172 467	173 962	175 879
Terminal activity	38 410	37 094	75 505	37 032	36 799	36 648
Other activities			-			

3.4.3.2 Assumptions for the "State" pension scheme (in nominal terms in '000 national currency)

Are there different contribution rates for different staff categories? If yes, how many?	Yes-2

Civil pensions	2020D	2021D	2020/2021D	2022D	2023D	2024D
Total pensionable payroll to which this scheme applies	258 601	263 476	522 077	266 261	267 953	270 320
Employer % contribution rate to this scheme	74.6%	74.6%		74.6%	74.6%	74.6%
Total pension costs in respect of this scheme	**192 916**	**196 553**	**389 470**	**198 631**	**199 893**	**201 659**
Number of employees the employer contributes for in this scheme	7 294	7 304		7 361	7 317	7 316

State workers	2020D	2021D	2020/2021D	2022D	2023D	2024D
Total pensionable payroll to which this scheme applies			-			
Employer % contribution rate to this scheme						
Total pension costs in respect of this scheme	**10 839**	**10 760**	**21 599**	**10 869**	**10 869**	**10 869**
Number of employees the employer contributes for in this scheme	274	274		274	274	274

Description on the relevant national pension regulations and pension accounting regulations on which the assumptions are based, as well as information whether changes of those regulations are to be expected during RP3

The ANSP contributes to the "CAS Pensions" (a special budgetary account), which corresponds to a pay-as-you-go scheme. The CAS Pensions was planned by article 21 of the LOLF (organic law related to finance acts) and created by article 51 of 2006 Finance Act.

More specifically, the ANSP contributes to 2 programs of the CAS Pensions: program 741 (civil pensions) and program 742 (State workers)
References:
- Loi organique n° 2001-692 du 1 août 2001 relative aux lois de finances
- Loi n° 2005-1719 du 30 décembre 2005 de finances pour 2006

Pension costs are the sum of the contribution to program 741 and program 742.

Contribution to program 741 is equal to the product of the contribution rate times the contribution base. Contribution base to program 741 corresponds to gross salaries (i.e. not including bonuses or premiums). The Ministry of Economy & Finance decides on the contribution rate to program 741 each year.

The Ministry of Economy & Finance decides on the contribution amount to program 742 each year.

The contribution rates to prog. 741 and the contribution to prog. 742 are both deemed uncontrollable, as they are imposed by the Ministry of Economy & Finance.

Description of the assumptions underlying the calculations of pension costs comprised in the determined costs

An assumption of a flat contribution rate for program 741 has been taken. The rate is flat from year 2013. A pension reform is envisaged at State level. But the date of this reform, if it occurs, is not known at this stage of the development of RP3, nor the form it could take.

Describe the actions taken ex-ante to manage the cost-risk (cost increase) associated with this item, as well as the actions taken to limit the impact of the unforeseen change on the costs to be passed on to airspace users

As explained above, the contribution rate is decided by Ministry of Economy & Finance and has been flat since 2013. No change is foreseen at the moment.

3.4.4 - Interest rate assumptions for loans financing the provision of air navigation services

Select number of loans	Select

Interest rate assumptions for loans financing the provision of air navigation services
(Amounts in nominal terms in '000 national currency)

Other loans	2020D	2021D	2020/2021D	2022D	2023D	2024D
Description	The debt levels presented below are aggregated between the different loan lines granted to the DGAC, as the DSNA does not raise loans itself. They represent the share of borrowings allocated to the ANSP.					
Remaining balance (end of year)	1 398	2 301		2 301	1 946	1 592
Average weighted interest rate %	0.87%	0.63%		0.59%	0.54%	0.50%
Interest amount	12	14	27	14	10	8

Total loans	2020D	2021D	2020/2021D	2022D	2023D	2024D
Total remaining balance	1 398	2 301		2 301	1 946	1 592
Average weighted interest rate %	0.87%	0.63%		0.59%	0.54%	0.50%
Interest amount	12	14	27	14	10	8

3.4.5 - Restructuring costs

3.4.5.1 Restructuring costs from previous reference periods to be recovered in RP3

Restructuring costs from previous reference periods approved by the European Commission?	Select
If yes, number of charging zones concerned	Select

Restructuring costs from previous reference periods to be recovered in RP3 (nominal terms in '000 national currency)

Restructuring costs recovery plan from previous RPs	2020D	2021D	2020/2021D	2022D	2023D	2024D

Additional comments

3.4.5.2 Restructuring costs planned for RP3

Restructuring costs foreseen for RP3?	Select
If yes, number of charging zones concerned	1

a) Overall description of the restructuring measures planned for RP3

b) Where applicable, information on how the restructuring measures make use of shared services, ATM data services and/or how the measures contribute to infrastructure rationalisation

b) Detailed information on the restructuring measures planned for RP3

Number of restructuring measures	Select

	2020D	2021D	2020/2021D	2022D	2023D	2024D
Total restructuring costs by measures ('000 national currency)	-	-	-	-	-	-

c) Detailed information on the restructuring costs by nature by charging zone

Restructuring costs planned for RP3 by nature and by charging zone (nominal terms in '000 national currency)

Click to select	2020D	2021D	2020/2021D	2022D	2023D	2024D
Staff			-			
of which, pension costs			-			
Other operating costs			-			
Depreciation			-			
Cost of capital			-			
Exceptional items			-			
Total restructuring costs	-	-	-	-	-	-

	2020D	2021D	2020/2021D	2022D	2023D	2024D
Total restructuring costs by charging zone ('000 national currency)	-	-	-	-	-	-

Additional comments

3.4.6 - Additional determined costs related to measures necessary to achieve the en route capacity targets

Additional costs of measures necessary to achieve the capacity targets for RP3?	Yes
If yes, number of **en route** charging zones concerned	1

a) Overall description of the measures necessary to achieve the en-route capacity targets for RP3, which induce additional costs

During RP2 the traffic increase and changes in some traffic flows combined with a decrease in operational staff (ATCO in OPS) due to the implementation of cost containment measures during RP1 and RP2 resulted in an increase of en route ATFM delays for DSNA, with a peak of en route average ATFM delay in 2018 (1,82 min/flight, all delay causes included).

DSNA addressed immediatly this issue by implementing short-term measures such as implementing new rostering schemes and enhancing the collaboration with adjacent ANSPs and the Network Manager through the implementation in 2018 and 2019 of rerouting Summer plans in the European core area, lowering the average en route ATFM in 2019 (1,20 min/flight, all delay causes included).

Nevertheless, current staffing and rostering schemes and legacy ATM systems productivity wouldn't enable DSNA to achieve its expected contribution to the FABEC revised RP3 en route capacity targets for 2021 to 2024 (the DSNA reference values computed by the NM) or be ready to accommodate the full traffic recovery in RP4 should the traffic recover as STATFOR scenario 2 traffic forecast has predicted or even at a higher speed or with an increased volatility without implementing during RP3 additional and costly measures. In some French ACCs, traffic ATFM measures have to be implemented as soon as the traffic level reach 80% of 2019 traffic in average (which has already been the case during Summer 2021, for example at Marseille ACC) because of local peak phenomena.

DSNA medium and long-term strategy to address this RP2 staffing issues and avoid future new capacity shortages when traffic will recover is based on a major investment plan aiming at modernizing ATM systems and tools and on a full set of human ressources measures addressing both ATCO shortage and better productivity.

The major drivers to provide additional capacity during RP3 and to prepare traffic recovery in RP4 in France are:

- 1/ The Implementation of new ATM systems enabling major productivity increase (through implementation of full electronic environment, 4D trajectory management, new ATC tools such as MTCD, "What-if solutions", new safety net and HMI...), enhance interoperability and PCP/CP1 compliance while supporting future AAS conops developments.

For DSNA, two major projects have been prioritized ans secured for implementation during RP3 (2022 in Reims and Marseille, 2023 in Paris) and beginning of RP4 (2025 in Brest and Bordeaux), which are coflight (new flight data processing system - FDPS) and 4-Flight (new ATM system). Extensive description of these new ATM systems is given in 2.2 ANSP#2 section (investments 1 & 4) and related investment costs are also provided there.

Implementation of 4-Flight (which includes underlying coflight FDPS) is expected to provide an additional 20 to 25 % capacity at Reims, Paris and Marseille ACCs and an additional 10 to 15% in Brest and Bordeaux ACCs (which have aready implemented full electronic environment and some new ATC tools).

- 2/ The increase of ATCO in OPS for the five DSNA ACCs, which will be the result of ongoing qualification of additional RP2 recruited ATCOs and of maintained recruitment and training of new ab-initio ATCO in RP3 in order to mitigate current staff and capacity shortages at DSNA ACCs but also to prepare for progressive traffic recovery during RP3 and future additional capacity required for RP4.

