EUROCONTROL

LSSIP 2020 - FRANCE
LOCAL SINGLE SKY IMPLEMENTATION

Level 1 - Implementation Overview

FOREWORD

We as the EUROCONTROL Network Manager have a major task to support aviation and all our partners; this is particularly true during these complex times of COVID 19 pandemic. We work with all the operational stakeholders to manage a seamless European airspace, linking together the elements of the European air traffic management system into a single value chain. Focusing on performance of the European network, we partner with the operational stakeholders to enable flights to reach their destination safely, on time, with the least possible impact on environment and in a cost-efficient way. In particular, in these difficult times, we are paving the way for a rapid and agile recovery committed to bring back better aviation.

For more than 27 years, the EUROCONTROL Local Single Sky ImPlementation (LSSIP) process, methodology, tools and documents annually express the commitment of civil and military national organisations (Regulators and National Supervisory Authorities, Air Navigation Service Providers and Airport Operators), and their cooperation towards the implementation of the European ATM Master Plan Level 3, also known as the European Single Sky ImPlementation (ESSIP) process.

The LSSIP documents provide an extensive, consolidated and harmonised picture, for the benefit of the ATM community at large, of how all ECAC States as well as States having a Comprehensive Agreement with EUROCONTROL, and stakeholders concerned, are progressing in planning and deploying all mature elements of the European ATM Master Plan and the various European aviation policies.

In addition, EUROCONTROL is promoting practices to avoid unnecessary duplication of reporting. We are cooperating with the SESAR Deployment Manager, the SESAR Joint Undertaking, the European Defence Agency and NATO to ensure the optimisation of the reporting mechanisms bringing all the processes into a single value chain.

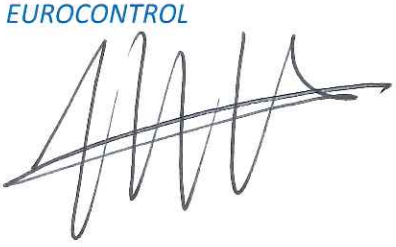
The reliability and quality of the data provided by the national stakeholders allowed, for the sixth consecutive year, the information in the LSSIP documents to constitute the sole source of information for the development of ICAO's Aviation System Block Upgrades (ASBUs) Implementation Monitoring Report in the ICAO EUR Region. EUROCONTROL undertakes this work, on behalf of ICAO, for all 55 ICAO/EUR States in accordance with the Global Air Navigation Plan (GANP).

We believe now is the time to build back better aviation. The exceptional situation we are living in shows the importance of a robust planning and monitoring process for the European ATM implementation in our evolving environment. In preparation of the next cycle of LSSIP documents ("LSSIP2021"), we therefore are working jointly and in close collaboration with the operational stakeholders towards a single Network Manager Planning Process integrating the Network Operations Plan (NOP), the LSSIP and the Operational Excellence Programme (OEP). We are working together with the SESAR Deployment Manager to streamline the reporting processes of LSSIP and PCP/CP1 in order to ensure a single reporting mechanism for all stakeholders.

I would like to thank, once again, all our stakeholders for their engagement and substantial effort spent in contributing to the production of this LSSIP document. This is a proof of commitment to the principles of transparency and partnership, for the benefit of the entire ATM community!

Enjoy the reading!

Iacopo PRISSINOTTI
Director NM – Network Manager
EUROCONTROL



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Reference Documents	
LSSIP Documents	https://www.eurocontrol.int/service/local-single-sky-implementation-monitoring
Master Plan Level 3 – Plan Edition 2020	https://www.eurocontrol.int/publication/european-atm-master-plan-implementation-plan-level-3
Master Plan Level 3 – Report Year 2020	https://www.eurocontrol.int/publication/european-atm-master-plan-implementation-report-level-3
European ATM Portal	https://www.atmmasterplan.eu/
STATFOR Forecasts	https://www.eurocontrol.int/statfor
National AIP	https://www.sia.aviation-civile.gouv.fr/
FAB Performance Plan	https://www.fabec.eu/performance/performance-plan

APPROVAL SHEET

The following authorities have approved all parts of the LSSIP Year 2020 document and the signatures confirm the correctness of the reported information and reflect the commitment to implement the actions laid down in the European ATM Master Plan Level 3 (Implementation View) – Edition 2020.