The detailed costs related to the implementation of additional ATCO in ops and the 2 new ATM systems described above are detailed below.

b) Detailed information on the additional costs of measures necessary to achieve the capacity targets for RP3

Number of capacity measures, which induce additional costs	3

4-Flight system RP3 investment costs	2020D	2021D	2020/2021D	2022D	2023D	2024D
Associated additional costs (nominal terms in '000 national currency)	9 797 000	15 292 000	25 089 000	24 491 000	33 291 000	41 985 000
Description and justification of the additional determined costs of the measure						
As already mentionned in a) these are the en route investment related costs required in RP3 to ensure proper and timely implementation of new French ATM system 4-Flight at DSNA ACCs as detailed in 2.2 Investments_ANSP#2 chapter of this performance plan						

Coflight system RP3 investment costs	2020D	2021D	2020/2021D	2022D	2023D	2024D
Associated additional costs (nominal terms in '000 national currency)	8 112 960	11 006 280	19 119 240	15 297 660	19 806 120	23 141 700
Description and justification of the additional determined costs of the measure						
As already mentionned in a) these are the en route investment related costs required in RP3 to ensure proper and timely implementation of coflight (the 4-Flight new FDPS) at DSNA ACCs as detailed in 2.2 Investments_ANSP#2 chapter of this performance plan.						

Additional ATCO in OPS for RP3 and beyond	2020D	2021D	2020/2021D	2022D	2023D	2024D
Associated additional costs (nominal terms in '000 national currency)	26 550 000	24 804 000	51 354 000	32 557 000	31 726 000	31 323 000
Description and justification of the additional determined costs of the measure						

As already mentionned in a) these are the en route staff costs related to the recruitment and training (during RP3) of additional ATCOs in French ACC required in RP3 to ensure proper and timely staffing and prepare also for additional RP4 capacity provision.

These costs include:

- the yearly staff costs related to additional ATCO in OPS in French ACC (2019 ATCO in OPS as a basis) as presented to the airspace users and the PRB during the consultation meeting:

	ATCO (ICNA)						ATCO (TSEEAC)	
	OPS ATCO ACC+APP	Trainees ATCO ACC+APP	OPS ACC	Trainees ACC	OPS APP	Trainees APP	OPS TWR	Trainees TWR
2019	3017	304	1423	251	1594	53	300	30
2020	3041	295	1453	237	1588	58	300	30
2021	2989	317	1431	252	1558	65	300	30
2022	3060	345	1502	277	1558	68	300	30
2023	3086	390	1505	340	1578	50	300	30
2024	3117	373	1524	327	1592	46	300	30

- the yearly staff costs related to RP3 ATCO recruitments (ab-initio and on the job trainees before qualification) for the French ACCs.

The table below provides the details of the total cost calculation:

	2020	2021	2022	2023	2024	Total RP3	Total RP3 costs for ACC (80%)
Number RP3 ATCO on initial training	303	285	229	164	196	1177	70 620 000 €
Number RP3 ATCO on the job training	51	82	94	127	64	418	33 440 000 €
Number RP3 additional ATCO in OPS	30	8	79	82	101	300	42 900 000 €

RP3 ATCO on initial training cost (75k€)	*18 180 000 €*	*17 100 000 €*	*13 740 000 €*	*9 840 000 €*	*11 760 000 €*
RP3 ATCO on the job training cost (100k€)	*4 080 000 €*	*6 560 000 €*	*7 520 000 €*	*10 160 000 €*	*5 120 000 €*
RP3 additional ATCO in OPS cost (143)	*4 290 000 €*	*1 144 000 €*	*11 297 000 €*	*11 726 000 €*	*14 443 000 €*

RP3 additional ATCO total cost	**26 550 000 €**	**24 804 000 €**	**32 557 000 €**	**31 726 000 €**	**31 323 000 €**	**146 960 000 €**

	2020D	2021D	2020/2021D	2022D	2023D	2024D
Total additional costs of measures ('000 national currency)	44 459 960	51 102 280	95 562 240	72 345 660	84 823 120	96 449 700

c) Detailed information on the additional costs of measures necessary to achieve the capacity targets for RP3 by nature by ANSP

Additional costs of measures necessary to achieve the capacity targets for RP3
(nominal terms in '000 national currency)

	2020D	2021D	2020/2021D	2022D	2023D	2024D
Staff	17 728 365	16 562 500	34 290 865	21 739 450	21 184 562	20 915 465
of which, pension costs						
Other operating costs	18 619 920	14 423 066	33 042 986	17 291 715	17 104 917	16 589 326
Depreciation	4 922 028	15 053 778	19 975 806	25 995 617	37 523 715	48 859 788
Cost of capital	3 189 646	5 062 936	8 252 582	7 318 877	9 009 927	10 085 121
Exceptional items			-			
Total additional costs of measures	-	-	-	-	-	-

	2020D	2021D	2020/2021D	2022D	2023D	2024D
Total additional costs of measures ('000 national currency)	44 459 960	51 102 280	95 562 240	72 345 660	84 823 120	96 449 700

Additional comments

The costs are allocated to the different cost elements, taking into account the following elements:

- 4-flight and Coflight investment costs include depreciation, cost of capital and other operating costs directly related to these investments;

- additional ATCO RP3 costs are broken down between staff costs and associated operating costs.

d) Demonstration that the deviation from the Union-wide targets is exclusively due to the additional determined costs related to measures necessary to achieve the performance targets in capacity

These combined cost amount to during 349 M€ for the whole RP3 period. If those cost were not spent to enable proper ATCO hiring training and qualification and implement the main two new ATM systems, DSNA would not be in a position to address current staffing and capacity issues and shortages and could not achieve revised RP3 en route capacity targets.

In such a case, without the additional costs related to the implementation of the capacity measures described above, the overall RP3 DSNA en route costs will be lower than those requested in average to achieve en route cost-efficiency targets for France.

Additional demonstration material is provided in the Annex R of this performance plan.

SECTION 3.5: ADDITIONAL KPIS / TARGETS

3.5 Additional KPIs / Targets

Annexes of relevance to this section

ANNEX J. OPTIONAL KPIs AND TARGETS

SECTION 3.6: DESCRIPTION OF KPAS INTERDEPENDENCIES AND TRADE-OFFS INCLUDING THE ASSUMPTIONS USED TO ASSESS THOSE TRADE-OFFS

3.6 - Description of KPAs interdependencies and trade-offs including the assumptions used to assess those trade-offs

- 3.6.1 - Interdependencies and trade-offs between safety and other KPAs
- 3.6.2 - Interdependencies and trade-offs between capacity and environment
- 3.6.3 - Interdependencies and trade-offs between cost-efficiency and capacity
- 3.6.4 - Other interdependencies and trade-offs

3.6 - Description of KPAs interdependencies and trade-offs including the assumptions used to assess those trade-offs

3.6.1 - Interdependencies and trade-offs between safety and other KPAs

a) Do the measures to reach the targets in the different KPAs require changes in the ANSP functional system that have safety implications? If yes, which mitigation measures are put in place?

Other KPAs may require changes directly impacting the ANSP functional system. Some changes have already been identified e.g. new procedures for greener routes or modernization of systems to comply with Common Project 1 (CP1) requirements (KPA environment), additional changes may be identified at a later stage.
Improving and maintaining a mature SMS (for example human resources / staff requirements) does also have an indirect impact on other KPAs (especially KPA cost efficiency). An important effort is required to train, maintain and operate experience feedback mechanisms (investigators, local and corporate safety committees, automatic loss of separation detection tools, improved runway alerting systems like ASMGCS) as well as functional system changes' analysis (development of safety barrier models etc.).
In all cases, changes are subject to Commission Implementing Regulation (EU) 2017/373 including its detailed requirements for changes to the functional system.

On the ANSP level, the current safety management processes requested by aforementioned Common Requirements do ensure that safety levels are not compromised when implementing airspace changes or changes to the ATM/ANS functional system. Changes to the ATM/ANS functional system could be required to reach the targets in the different KPAs. A mitigation layer exists as these changes will require approval from the Competent Authorities. Furthermore, changes might also be necessary on the organisational level (i.e. safety training or safety culture initiatives).

On the Competent Authority level, the changes to the ANSP functional system are closely supervised. The precise changes' scope as well as interfaces are challenged during this process to ensure that all essential information is available to avoid any unacceptable safety implications right from the start of the change management procedure. The combination of changes due to measures to reach the targets in the different KPAs may not have any negative safety implication and overall safety should improve in line with the safety targets. Furthermore, change management procedures and any change thereto require prior approval by the Competent Authority. These procedures are also inspected by EASA in the frame of the ongoing standardisation (STD) visits. Besides, the Competent Authority oversees the Safety Management requirements covered by Commission Implementing Regulation (EU) 2017/373 Part.ATM/ANS and Part.ATS specifically. That ensures a high standard of safety performance management.

b) What are the main assumptions used to assess the interdependencies between safety and other KPAs?