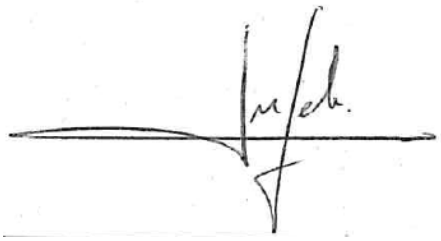
Organisation	Name	Signature
Direction du Transport Aérien	Marc BOREL	
Direction des Services de la Navigation Aérienne	Maurice GEORGES	
Direction de la Circulation Aérienne Militaire	BG** Etienne HERFELD	

TABLE OF CONTENTS

Executive Summary

National ATM Context

Member State of:


Leading stakeholders involved in ATM in France are the Ministry for the Armed Forces and the Ministry for the Ecological Transition, respectively through French Military Air Traffic Management Directorate (DIRCAM - Direction de la Circulation Aérienne Militaire) and French Civil Aviation Authority (DGAC - Direction Générale de l'Aviation Civile).

Air Transport Directorate (DTA - Direction du Transport Aérien) and Civil Aviation Safety Directorate (DSAC - Direction de la Sécurité de l'Aviation Civile), both belonging to DGAC but functionally separated, are defined as national supervisory authorities (NSA) : DTA for charging and performance and DSAC for safety oversight in air navigation services and air traffic management, including in particular changes oversight and interoperability. For services provided to general air traffic, DIRCAM exercises the national supervisory functions within Defence on behalf of DSAC, according to national decrees.

Civil ANSPs include DSNA (Direction des Services de la Navigation Aérienne), the main French air navigation services provider certified and designated for ATM services and 65 other ANSPs, providing Aerodrome Flight Information Service (AFIS) for GAT on 66 aerodromes. In addition, five military ANSPs providing services to general air traffic and covering ATC and CNS services, are certified in France. Among them four are designated since December 2011 as military air traffic service provider for the benefit of general air traffic. Météo-France is certified and formally designated as the only one national MET provider since 20th December 2011. Moreover, major airports (Paris Roissy-CDG, Paris-Orly, Nice-Côte d'Azur, Lyon-Saint Exupéry, Toulouse-Blagnac and Marseille-Provence) operators contribute to this reporting.

France is member state of the FABEC together with Belgium, Germany, Luxembourg, The Netherlands and Switzerland. In the course of 2011, two performance plans have been established for the first reference period (2012-2014) and submitted to the European Commission in compliance with Commission Regulation (EU) N° 691/2010 of 29th July 2010 and agreed according to Commission Recommendation 2012/C 228/01 of 29th July 2012. Those first national and FABEC RP1 performance plans addressed safety, capacity, flight efficiency and military mission effectiveness through complementary Key Performance indicators (KPI, with targets) and Performance Indicators (PI, for monitoring purposes without targets). In addition, the national plan addressed cost efficiency performance indicators.

For the 2nd reference period the FABEC Performance Plan for 2015 – 2019 was delivered to the Commission 30th June 2014 in compliance with Commission Regulation (EU) N° 390/2013 and 391/2013 of 3rd May 2013 ; a final revised version agreed according to Commission decision (UE) 2017/of the 22nd mars 2017. It addressed safety, en-route and terminal capacity, flight efficiency and cost efficiency targets. There was no more national French performance plan as such, as for RP1 but national chapters of the FABEC performance plan addressing targets set at national level.

For the 3rd reference period, the FABEC draft Performance Plan for 2020 – 2024 has been submitted to the Commission 1st October 2019 in compliance with Commission Regulation (EU) N° 317/2019 of 11th February 2019. Due to the impact of the COVID-19 pandemic, the assessment and approval process of the RP3 performance plans by the PRB and the Commission have been suspended.

In order to address the pandemic impact on the performance and charging scheme, the Commission has developed an ad-hoc implementing Regulation (EU) 2020/1627 of 3rd November 2020 on exceptional measures for the third reference period (2020-2024) of the single European sky performance and charging scheme due to the COVID-19 pandemic. New RP3 targets will be defined before 1st May 2021 and a revised FABEC performance plan will be submitted before 1st October 2021.

Moreover, the DSAC is involved in the agreement on the cooperation of the FABEC national supervisory authorities and a manual for their common activities of has been issued in 2012.

Main airports covered by the French LSSIP reporting are:

- Aéroport de Paris-Charles de Gaulle,
- Aéroport de Paris-Orly,
- Aéroport de Nice-Côte d'Azur,
- Aéroport de Lyon-Saint Exupéry,
- Aéroport de Toulouse-Blagnac,
- Aéroport de Marseille-Provence.

Traffic and Capacity

Due to the massive impact of the COVID-19 pandemic on the air transport industry, traffic in France decreased by 59 % during summer 2020 (May to October inclusive), when compared to the same period during 2019. Regarding the 2021-2024 period the latest STATFOR medium-term forecast (MTF) released in November 2020 predicts an average annual increase between 13% and 43% during the planning cycle, with an average annual growth rate of -2% compared to 2019 traffic level.

Regarding the current capacity plan of 5 French ACC for summer 2021:

- Bordeaux ACC: no capacity gap is expected during summer 2021.
- Brest ACC: The traffic demand is expected to be slightly above declared capacity in some elementary sectors in the upper layer most of the days, mainly due to green RAD and more routeing flexibility given to AOs. ATFCM measures such as STAM or scenarios might be needed to better balance traffic between the different sector layers.
- Marseille ACC: In May and October, some flexibility should be needed and, in some cases, ATFCM measures such as STAM or scenarios may be required due to the training phase for ATCO to prepare the commissioning of 4-FLIGHT new ATM system in 2022.
- Paris ACC: no capacity gap is expected during summer 2021.
- Reims ACC: some flexibility should be needed and, in some cases, ATFCM measures such as STAM or scenarios may be required due to the training phase for ATCO to prepare the commissioning of 4-FLIGHT new ATM system in 2022.

Summer Traffic (May to October inclusive)

Summer delay per ACC:

BORDEAUX ACC

BREST ACC

MARSEILLE ACC

PARIS ACC

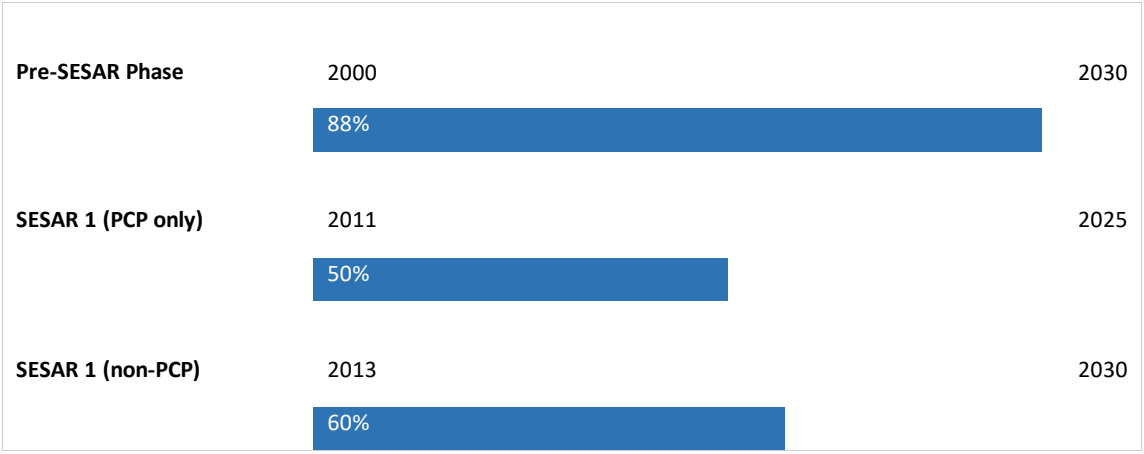
REIMS ACC

Progress per SESAR Phase

The figure below shows the progress made so far in the implementation of the SESAR baseline (Pre-SESAR and SESAR1 non-PCP) and the PCP elements.