Safety constitutes the highest priority and its attainment cannot be compromised by adverse interdependencies with other key performance areas. Thus, it is always part of any other KPA's consideration. The achievement of an acceptable level of safety has the highest priority. Safety will naturally be balanced with other strong requirements linked to environment, production pressure and finances. In all change paths undertaken, this balance is addressed and ensured to guarantee that this balance stays acceptable. Sometimes this leads to a non-acceptance of change proposals, based on one of these requirements. FABEC ANSPs have a safety target for their operations, that, if quantifiable, helps to establish a bottom line for safety.

On the Competent Authority level, the mitigation measures described in a) address the assumptions used to assess the interdependencies between safety and other KPAs.

c) What metrics, other than those indicators described in the Regulation, are you monitoring during RP3 to ensure targets in the KPAs of capacity , environment, and cost-efficiency are not degrading safety?

DSNA, together with other FABEC ANSPs have defined own (K)PIs to monitor their performance by means of other ad-hoc and flexible indicators than those described in Commission Implementing Regulation (EU) 2019/317. These are also crossing the KPAs to highlight the interface and interdependency between safety and other KPAs. FABEC ANSPs have a dashboard including safety data as well as lagging and leading indicators. For instance: there is an indicator that monitors the number of runway crossings at a certain crossing to ensure achieving the safety objective(s). These indicators could typically indicate production pressure. Similarly, there are parameters for the driving direction of runway inspections, separation on final, etc. Besides, there is a common FABEC dashboard which is kept up-to-date by the SPM working group reporting to the SC-SAF. A yearly aggregation of SMI, RI and EoSM results is done under the leadership of the DSNA and analysed both by SPM and SC-SAF. The publication on a website is foreseen in the near future.

Moreover, FABEC ANSPs also hold performance board meetings to monitor indicators relevant to their Integrated Safety Management System (Safety, Security, Quality, Environment). Indicators, issues and possible trade-offs are discussed, explained and sorted out by board members under the leadership of the ANSPs' management.

On the Competent Authority level, the Safety Management System's components as described in Commission Implementing Regulation (EU) 2017/373, Part-ATS, ATS.OR.200 are subject to the ongoing oversight. These are: Safety policy and objectives, safety risk management, safety assurance and safety promotion.

d) Do targets allow trade-offs in operational decision making to managing resource shortfalls in order to preserve safety performance? Do targets restrict the release of staff for safety activities, such as training?

In terms of resources normally the operational staff is the bottleneck. Of course, the acceptable safety performance is priority 1, second is safety training, third is the change management of changes to the functional ATM system(s). No non-safety target will be able to restrict safety or safety activities. Operational safety trade-offs (day to day operations at unit level) are very different in nature and content to safety performance trade-offs at organisational level. Operational safety is the main driver but consequences of corporate decision making is also tracked and monitored. Specific processes are required to manage the operational HR's needs. Furthermore, budget issues are scrutinized because of civil service specific standards and rules.

e) Have the States reviewed the ANSP financial and personnel resources that are needed to support safe ATC service provision through safety promotion, safety improvement, safety assurance and safety risk management after changes introduced to achieve targets in other KPAs? Please, explain.

On the ANSP level, DSNA has committed itself by declaring to have sufficient resources to perform the required safety activities in their day-to-day operations. DSNA is state-owned and hence the French states oversees the financial and personnel plan to ensure all necessary activities are carried out.

On the Competent Authority level, the Safety Management System's components as described in Commission Implementing Regulation (EU) 2017/373, Part-ATS, ATS.OR.200 are subject to the ongoing oversight. These are: Safety policy and objectives, safety risk management, safety assurance and safety promotion.

Besides, the Management System requirements for ATS providers laid down in Commission Implementing Regulation (EU) 2017/373 Part.ATM/ANS and Part.PERS are strictly overseen by the Competent Authority. These include, but are not limited to, the following aspects: providing appropriate human and financial resources by the senior management, ensuring sufficient resources allocated to the compliance monitoring function and safety manager function, allocation of appropriate resources to achieve the planned safety performance by the safety review board, appropriate resources covered in the Stress Management and Fatigue Management policies. Apart from this, the Competent Authority supervises the annual plan, the resulting annual report and the (5 years) business plan to ensure that financial and personnel resources are dealt with proportionally.
Furthermore, the mitigation measures described in a) address the assumptions used to assess the interdependencies between safety and other KPAs.

3.6.2 - Interdependencies and trade-offs between capacity and environment

Following traffic increases, the FABEC KEA indicator monitored in RP2 and beginning of RP3 increased between 2014 and 2016. From 2017 onwards the KEA performance has stabilised as a balance has occurred between continued strong traffic growth and the introduction of operational changes such as FRA, but this may also be related to a change in the KEA calculation method. In 2020 KEA has decreased with the massive drop of traffic as from the ourbreak of the COVID-19 pandemic.

KEA achievements are clearly influenced by traffic level and volatility (the yearly profile is clearly influenced by seasonality and number of flights). ATCOs can offer more direct routing with low traffic and facing no capacity issues. Nevertheless, with the capacity and staffing issues incurred by DSNA in the core area, delays increased significantly during RP2, deteriorating flight efficiency.

In addition NM summer initiatives introduced as from 2018 summer introduced massive rerouting which have impacted DSNA flight efficiency in order to mitigate capacity issues. As stakeholders put priority on reducing delays, this comes at a cost to environmental performance.

3.6.3 - Interdependencies and trade-offs between cost-efficiency and capacity

As it has been described in chapter 3.3.1, main capacity improvements during RP3 and following RP4 will be provided through measures such as:

- Implementation new ATM systems or upgrades of legacy systems enabling new concepts of operations or introducing new ATC tools (safety nets, stripless, DLS, 4D trajectory, MTCD, sector less ATM, new HMI etc.) such as the new 4-FLIGHT ATM system;

- ATCO hiring plans;

- More flexible rostering and new working conditions for ATCO.

All these measures have an impact on the costs base of DSNA: on staff costs for additional recruitments or social agreements, on depreciation costs and costs of capital regarding new investments.

DSNA detailed interdependencies between cost-efficiency and capacity are addressed in chapter 3.4 and in Annex R of this performance plan.

3.6.4 - Other interdependencies and trade-offs

Regarding Environment performance, capacity is not the only performance area influencing KEA achievement; many other factors, some of them out of the full scope of responsability of ANSPs, can impact a good flight efficiency.

Among the main factors can be listed:

- Further implementation of FUA in the airspaces most affected by military activities is expected to bring a certain improvement of flight efficiency. However, the current ERNIP edition includes only a few project (out of around 300) focusing on FUA improvement. In addition, benefits from FUA implementation will only be significantly perceivable if the level of military activity/training will remain unchanged in the years to come. Increase of military activity has an impact on flight efficiency. Nevertheless, FABEC has set up a FUA harmonization and implementation initiative with its ANSPs through a permanent joint CIV-MIL task-force.

- Weather has been becoming more extreme and unpredictable; and so has its impact on air traffic (to reflect the real situation the TMA cylinder should be extended from 40NM to 200NM, therefore excluding the constraints set for arrival and departure from the calculation of en-route flight efficiency).

- Structure of the traffic: more overflights automatically means a better HFE. FABEC area, however, contains the busiest European airports (FRA, CDG, AMS), and Heathrow in close proximity.

- In contrast to the aim to minimise emissions, Airspace users are not obliged to fly the shortest route. One example of a reason why they might not do this is when longer but cheaper route is available due to different unit rates across Europe. Neither are they obliged to provide a reason for not flying the shortest route. In addition the new En Route charging calculation according to actual flown route could have an impact on Airspace users choice regarding routes, which will influence flight-efficiency in a magnitude which is still unknown.
- The NM and the ANSPs have optimized their operations with respect to rolling UUP and Procedure 3, bringing more flexibility and more options for AOs to fly shorter routes. Unfortunately, the major part of AOs are not able to seize these opportunities because they file their flight plans more than 6-7 hours in advance. As a consequence, when a TRA is released only 3 hours in advance, they are not able to update their flight plans. As long as the flown track follows the flight plan trajectory, this lack of AOs' reactivity has a negative impact on flight efficiency and potentially on capacity (for instance if several flight plans are filed in a region with a capacity bottleneck whereas if these flight plans were updated, the corresponding flights would be rerouted outside this area).