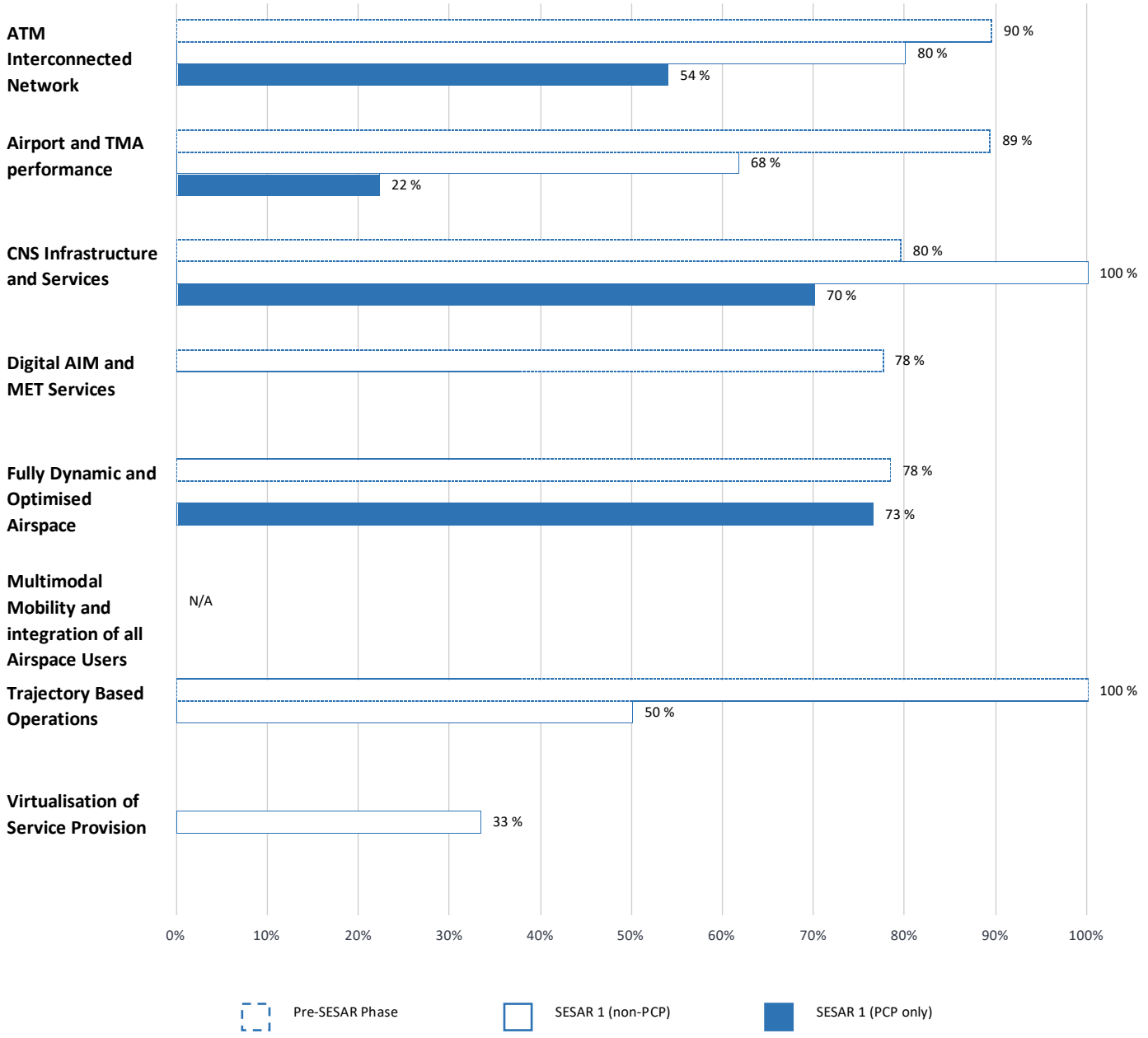
It shows the average implementation progress for all objectives grouped by SESAR Phases, excluding those for which the State is outside the applicability area as defined on a yearly basis in the European ATM Master Plan (Level 3) 2020, i.e. disregarding the declared “NOT APPLICABLE” LSSIP progress status.

The SESAR 1 (non-PCP) progress in the graphics below for FR is based on the following objectives: AOP14, AOP15, AOP17, AOP18, ATC02.9, ATC19, ATC20 and COM11.2.



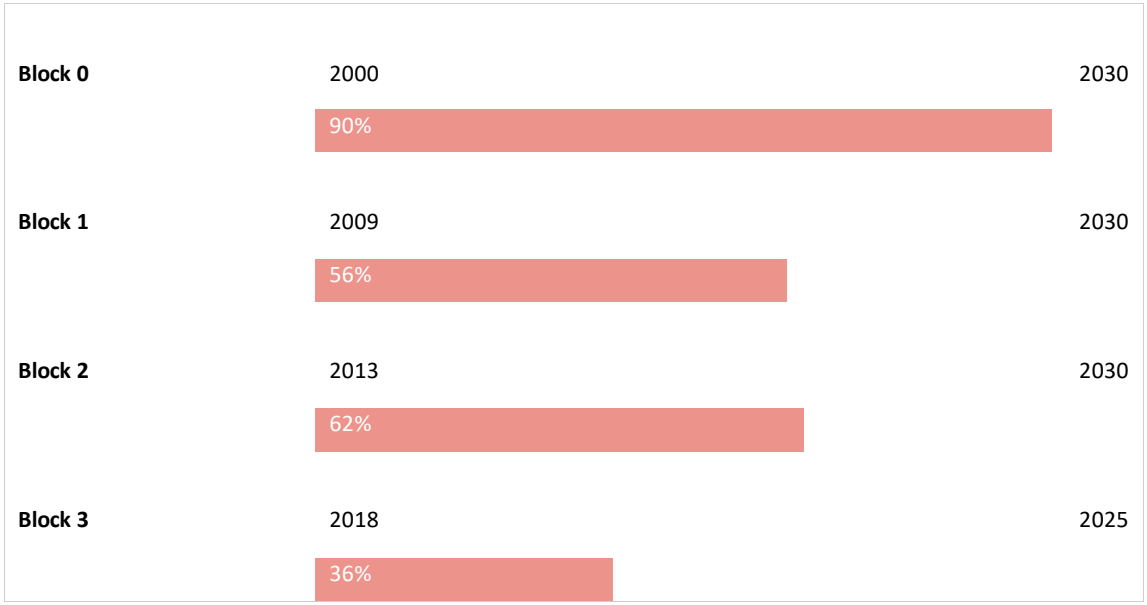
Progress per SESAR Essential Operational Changes and Phase

The figure below shows the progress made so far, per SESAR Essential Operational Changes, in the implementation of the SESAR baseline and the PCP elements. The percentages are calculated as an average, per EOC, of the same objectives as in the previous paragraph.