More in general, we note that the performance scheme does not cover all KPAs and indicators that are relevant to ANS performance, and indeed to air transport as a whole. Performance areas such as security, sustainability, business continuity, etc are also important, and activities undertaken to address performance in these areas can affect performance in relation to the KPIs and targets included in this plan, e.g. improving security will come at a cost. Similarly, within the KPAs of safety, capacity, environment and cost efficiency there are (both local and European) issues or priorities that require action even without target setting - compare the PIs included in the performance and charging regulation. As an example, it may be necessary to invest in detecting and/or preventing runway incursions or airspace infringements. This will also affect cost efficiency but it will not contribute to meeting any of the targets in this plan.

SECTION 4: CROSS-BORDER INITIATIVES AND SESAR IMPLEMENTATION

4.1 - Cross-border initiatives and synergies

4.1.1 - Planned or implemented cross-border initiatives at the level of ANSPs

4.1.2 - Investment synergies achieved at FAB level or through other cross-border initiatives

4.2 - Deployment of SESAR Common Projects

4.3 - Change management

Annexes of relevance to this section

ANNEX N. CROSS-BORDER INITIATIVES

4.1 - Cross-border initiatives and synergies

4.1.1 - Planned or implemented cross-border initiatives at the level of ANSPs

Number of cross-border initiatives	10

Note: menu will only allow selection of a maximum of 10 initiatives, however, 11 initiatives are listed below.

Initiative #1	
Name	DSNA, ENAV & Skyguide partners to deliver Coflight Cloud Service (CCS), the first ADSP (ATM Data Service Provider)
Description	The aim of the program is to implement a Flight data processing service and all related support services for testing, training, operational and contingency purpose. The Flight Data Processing System offered remotely "as a service", to interconnect within an innovative Service Oriented Architecture like Skyguide Virtual Center. This advanced technology and architectural interface is implemented jointly by DSNA, ENAV and skyguide. Coflight Cloud Services fosters interoperability required between the Europeans ANSPs, particularly in the FABEC while enabling consolidation of ATM systems in FABEC in an open architecture framework.
Expected performance benefits	SAF+ CAP+ CEF+ ENV+

Initiative #2	
Name	Dynamic Cross-border airspace shared by DSNA and skyguide
Description	Implementation of a French/Swiss cross-border airspace at Geneva Airport. Dependent on the RWY in use Swiss and French controllers operate a dynamically adapted cross border airspace.
Expected performance benefits	CEF+ ENV+

Initiative #3	
Name	The 14 ACCs of FABEC are internally benchmarked with the focus on sector level capacity
Description	The study explorers factors influencing capacity provision at all 14 FABEC ACCs. In contrast to available benchmark reports this is done on a unusual detailed level and unusual large data set. Local supervisors, ATCOs and ATFM experts along with FABEC performance experts analyse the operational environment, the technical environment as well as staff planning routines to provide a deeper understanding of performance differences and to identify and exchange best practices.
Expected performance benefits	CAP+

Initiative #4	
Name	Framework for Cross-Border Business Continuity / Contingency
Description	Establish the appropriate framework at FABEC level supporting the development of cross-border business continuity or contingency procedures. FABEC ANSPs will check the requirements to support each other with bilateral arrangements in case of outages of an ACC (e.g. frequency outage, power failure, etc.). Some procedures are already in place. Langen ACC can deliver/ take over traffic at the border directly to/ from Liège Approach in case of an outage at Brussels ACC. The same is done with DSNA and Charleroi Approach.
Expected performance benefits	SAF+ CAP+ CEF+ ENV+

Initiative #5	
Name	Harmonisation of regulator framework for unmanned aircraft systems
Description	Initiative to harmonise separation standards to unmanned aircraft systems (UAS/ drones). In the framework of the initiative any kind of factors are analysed that may impair safety and operational performance. The objective is to avoid procedure diversification within FABEC and prepare a consolidated regulatory approach.
Expected performance benefits	CEF+

Initiative #6	
Name	RAD Optimisation Workshops
Description	The Route Availability Document (RAD) is a common reference document containing the policies, procedures and description for route and traffic orientation. The RAD is part of the European Route Network Improvement Plan (ERNIP). It also includes route network and free route airspace utilisation rules and availability. The RAD is also an Air Traffic Flow and Capacity Management (ATFCM) tool that is designed as a sole-source flight-planning document, which integrates both structural and ATFCM requirements, geographically and vertically. FABEC's CRM group organises regular meetings to optimise and harmonise the documents. Airspace users, NM representatives and FABEC's RAD coordinators optimise and harmonise RAD restrictions and increase understanding on users side. During the second half of 2021 a 'Dynamic RAD Progress' trial will take place with, amongst others, DSNA and Skyguide.
Expected performance benefits	CAP+ ENV+

Initiative #7

Name	Joint States/ ANSPs FUA Task Force
Description	The Task Force of State and ANSP experts, referred to as the joint FUA Task Force (JTF), supports the work of the Airspace Committee in developing an harmonised application of the ASM/FUA concepts within FABEC and in providing guidance to FABEC ANSPs on an harmonised application of FUA Level 2 and Level 3. The tool sub-group is focussing on the usage of available tools. The JTF is established with the general objectives of providing ASM/ FUA expertise to the AC and performing tasks for the AC in the area of ASM/FUA, with the end goal to develop proposals for the harmonisation of the application of ASM/ FUA concept at all three levels, in order to enhance airspace utilisation and contribute to performance and network improvements in particular in the FABEC core area and in cross-border areas of the FABEC airspace.
Expected performance benefits	CAP+ ENV+

Initiative #8	
Name	FABEC/Network Manager Airspace Design Coordination Group (FABEC/NM ADCG)
Description	For the mid-term, the NM Action Plan aims to tackle existing bottlenecks, address future capacity, and flight efficiency challenges, with a renewed airspace structure, in particular for the FABEC. The Airspace Design Coordination Group (ADCG) has been set up with the objective to make the link between the FABEC States and ANSPs bodies/structures (AC, SC OPS and ODG) and the NM RNDSG in charge of conducting the airspace study, on a seamless approach basis regardless of national borders. The new airspace structure will address current and future structural airspace bottlenecks and will include the new airspace requirements, which had to been declared by the States no later than May 2019. The implementation plan was postponed several times due to the COVID crisis but all potential projects are now included in the 'Airspace Catalogue', as annex to ERNIP part 2, even though with a status 'proposed'.
Expected performance benefits	CAP+ ENV+

Initiative #9	
Name	The Cooperative Optimisation of Boundaries, Routes and Airspace (COBRA)
Description	The two upper area control centres in Karlsruhe (DFS) and Maastricht (Eurocontrol) have launched an initiative to optimise the transfer of flights at the boundary of their areas of responsibility. The project is developing measures in the Central, East and West modules for the adjacent sectors along the geographical borders between Germany, Belgium, Luxembourg and France. The objective of the planned modifications is to reduce the complexity of air traffic in these airspaces for controllers. This will in turn optimise workflows, which will increase safety and airspace capacity as well as shorten the routes.
Expected performance benefits	SAF+ CAP+ ENV+

Initiative #10	
Name	Extended Arrival Management (XMAN)
Description	With the need to focus on activities which are directly answering current operational needs and the heavy constraints which the still ongoing COVID-19 crisis imposes on all ANSPs, FABEC ANSPs were forced to re-prioritise their FABEC XMAN Activities. As it remains an important initiative for when traffic recovers, most ANSPs continue with implementation as planned or with minor postponement. The maximum benefit for Airlines is therefore still expected to be substantial.
Expected performance benefits	CAP+ ENV+ CEF+

Initiative #11	
Name	Free Route Airspace (FRA)
Description	The project work on Direct Routings and Free Route is in a rolling status with a yearly update of the implementation report and implementation plan. The four involved FABEC ANSPs (MUAC, DFS, DSNA and Skyguide) will have FRA 24h by end 2025. Additional FRA improvements are also planned with several cross border operations for e.g. Karlsruhe/Munich/Zurich, Karlsruhe/MUAC, Karlsruhe/Vienna and Geneva/Zurich.
Expected performance benefits	CAP+ ENV+

Additional comments
France, together with its partners from the FABEC States are focusing their work in order to ensure that FABEC airspace management aims at supporting both the performance of operations within FABEC airspace, in particular defined RP3 targets, and the Military Mission Effectiveness achievement. The functional airspace block worked as facilitator for not just the abovementioned larger undertakings but also to many more smaller initiatives. Many initiatives are born when the CEOs, OPS directors, technical directors, the Head of ACC group or performance experts plan jointly future performance in their regular meetings. Studies, tests and deployment then, usually starts with one or two collaborating ANSPs and if successful are joined by the FABEC partners. FABEC offers a more comprehensive picture on Operational planning on this site: https://www.fabec.eu/opmap/

4.1.2 - Investment synergies achieved at FAB level or through other cross-border initiatives

Details of synergies in terms of common infrastructure and common procurement
Generally speaking, it has to be noted that the financial impact of such common procurement or common infrastructure is hard to determine as soon as an alliance starts to act. Practically, on a yearly basis, DSNA as a member of the FABEC SC TECH SYS discusses its investment plan for CNS equipment with FABEC partners in order to investigate possibilities for a common procurement. This already resulted in cooperation between FABEC partners on many technical projects and investment synergies are achieved. Such technical synergies are listed in chapter 4.1.1 above.

4.2.2 - Common Project One (CP1)

CP1 ATM Functionality (CP1-AF) / Sub functionality (CP1-s-AF)	Recent and expected progress
CP1-AF1 - Extended AMAN and Integrated AMAN/DMAN in High-Density TMAs	
CP1-s-AF1.1 AMAN extended to en-route airspace	
Paris-CDG	-MP Obj ATC07.1 AMAN Tools and Procedures - Functionality is already operational at Charles de Gaulle since March 2012. -MP Obj ATC15.1 Information Exchange with En-route in Support of AMAN - France uses MAESTRO to support AMAN operations for many years. MAESTRO is already compliant to use in En-Route and is a level1 system, already implemented in the Paris ACC to support AMAN operations of CDG. -MP Obj ATC15.2 - Arrival Management Extended to En-route Airspace) - The current situation (Paris CDG/ORY AMAN extended into Paris ACC) is already compliant with the PCP and the operational needs.
Paris-Orly	-MP Obj ATC07.1 AMAN Tools and Procedures - Functionality is already operational at Orly Airport since March 2012. -MP Obj ATC15.1 Information Exchange with En-route in Support of AMAN - France uses MAESTRO to support AMAN operations for many years. MAESTRO is already compliant to use in En-Route and is a level1 system, already implemented in the Paris ACC to support AMAN operations of Orly. -MP Obj ATC15.2 - Arrival Management Extended to En-route Airspace) - The current situation (Paris CDG/ORY AMAN extended into Paris ACC) is already compliant with the PCP and the operational needs.
Nice Cote d'Azur	-MP Obj ATC07.1 AMAN Tools and Procedures - Functionality is already operational at Orly Airport since June 2015. -MP Obj ATC15.1 Information Exchange with En-route in Support of AMAN - France uses MAESTRO to support AMAN operations for many years. At Nice Airport, the implementation is being considered by mid 2019. -MP Obj ATC15.2 - Arrival Management Extended to En-route Airspace) - The deployment of AMAN2SE in Marseille ACC guarantees PCP compliance, except for the flow coming from North-East via Milano ACC. Initiation of an XMAN project with ENAV is ongoing with 10% of progrss, to cover this North-East flow.
CP1-s-AF1.2 AMAN/DMAN Integration	
Paris-CDG	- MP Obj ATC19: current progress 0% (source LSSIP 2020)
Nice Cote d'Azur	- MP Obj ATC19: current progress 0% (source LSSIP 2020)
CP1-AF2 - Airport Integration and Throughput	
CP1-s-AF2.1 DMAN synchronised with predeparture sequencing	
Paris-CDG	-MP Obj AOP05 Airport CDM - CDG airport is labellized "Airport-CDM" since 16th November 2010; CDM procedures in adverse condition implemented 02/2013; FUM process implemented by end 2013. -MP Obj AOP12 Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC) – The digital systems such as electronic flight strips (EFS) are implemented as part of DMAN deployed in February 2013.
Paris-Orly	-MP Obj AOP05 Airport CDM - Orly airport has been certified as a CDM airport on November 2016. -MP Obj AOP12 Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC) – The digital systems such as electronic flight strips (EFS) are implemented as part of DMAN deployed in November 2016.
Nice Cote d'Azur	-MP Obj AOP05 Airport CDM - Nice Airport has been certified as a CDM airport in September 2020 -MP Obj AOP12 Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC) – The digital systems such as electronic flight strips (EFS) are implemented as part of DMAN deployed . DMAN Nice is in operation since 25 November 2019
CP1-s-AF2.2.1 Initial airport operations plan (iAOP)	

Paris-CDG	-MP Obj AOP11: partially completed depending on expected requirement about ANSP data to be shared (source LSSIP 2020)
Paris-Orly	-MP Obj AOP11: partially completed depending on expected requirement about ANSP data to be shared (source LSSIP 2020)
Nice Cote d'Azur	-MP Obj AOP11: partially completed depending on expected requirement about ANSP data to be shared (source LSSIP 2020)
CP1-s-AF2.2.2 Airport operations plan (AOP)	
Paris-CDG	-MP Obj AOP11: partially completed depending on expected requirement about ANSP data to be shared (source LSSIP 2020)
Paris-Orly	-MP Obj AOP11: partially completed depending on expected requirement about ANSP data to be shared (source LSSIP 2020)
Nice Cote d'Azur	-MP Obj AOP11: partially completed depending on expected requirement about ANSP data to be shared (source LSSIP 2020)
Lyon Saint-Exupéry	-MP Obj AOP11: partially completed depending on expected requirement about ANSP data to be shared (source LSSIP 2020)
CP1-s-AF2.3 Airport safety nets	
Paris-CDG	-MP Obj AOP12 Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC) - The ATC clearances monitoring will be supported by the new system SYSAT planned to be implemented in Paris CDG airport. The current percentage of implementation is to be assessed with new CP1 requirement.
Paris-Orly	-MP Obj AOP12 Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC) - The ATC clearances monitoring will be supported by the new system SYSAT planned to be implemented at Paris Orly Airport. The current percentage of implementation is to be assessed with new CP1 requirement.
Nice Cote d'Azur	-MP Obj AOP12 Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC) - The ATC clearances monitoring will be supported with the new system SYSAT planned to be implemented at Nice Airport. The current percentage of implementation is to be assessed with new CP1 requirement.
CP1-AF3 - Flexible Airspace Management and Free Route Airspace	
CP1-s-AF3.1 Airspace management and advanced flexible use of airspace	- MP Obj AOM19.1 ASM Support Tools to Support Advanced FUA (AFUA) - French AMC (called CNGE) is using its own appropriate support systems (e.g. COURAGE, ...) since the year 2000. - MP Obj AOM19.2 ASM Management of Real-Time Airspace Data - The current implementation
CP1-s-AF3.2 Free route airspace	- MP Obj AOM21.2 Free Route Airspace - Free Route Implementation is being studied in the FABEC framework and in collaboration with NM. Initial FRA is expected to be fully implemented by the end of 2021, full free route implementation percentage is to be assessed with the next monitoring view
CP1-AF4 - Network Collaborative Management	
CP1-s-AF4.1 Enhanced short-term ATFCM measures	- MP Obj FCM04.1 Short Term ATFCM Measures (STAM) - Phase 1 - Process is completed in the 5 ACCs (Bordeaux, Brest, Paris, Reims and Marseille) -MP Obj FCM04.2 Short Term ATFCM Measures (STAM) - Phase 2 - DSNA has launched a program
CP1-s-AF4.2 Collaborative NOP	- MP Obj FCM05 Interactive Rolling NOP - Practical implementation of this objective by all concerned stakeholders is currently on-going. However, the provision of AOP to NM to perform the integration of the AOP with the NOP is only planned in a second phase for 2021. The current percentage of
CP1-s-AF4.3 Automated support for traffic complexity assessment	Different DSNA tools are available to support traffic complexity assesment. The current percentage of implementation is estimated at 85%
CP1-s-AF4.4 AOP/NOP integration	Different DSNA tools are available to support AOP/NOP integration. The current percentage of implementation is estimated at 33%
CP1-AF5 - SWIM	
CP1-s-AF5.1 Common infrastructure components	- MP Obj INF08.1 Information Exchanges using the SWIM Yellow TI Profile - DSNA has started consuming various NM services offered on B2B concerning Flight and Network information, a first step towards full implementation. Progress is monitored through the local common infrastructure