ICAO ASBUs Progress Implementation

The figure below shows the progress made so far in the implementation of the ICAO ASBUs Blocks. The overall percentage is calculated as an average of the relevant Objectives contributing to each of the relevant ASBUs; this is a summary of the table explained in Chapter 5.3 – ICAO ASBU Implementation Progress.



ATM Deployment Outlook

State Objectives

✓ **Deployed in 2019 - 2020**

- Short Term ATFCM Measures (STAM) - Phase 2
FCM04.2 - 100 % progress
- Full Rolling ASM/ATFCM Process and ASM Information Sharing
AOM19.3 - 100 % progress
- Electronic Terrain and Obstacle Data (eTOD)
INF07 - 100 % progress
- New Pan-European Network Service (NewPENS)
COM12 - 100 % progress

By 2021	By 2022	By 2023	By 2024+
- Initial ATC Air-Ground Data Link Services ITY-AGDL - 82 % progress **- ASM Management of Real-Time Airspace Data** AOM19.2 - 70 % progress **- Management of Pre-defined Airspace Configurations** AOM19.4 - 40 % progress **- Common Flight Message Transfer Protocol (FMTP)** ITY-FMTP - 97 % progress **- Migrate from AFTN to AMHS** COM10 - 87 % progress **- Traffic Complexity Assessment** FCM06 - 80 % progress		**- Arrival Management Extended to En-route Airspace** ATC15.2 - 78 % progress **- Voice over Internet Protocol (VoIP) in En-Route** COM11.1 - 70 % progress **- Interactive Rolling NOP** FCM05 - 69 % progress	**- RNP Approach Procedures to instrument RWY** NAV10 - 99 % progress **- Free Route Airspace** AOM21.2 - 45 % progress **- RNAV 1 in TMA Operations** NAV03.1 - 87 % progress **- Ensure Quality of Aeronautical Data and Aeronautical Information** ITY-ADQ - 55 % progress **- Automated Support for Conflict Detection, Resolution Support Information and Conformance Monitoring** ATC12.1 - 47 % progress **- Surveillance Performance and Interoperability** ITY-SPI - 71 % progress **- Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer** ATC17 - 38 % progress **- Information Exchanges using the SWIM Yellow TI Profile** INF08.1 - 36 % progress **- Aircraft Identification** ITY-ACID - 90 % progress **- 8,33 kHz Air-Ground Voice Channel Spacing below FL195** ITY-AGVCS2 - 48 % progress **- Collaborative Flight Planning** FCM03 - 79 % progress

Airport Objectives - CANNES-MANDELIEU

✓ **Deployed in 2019 - 2020** None

By 2021	By 2022	By 2023	By 2024+
- Remote Tower Services AOP14 - 75 % progress			

Airport Objectives - Lyon Airport

✓ **Deployed in 2019 - 2020** None

By 2021	By 2022	By 2023	By 2024+
- Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2) AOP04.2 - 58 % progress			

Airport Objectives - Toulouse Airport

✓ **Deployed in 2019 - 2020** None

By 2021	By 2022	By 2023	By 2024+
- Provision/integration of departure planning information to NMOC AOP17 - 80 % progress	**- Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)** AOP04.1 - 48 % progress **- Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)** AOP04.2 - 33 % progress		

Airport Objectives - Marseille Airport

✓ **Deployed in 2019 - 2020** None

By 2021	By 2022	By 2023	By 2024+
- Provision/integration of departure planning information to NMOC AOP17 - 80 % progress	**- Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)** AOP04.1 - 16 % progress	**- Continuous Descent Operations (CDO)** ENV01 - 78 % progress **- Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)** AOP04.2 - 07 % progress	

Airport Objectives - PAU-PYRENEES

✓ **Deployed in 2019 - 2020** None

By 2021	By 2022	By 2023	By 2024+
		- Remote Tower Services AOP14 - 5 % progress	

Airport Objectives - Bale-Mulhouse Airport

✓ **Deployed in 2019 - 2020** None

By 2021	By 2022	By 2023	By 2024+
		- Provision/integration of departure planning information to NMOC AOP17 - 00 % progress	

Airport Objectives - Bordeaux Airport

✓ **Deployed in 2019 - 2020** None

By 2021	By 2022	By 2023	By 2024+
		- Provision/integration of departure planning information to NMOC AOP17 - 00 % progress	

Airport Objectives - Nantes Airport

✓ **Deployed in 2019 - 2020** None

By 2021	By 2022	By 2023	By 2024+
		- Provision/integration of departure planning information to NMOC AOP17 - 00 % progress	