CP1-s-AF5.2 SWIM yellow profile technical infrastructure and specifications	- MP Obj INF08.1 Information Exchanges using the SWIM Yellow TI Profile - DSNA has started consuming various NM services offered on B2B concerning Flight and Network information, a first step towards full implementation. Progress is monitored through the local common infrastructure
CP1-s-AF5.3 Aeronautical information exchange	- MP Obj INF08.1 Information Exchanges using the SWIM Yellow TI Profile - DSNA has started consuming various NM services offered on B2B concerning Flight and Network information, a first step towards full implementation. Progress is monitored through the local common infrastructure
CP1-s-AF5.4 Meteorological information exchange	- MP Obj INF08.1 Information Exchanges using the SWIM Yellow TI Profile - DSNA has started consuming various NM services offered on B2B concerning Flight and Network information, a first step towards full implementation. Progress is monitored through the local common infrastructure
CP1-s-AF5.5 Cooperative network information exchange	- MP Obj INF08.1 Information Exchanges using the SWIM Yellow TI Profile - DSNA has started consuming various NM services offered on B2B concerning Flight and Network information, a first step towards full implementation. Progress is monitored through the local common infrastructure
CP1-s-AF5.6 Flight information exchange (yellow profile)	- MP Obj INF08.1 Information Exchanges using the SWIM Yellow TI Profile - DSNA has started consuming various NM services offered on B2B concerning Flight and Network information, a first step towards full implementation. Progress is monitored through the local common infrastructure
CP1-AF6 - Initial Trajectory Information Sharing	
CP1-s-AF6.1 Initial air-ground trajectory information sharing	- MP Obj ITY-AGDL Initial ATC Air-Ground Data Link Services - Data link functions are provided in accordance with DLS IR. (source LSSIP 2020). - Participation in PJ38 will prepare use of trajectory information data especially for display to the controller. The respective ATS system will be upgraded accordingly. It is expected that CP1 AF6.1 will be implemented before December 2027.
CP1-s-AF6.2 Network Manager trajectory information enhancement	N/A
CP1-s-AF6.3 Initial trajectory information sharing ground distribution	- Participation in PJ38 will prepare trajectory information data sharing through a common ADS-C service, DSNA is expected be a user of this common ADS-C service that is expected to be provided by the future Data-link Service Provider. It is expected that CP1 AF6.3 will be implemented before December 2027.

4.3 - Change management

DSNA change management process

Portfolio management and delivery process transformation

After having formalized and implemented a specific methodology to ensure the successful completion of projects and programmes, DSNA has launched an advanced transformation dealing with portfolio management.
Accordingly, a set of portfolios has been defined to cover the whole scope of DSNA's investments, including ATM, communication, navigation, surveillance, network infrastructures, facilities, and innovation. Portfolio managers have been coached on how to perform their roles and responsibilities. A dedicated tool has been set up to allow project/programme/portfolio managers to complete their planning and monitoring activities, in line with the strategic objectives of DSNA. Portfolio roadmaps have been established, which allows the top management to have a better vision on the status of projects and programmes, including dependencies and risks.
All DSNA's major ATM programmes (in particular but not limited to: 4-Flight, SYSAT and Coflight) are part of the same portfolio, under the supervision of a unique ATM programmes director since early 2021. This significant move in DSNA's organisation has enabled to focus on achieving technical modernisation, while preparing for the next steps of technological evolution in ATM systems.
In parallel, the process of delivery of system/software versions has been adapted to increase the cost control of the development, the evolutive maintenance and – as the next target – the corrective maintenance of technical systems. This improvement results from the implementation of an open and modular architecture, the regular roll-out of new versions or value-added services for operational centres, and an increased reactivity in implementing recovery plans.
Those two major transformations have proven powerful enablers to deal with the more uncertain and fast-evolving environment in which DSNA delivers its services to clients.

Management of tactical and strategic changes:

DSNA has implemented the concept of Collaborative Decision Making, a set of methods and tools that enable to manage pre-tactical and tactical disruptions caused by unforeseen events in close collaboration with all the relevant stakeholders such as the Network Manager, the operators and the airport operators.
In that respect, the following achievements may be mentioned:
-4 airports certified by the NM,
-a portal "CDM@DSNA" widely used by airlines, airport operators and crisis centres,
-decision-making tools developed for the flow management positions of the 5 ACCs and interconnected with the NM's system (SALTO),
-CDM tools and processes to optimize airspace configuration through the airspace management cell and the sectors of the ACCs.

At strategic level, the concept of collaboration is materialized by the French ATM Strategy, a joint initiative by IATA and DSNA which started in 2017 and ran into full steam in 2020. The objective is to consult with all relevant stakeholders (clients/airspace users/partners) when DSNA defines/revises its strategic objectives and the roadmaps aimed at achieving those objectives, especially for investments. This consultation results in - but is not limited to - an annual Strategic Consultation meeting, which took place in June for the year 2021. In addition, a dedicated working group on PBN has been launched, to organise the technical collaboration with all relevant and willing stakeholders on that topic.

Evolving while maintaining safety:

The performance of DSNA safety service relies on its ability to integrate technical and operational improvements/innovations, in order to adapt to the changing context and to maintain a high level of operational skills. Providing this service now and tomorrow to the highest level of requirement and performance lastly entails fully integrating security issues, and in particular the threat of cyber into increasingly more automation and interoperability with all the aerospace stakeholders.

To do this, DSNA continue to capitalize on the three historical pillars of its safety approach which are the high level of operational competence of the personnel, reporting and transparency in a Just culture framework and finally its recognized acknowledgment in the deployment of “safety net” tools. DSNA is consolidating the fourth pillar that is now cybersecurity, along with the management of technical transitions by capitalizing on experience feedback.

Following the diagnosis on the operation of its SMS established in 2015, and in the aim of integrating the results of discussions then initiated as part of its “integrated safety approach”, DSNA resolutely engaged a transformation of its SMS, particularly aiming, by the creation of “unit safety cases”, to:
- Take into account safety event analyses (and, more broadly, findings) in the safety studies
- Harmonize and optimize safety studies
- Capitalize on the analysis results of the findings
- Better take into account the human factor element in the functional system

To do this, DSNA seized the opportunity of the new European regulation 2017-373 (known as ATM-IR) to achieve its goals: empowering the SMS with the prospect of making it more adaptive (than normative), bringing the designed close to the end user, developing the “collection” modes, and better defining the strategic policies in the matter by an approach by risks (precaution vs. innovation).

For this purpose, the adoption of a so-called “barrier” safety model allows DSNA’s safety assessment methodologies and analysis of incidents to provide better safety management capacities. Also, by integrating benefits of change in modernization projects, this approach will support other key performance areas.

SECTION 5: TRAFFIC RISK SHARING ARRANGEMENTS AND INCENTIVE SCHEMES

5.1 - Traffic risk sharing

5.1.1 Traffic risk sharing - En route charging zones

5.1.2 Traffic risk sharing - Terminal charging zones

5.2 - Capacity incentive schemes

5.2.1 - Capacity incentive scheme - Enroute

5.2.1.1 Parameters for the calculation of financial advantages or disadvantages - Enroute

5.2.1.2 Rationale and justification - Enroute

5.2.2 - Capacity incentive scheme - Terminal

5.2.2.1 Parameters for the calculation of financial advantages or disadvantages - Terminal

5.2.2.2 Rationale and justification - Terminal

5.3 - Optional incentives

Annexes of relevance to this section

ANNEX G. PARAMETERS FOR THE TRAFFIC RISK SHARING

ANNEX I. PARAMETERS FOR THE MANDATORY CAPACITY INCENTIVES

ANNEX K. OPTIONAL INCENTIVE SCHEMES

5.1 - Traffic risk sharing

5.1.1 Traffic risk sharing - En route charging zones

France			Traffic risk-sharing parameters adapted?			no
			Service units lower than plan		Service units higher than plan	
	Dead band	Risk sharing band	% loss to be recovered	Max. charged if SUs 10% < plan	% additional revenue returned	Min. returned if SUs 10% > plan
Standard parameters	±2.00%	±10.0%	70.0%	5.6%	70.0%	5.6%

5.1.2 Traffic risk sharing - Terminal charging zones

France - Zone 1			Traffic risk-sharing parameters adapted?			no
			Service units lower than plan		Service units higher than plan	
	Dead band	Risk sharing band	% loss to be recovered	Max. charged if SUs 10% < plan	% additional revenue returned	Min. returned if SUs 10% > plan
Standard parameters	±2.00%	±10.0%	70.0%	5.6%	70.0%	5.6%

France - Zone 2			Traffic risk-sharing parameters adapted?			no
			Service units lower than plan		Service units higher than plan	
	Dead band	Risk sharing band	% loss to be recovered	Max. charged if SUs 10% < plan	% additional revenue returned	Min. returned if SUs 10% > plan
Standard parameters	±2.00%	±10.0%	70.0%	5.6%	70.0%	5.6%