Airport Objectives - Paris Orly Airport

✓ **Deployed in 2019 - 2020** None

By 2021	By 2022	By 2023	By 2024+
- Enhanced traffic situational awareness and airport safety nets for the vehicle drivers AOP15 - 85 % progress		**- Time-Based Separation** AOP10 - 10 % progress **- Continuous Descent Operations (CDO)** ENV01 - 78 % progress **- Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC)** AOP12 - 50 % progress **- Initial Airport Operations Plan** AOP11 - 36 % progress	

Airport Objectives - Paris CDG Airport

✓	**Deployed in 2019 - 2020**	None

By 2021	By 2022	By 2023	By 2024+
- Enhanced traffic situational awareness and airport safety nets for the vehicle drivers AOP15 - 85 % progress		**- Continuous Descent Operations (CDO)** ENV01 - 78 % progress **- Initial Airport Operations Plan** AOP11 - 36 % progress	**- Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC)** AOP12 - 50 % progress

Airport Objectives - TOURS VAL DE LOIRE

✓	**Deployed in 2019 - 2020**	None

By 2021	By 2022	By 2023	By 2024+
			- Remote Tower Services AOP14 - 20 % progress

Airport Objectives - Nice Airport

✓	**Deployed in 2019 - 2020**	**- Airport Collaborative Decision Making (A-CDM)** AOP05 - 100 % progress

By 2021	By 2022	By 2023	By 2024+
		- Initial Airport Operations Plan AOP11 - 36 % progress	**- Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC)** AOP12 - 37 % progress

Overall situation of Implementation Objectives

Main Objectives	Topic	Progress at the end of 2020	Status	2020	2021	2022	2023	2024	2025	>2025
AOM13.1	Harmonise Operational Air Traffic (OAT) and General Air Traffic (GAT) Handling	100%	Completed							
AOM19.1	ASM Support Tools to Support Advanced FUA (AFUA)	100%	Completed			*				
AOM19.2	ASM Management of Real-Time Airspace Data	70%	Ongoing			*				
AOM19.3	Full Rolling ASM/ATFCM Process and ASM Information Sharing	100%	Completed			*				
AOM19.4	Management of Pre-defined Airspace Configurations	40%	Ongoing			*				
AOM21.1	Direct Routing	100%	Completed							
AOM21.2	Free Route Airspace	45%	Late			*				
AOP04.1(LFBO)	Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)	48%	Late		*					
AOP04.1(LFLL)	Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)	100%	Completed		*					
AOP04.1(LFML)	Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)	16%	Late		*					
AOP04.1(LFMN)	Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)	100%	Completed		*					
AOP04.1(LFPG)	Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)	100%	Completed		*					
AOP04.1(LFPO)	Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)	100%	Completed		*					
AOP04.2(LFBO)	Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)	33%	Late		*					
AOP04.2(LFLL)	Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)	58%	Late		*					
AOP04.2(LFML)	Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict	7%	Late		*					

Main Objectives	Topic	Progress at the end of 2020	Status	2020		2021		2022		2023		2024		2025		>2025
	Alerting (RMCA) (former Level 2)															
AOP04.2(LFMN)	Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)	100%	Completed			*										
AOP04.2(LFPG)	Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)	100%	Completed			*										
AOP04.2(LFPO)	Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)	100%	Completed			*										
AOP05(LFBO)	Airport Collaborative Decision Making (A-CDM)	-	Not Applicable			*										
AOP05(LFLL)	Airport Collaborative Decision Making (A-CDM)	100%	Completed			*										
AOP05(LFML)	Airport Collaborative Decision Making (A-CDM)	-	Not Applicable			*										
AOP05(LFMN)	Airport Collaborative Decision Making (A-CDM)	100%	Completed			*										
AOP05(LFPG)	Airport Collaborative Decision Making (A-CDM)	100%	Completed			*										
AOP05(LFPO)	Airport Collaborative Decision Making (A-CDM)	100%	Completed			*										
AOP10(LFPO)	Time-Based Separation	10%	Ongoing									*				
AOP11(LFBO)	Initial Airport Operations Plan	0%	Not yet planned			*										
AOP11(LFLL)	Initial Airport Operations Plan	100%	Completed			*										
AOP11(LFML)	Initial Airport Operations Plan	0%	Not yet planned			*										
AOP11(LFMN)	Initial Airport Operations Plan	36%	Late			*										
AOP11(LFPG)	Initial Airport Operations Plan	36%	Late			*										
AOP11(LFPO)	Initial Airport Operations Plan	36%	Late			*										
AOP12(LFMN)	Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC)	37%	Late			*										
AOP12(LFPG)	Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC)	50%	Late			*										