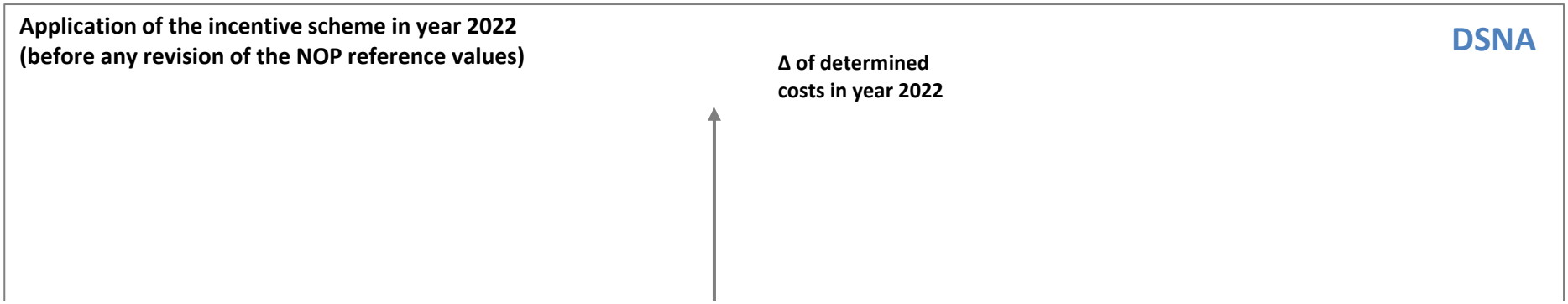
5.2 - Capacity incentive schemes

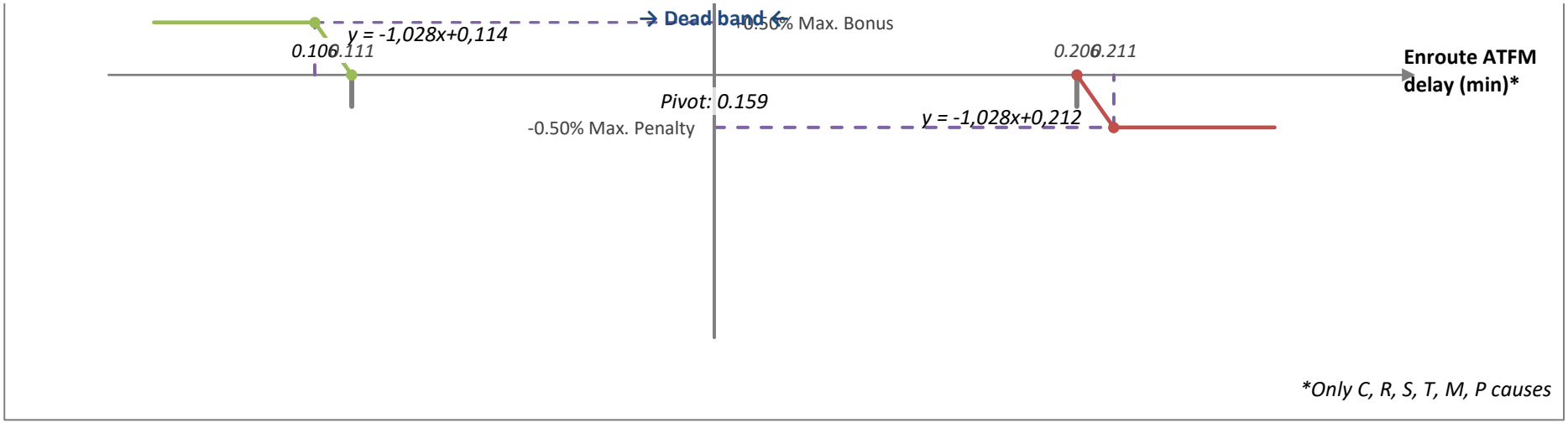
5.2.1 - Capacity incentive scheme - Enroute

5.2.1.1 Parameters for the calculation of financial advantages or disadvantages - Enroute

DSNA	Expressed in	Value
Dead band Δ	%	±30.0%
Max bonus (≤2%)*	*% of DC*	0.50%
Max penalty (≥ Max bonus)*	*% of DC*	0.50%
The pivot values for RP3 are*	modulated	CRSTMP

		2020	2021	2022	2023	2024
Ref. values (mins of ATFM delay/ flight) as per NM letter of 1.6.2021				0.25	0.25	0.25
Alert threshold (Δ Ref. value in fraction of min)				±0.053	±0.053	±0.053
Performance Plan targets (mins of ATFM delay per flight)				0.25	0.25	0.25
Pivot values for RP3 (mins of ATFM delay per flight)**				0.16	0.16	0.16
Delay ranges for the calculation of financial advantages / disadvantages	Dead band range			[0,111-0,206]	[0,111-0,206]	[0,111-0,206]
	Bonus sliding range*			[0,106-0,111]	[0,106-0,111]	[0,106-0,111]
	Penalty sliding range*			[0,206-0,211]	[0,206-0,211]	[0,206-0,211]





b) The scope of the incentives is limited to delay causes related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special events with the codes C, R, S, T, M and P of the ATFCM user manual. If yes, provide below a justification for this decision and an explanation of how the pivot values are calculated.	Yes

The French incentive scheme for the en route ATFM delay per flight KPI has been established in accordance with the requirements of Implementing Regulation (EU) 2019/317 of 11 February 2019 laying down a performance and charging scheme in the single European sky as well as Implementing Regulation (EU) 2020/1627 of 3 November 2020 on exeptional measures for the third reference period (2020-2024) of the single European sky performance and charging scheme due to the COVID-19 pandemic.

The incentive scheme is based on the en route ATFM delay causes related to the codes C, R, S, T, M and P of the ATFCM user manual. It had already decided to focus on these delay causes in RP2 because ANSPs are supposed to be responsible for them and can influence them; though the reason for respective ATFM-delay might be considered irrelevant by the airspace users, France is convinced that rewarding or penalising DSNA for performance that is outside its influence does not incentivise good performance and might - in case of e.g. good weather - lead to windfall bonuses.

In order to assure the correct application of the ATFM-coding, France continues to apply a post-operation procedure, checking the correct application yearly on a sample basis.

Considering the ratio of en route ATFM delay CRSTMP causes, the historical data of the previous reference period (RP2 - 2014-2019) shows that about 63,5% of en route ATFM delay can be considered to be under the responsibility of ANSPs (CRSTMP reasons). Therefore, the pivot values represent 63,5176225043715% of the capacity targets.

*** Refer to Annex I, if necessary.*

Justification for the set up of the incentive scheme
According to article 11 paragraph 3 lit. a of the Implementing Regulation (EU) 2019/317, the incentive scheme on capacity shall be proportionate to the level of ATFM delay and consist of financial advantages and financial disadvantages having material impact on revenue at risk. The French scheme was set up taking into account local circumstances with known bottlenecks as well as the current pandemic in general, where a major goal for all stakeholders of the SES is to recover in a still volatile environment, with peaks overshooting pre-2020 levels while the average stays still below. In line with the incentive scheme applied in RP2, France decided to apply a symmetric incentive scheme, with a maximum bonus or penalty set at 0.5%. In addition, France decided to apply a large dead band. During the preparation, France had discussions with both the Performance Review Body and PRB support on the definition of materiality of the impact of such an incentive scheme. It was outlined by PRB support that there was neither a mathematical calculation nor a rationale provided to determine a value at which a material impact can be assured. In addition, PRB support informed that in 2019 there were € 9.9 Mio bonuses and -€ 9.8 Mio penalties calculated for SES. In our view, a symmetric scheme provides for the best incentive in a situation where the precise traffic forecast is not clear and where particular flexibility is needed on the side of the ANSPs. In the same sense, the large dead band is set to avoid on the hand windfall bonuses in case traffic is lower than expected - but also to provide for a considerable margin in case traffic increases faster than expected. The level of bonus and malus is considered as material for DSNA, in particular in case of the present uncertainties. This uncertainty in regards of traffic is once again highlighted by the fact of a lately published (15 October 2021) updated traffic forecast with considerably higher traffic figures than provided by the May 2021 STATFOR forecast. With traffic picking up and thus putting pressure on the bottleneck, France considers the capacity targets as very ambitious - thus expecting strong efforts (including expensive overtime) in order to avoid missing the targets and thus entering into the malus zone. Taking into account the financial impact of the pandemic on ANSPs including tight cost planning for the upcoming years, a 0,5% bonus or penalty is indeed considered to a very material impact on their financial situation. The financial impact can also be seen by the fact that DSNA has rather low or even no return on investment in their cost planning for RP3 which puts even more pressure on the ANSPs since there is no financial risk mitigation given and every loss of revenue is forefeit.