Main Objectives	Topic	Progress at the end of 2020	Status	2020		2021		2022		2023		2024		2025		>2025
AOP12(LFPO)	Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC)	50%	Late			*										
AOP13(LFMN)	Automated Assistance to Controller for Surface Movement Planning and Routing	10%	Not yet planned									*				
AOP13(LFPG)	Automated Assistance to Controller for Surface Movement Planning and Routing	10%	Not yet planned									*				
AOP13(LFPO)	Automated Assistance to Controller for Surface Movement Planning and Routing	10%	Not yet planned									*				
AOP14(LFBP)	Remote Tower Services	5%	Ongoing													2030
AOP14(LFMD)	Remote Tower Services	75%	Ongoing													2030
AOP14(LFOT)	Remote Tower Services	20%	Ongoing													2030
AOP15(LFPG)	Enhanced traffic situational awareness and airport safety nets for the vehicle drivers	85%	Ongoing													2030
AOP15(LFPO)	Enhanced traffic situational awareness and airport safety nets for the vehicle drivers	85%	Ongoing													2030
AOP16(LFPG)	Guidance assistance through airfield ground lighting	-	Not Applicable													2030
AOP17(LFBD)	Provision/integration of departure planning information to NMOC	0%	Planned													2030
AOP17(LFBO)	Provision/integration of departure planning information to NMOC	80%	Ongoing													2030
AOP17(LFML)	Provision/integration of departure planning information to NMOC	80%	Ongoing													2030
AOP17(LFRS)	Provision/integration of departure planning information to NMOC	0%	Planned													2030
AOP17(LFSB)	Provision/integration of departure planning information to NMOC	0%	Planned													2030
AOP18(LFPG)	Runway Status Lights (RWSL)	100%	Completed													2030
ATC02.2	Implement ground based safety nets - Short Term Conflict Alert (STCA) - level 2 for en-route operations	100%	Completed													
ATC02.8	Ground-Based Safety Nets	100%	Completed					*								
ATC02.9	Short Term Conflict Alert (STCA) for TMAs	100%	Completed		*											

Main Objectives	Topic	Progress at the end of 2020	Status	2020		2021		2022		2023		2024		2025		>2025
ATC07.1(LFMN)	AMAN Tools and Procedures	100%	Completed	*												
ATC07.1(LFPG)	AMAN Tools and Procedures	100%	Completed	*												
ATC07.1(LFPO)	AMAN Tools and Procedures	100%	Completed	*												
ATC12.1	Automated Support for Conflict Detection, Resolution Support Information and Conformance Monitoring	47%	Late					*								
ATC15.1	Information Exchange with En-route in Support of AMAN	100%	Completed													
ATC15.2	Arrival Management Extended to En-route Airspace	78%	Ongoing									*				
ATC16	Implement ACAS II compliant with TCAS II change 7.1	100%	Completed													
ATC17	Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer	38%	Late					*								
ATC18	Multi-Sector Planning En-route - 1P2T	-	Not Applicable													2030
ATC19	Enhanced AMAN-DMAN integration	0%	Not yet planned													2030
ATC20	Enhanced STCA with down-linked parameters via Mode S EHS	0%	Not yet planned													2030
COM10	Migrate from AFTN to AMHS	87%	Late													
COM11.1	Voice over Internet Protocol (VoIP) in En-Route	70%	Late					*								
COM11.2	Voice over Internet Protocol (VoIP) in Airport/Terminal	100%	Completed								*					
COM12	New Pan-European Network Service (NewPENS)	100%	Completed											*		
ENV01(LFBO)	Continuous Descent Operations (CDO)	100%	Completed								*					
ENV01(LFLL)	Continuous Descent Operations (CDO)	100%	Completed								*					
ENV01(LFML)	Continuous Descent Operations (CDO)	78%	Ongoing								*					
ENV01(LFMN)	Continuous Descent Operations (CDO)	100%	Completed								*					
ENV01(LFPG)	Continuous Descent Operations (CDO)	78%	Ongoing								*					
ENV01(LFPO)	Continuous Descent Operations (CDO)	78%	Ongoing								*					
ENV02(LFBO)	Airport Collaborative Environmental Management	100%	Completed													2030
ENV02(LFLL)	Airport Collaborative Environmental Management	100%	Completed													2030
ENV02(LFML)	Airport Collaborative Environmental Management	100%	Completed													2030
ENV02(LFMN)	Airport Collaborative Environmental Management	100%	Completed													2030