5.2.2 - Capacity incentive scheme - Terminal

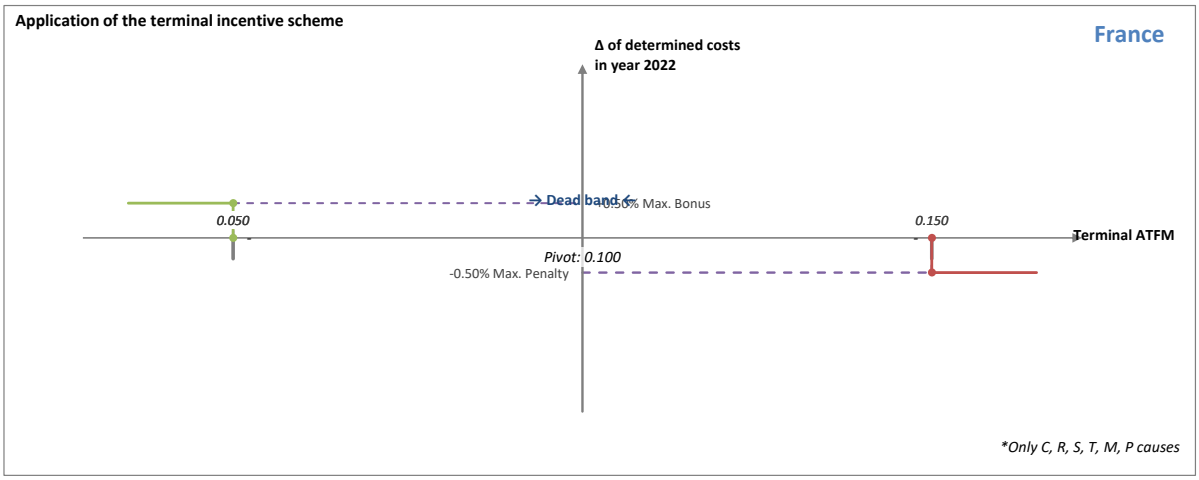
5.2.2.1 Parameters for the calculation of financial advantages or disadvantages - Terminal

a) Parameters for the calculation of financial advantages or disadvantages - Terminal

France - Terminal	Expressed in	Value
Dead band Δ	%	±50.0%
Bonus/penalty range (% of pivot value)	%	±50%
Max bonus	% of DC	0.50%
Max penalty	% of DC	0.50%
The pivot values for RP3 are	modulated	CRSTMP

		2020	2021	2022	2023	2024
Performance Plan targets (mins of ATFM delay per flight)				0.4	0.4	0.4
Bonus/penalty range Δ (in fraction of min)				±0.050	±0.050	±0.050
Pivot values for RP3 (mins of ATFM delay per flight)*				0.10	0.10	0.10
Financial advantages / disadvantages	Dead band range			[0,05-0,15]	[0,05-0,15]	[0,05-0,15]
	Bonus sliding range			[0,05-0,05]	[0,05-0,05]	[0,05-0,05]
	Penalty sliding range			[0,15-0,15]	[0,15-0,15]	[0,15-0,15]

** When modulation applies, these figures are only indicative as they will be updated annually on the basis of the methodology described in 5.2.1.2.a below. The pivot values for year n have to be notified to the EC by 1 January n.*



b) Rationale and justification - Terminal

Explain how the bonus and penalties are going to be apportioned between the different terminal charging zones and ANSPs providing services in each of them**

Based on Annex XIII §1.2 b), the modulation mechanism limits the scope of incentives to cover only ATFM delay causes related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special events with respectively the codes C, R, S, T, M and P of the ATFCM user manual.

In case of a bonus or a penalty, *i.e.* an annual terminal ATFM delay respectively below 0.05 mn/flight or above 0.15 mn/flight, the financial amount A is going to be apportioned proportionally between both terminal charging zones in applying yearly the same sharing key during RP3.

This sharing key is based on the average weight of air traffic managed by each charging zone during RP2, counted in terms of IFR movements, and to be applied for RP3: 40% in the first charging zone (CZ1) and 60% in the second charging zone (CZ2). Indeed, during RP2 the cumulated number of IFR flights in CZ1 and CZ2 was respectively 40% and 60%.

Incentive scheme shares CZ1/CZ2	2015	2016	2017	2018	2019	2020	**IS RP3 ratio**
Traffic (IFR Mvts - STATFOR)							
CZ1	354 985	358 404	357 396	360 240	363 267	152 751	
CZ2	533 695	544 916	559 940	566 906	579 051	292 157	
Ratio							
CZ1	40%	40%	39%	39%	39%	34%	**40%**
CZ2	60%	60%	61%	61%	61%	66%	**60%**

In year n+2, unit rates for CZ1 and CZ2 will be adjusted by taking into account respectively an amount equal to 40% of A and 60% of A where appropriate.

*** Refer to Annex I, if necessary.*

Indicate which of the principles below will be applied for the modulation of the pivot values for the whole RP3:	
a) The pivot value for year n is modulated in order to enable significant and unforeseen changes in traffic to be taken into account and is based on the principles explained below:**	No
b) The scope of the incentives is limited to delay causes related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special events with the codes C, R, S, T, M and P of the ATFCM user manual. If yes, provide below a justification for this decision and an explanation of how the pivot values are calculated.	Yes

Based on Annex XIII §1.2 b), the modulation mechanism limits the scope of incentives to cover only ATFM delay causes related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special events with respectively the codes C, R, S, T, M and P of the ATFCM user manual. This modulation mechanism has already been used during RP2 for the terminal capacity incentive scheme.

Based on RP2 historical data , CRSTMP share of ATFM delay causes represents 25% of all ATFM delays causes. From the Terminal capacity performance target fixed at 0.4 mn/flight, this percentage has been applied for setting the Pivot value at 0.10 min/flight each year in compliance with the modulation mechanism.

*** Refer to Annex I, if necessary.*

SECTION 6: IMPLEMENTATION OF THE PERFORMANCE PLAN

6.1 Monitoring of the implementation plan

6.2 Non-compliance with targets during the reference period

6 - IMPLEMENTATION OF THE PERFORMANCE PLAN

6.1 Monitoring of the implementation plan

Description of the processes put in place by the NSAs to monitor the implementation of the Performance Plan including the yearly monitoring of all KPIs and PIs defined in Annex I of the Regulation and a description of the data sources
Monitoring processes exist both at FABEC and national levels, and vary between different KPAs. Capacity and environment performance is reported by the FABEC ANSPs' Performance Management Group (PMG) on a monthly basis in coordination with the FABEC ANSPs. Reports are presented to the States' Financial and Performance Committee (FPC) which meets approximately 6 times per year. At national level operational KPIs are imbedded in the yearly surveillance and monitoring programme run by the French NSA (weekly / monthly reports, regular meeting with the DSNA OPS managers, on-site visits in some cases, NSA participation to DSNA capacity planning meetings with NM for NOP updates etc.) Monitoring of the safety KPI is limited to the annual monitoring process described below. Monitoring of PIs is done at French level in coordination between the French NCA (DSAC) and the performance NSA (DTA). Monitoring of cost efficiency and investments is performed at national level and is one of the major part of the yearly surveillance programme of the French NSA. For the annual monitoring process, France will continue to use the process applied during RP2 and beginning of RP3 whithin the FABEC context on the top of the national ones. The FABEC process is performed under the responsibility of the FPC : French NSA experts collaborate with - the FABEC ANSPs' Performance Management Group (PMG) on gathering operational performance information (capacity, environment) - the FABEC States' Safety Performance and Risk Coordination (SPRC) Task Force and the ANSPs' focal points for EoSM for gathering and verifying safety performance data; If necessary, the ANSPs' Standing Committee on Safety will be consulted - national NSAs for information on costs and investments. In all areas, identification of the main drivers for performance and in particular for deviations from planned performance will be part of the monitoring process. Input of all experts will be consolidated into a single national monitoring report, which is then reviewed, updated and finalised during a dedicated drafting session.

6.2 Non-compliance with targets during the reference period

Description of the processes put in place and measures to be applied by the NSAs to address the situation where targets are not reached during the reference period
France addresses the compliance through two processes : - the annual NSA oversight of the ANSPs compliance with Reg (EU) 317/2019 as amended includes cost-efficiency and operational deviations, revision and adjustments. Potential non-compliances would lead to raising findings managed through a formal corrective action plan implementation and follow-up assessessment. - the annual monitoring assesses and reports on operational performance and cost-efficiency aspects as well as investment and cost-exempt monitoring. Union-wide safety targets for the end of RP3 i.e. 2024 given by Commission implementing decision (EU) 2021/891 of 2 June 2021 are always born in mind by the NSA through the yearly monitoring process. The ANSPs individual targets for 2021-2024 are checked every year within the NSA assessment of the ANSPs self-assessment. Subject matter experts gather data during January each year and will counteract instantly in case an intermediate target is not reached and thus a non-compliance identified. For that , in addition to the national processes, a close cooperation between FABEC NSAs (SPRC TF / NSAC) and ANSPs (SC-SAF) has been established for harmonization and monitoring purposes. For capacity and environment performance, on the top of the national oversight processes, FABEC has also developed the 'OPS performance process' which requires ANSPs to propose measures to improve performance if performance is not in line with targets. Remedial measures are initially proposed to the FPC, which will assess the proposals and provide advice to the FABEC Council to either accept the proposed remedial measures or request further improvements.