Main Objectives	Topic	Progress at the end of 2020	Status	2020		2021		2022		2023		2024		2025		>2025
ENV02(LFPG)	Airport Collaborative Environmental Management	100%	Completed													2030
ENV02(LFPO)	Airport Collaborative Environmental Management	100%	Completed													2030
ENV03(LFBO)	Continuous Climb Operations (CCO)	100%	Completed													2030
ENV03(LFLL)	Continuous Climb Operations (CCO)	100%	Completed													2030
ENV03(LFML)	Continuous Climb Operations (CCO)	100%	Completed													2030
ENV03(LFMN)	Continuous Climb Operations (CCO)	100%	Completed													2030
ENV03(LFPG)	Continuous Climb Operations (CCO)	100%	Completed													2030
ENV03(LFPO)	Continuous Climb Operations (CCO)	100%	Completed													2030
FCM01	Implement enhanced tactical flow management services	100%	Completed													
FCM03	Collaborative Flight Planning	79%	Late					*								
FCM04.2	Short Term ATFCM Measures (STAM) - Phase 2	100%	Completed					*								
FCM05	Interactive Rolling NOP	69%	Late					*								
FCM06	Traffic Complexity Assessment	80%	Ongoing					*								
INF07	Electronic Terrain and Obstacle Data (eTOD)	100%	Completed													
INF08.1	Information Exchanges using the SWIM Yellow TI Profile	36%	Late											*		
ITY-ACID	Aircraft Identification	90%	Late	*												
ITY-ADQ	Ensure Quality of Aeronautical Data and Aeronautical Information	55%	Late													
ITY-AGDL	Initial ATC Air-Ground Data Link Services	82%	Late	*												
ITY-AGVCS2	8,33 kHz Air-Ground Voice Channel Spacing below FL195	48%	Late		*											
ITY-COTR	Implementation of ground-ground automated co-ordination processes	100%	Completed													
ITY-FMTP	Common Flight Message Transfer Protocol (FMTP)	97%	Late													
ITY-SPI	Surveillance Performance and Interoperability	71%	Late		*											
NAV03.1	RNAV 1 in TMA Operations	87%	Ongoing													2030
NAV03.2	RNP 1 in TMA Operations	1%	Not yet planned									*				
NAV10	RNP Approach Procedures to instrument RWY	99%	Ongoing									*				
NAV12	ATS IFR Routes for Rotorcraft Operations	-	Not													2030

Main Objectives	Topic	Progress at the end of 2020	Status	2020		2021		2022		2023		2024		2025		>2025
			Applicable													
SAF11	Improve Runway Safety by Preventing Runway Excursions	100%	Completed													

LEGEND:

*	Full Operational Capability (FOC) date
	The Planned Implementation Date as reported in the LSSIP DB for each objective

Source: LSSIP DB

Introduction

The Local Single Sky ImPlementation (LSSIP) documents, as an integral part of the Master Plan (MP) Level 3 (L3)/LSSIP mechanism, constitute a short/medium term implementation plan containing ECAC States' actions to achieve the Implementation Objectives as set out by the MP Level 3 and to improve the performance of their national ATM System. This LSSIP document describes the situation in the State at the end of December 2020, together with plans for the next years.

Chapter 1 provides an overview of the ATM institutional arrangements within the State, the membership of the State in various international organisations, the organisational structure of the main ATM players - civil and military - and their responsibilities under the national legislation. In addition, it gives an overview of the Airspace Organisation and Classification, the ATC Units and the ATM systems operated by the main ANSP;

Chapter 2 provides a comprehensive picture of the situation of Air Traffic, Capacity and ATFM Delay per each ACC in the State. It shows the evolution of Air Traffic and Delay in the last five years and the forecast for the next five years. It also presents the planned projects assumed to offer the required capacity, taking into account the current aviation situation caused by the COVID19 crisis;

Chapter 3 provides the main Implementation Projects (at national, FAB and multinational level) which contribute directly to the implementation of the MP Operational Improvements and/or Enablers and Implementation Objectives. The Level 1 document covers a high-level list of the projects showing the applicable links. All other details like description, timescale, progress made and expected contribution to the ATM Key Performance Areas provided by the State per each project are available in the Level 2 document;

Chapter 4 deals with other cooperation activities beyond Implementation Projects. It provides an overview of the FAB cooperation, as well as all other multinational initiatives, which are out of the FAB scope. The content of this chapter generally is developed and agreed in close cooperation between the States concerned;

Chapter 5 contains aggregated information at State level covering the overall level of implementation, implementation per SESAR Essential Operational Change and implementation of ICAO ASBUs. In addition, it provides the high-level information on progress and plans of each Implementation Objective. The information for each Implementation Objective is presented in boxes giving a summary of the progress and plans of implementation for each Stakeholder. The conventions used are presented at the beginning of the section.

The Level 1 document is completed with a separate document called LSSIP Level 2. This document consists of a set of tables organised in line with the list of Implementation Objectives. Each table contains all the actions planned by the four national stakeholders (REG, ASP, MIL and APO) to achieve their respective Stakeholder Lines of Action (SLoAs) as established in the European ATM Master Plan L3 Implementation Plan Edition 2020. In addition, it covers a detailed description of the Implementation Projects for the State as extracted from the LSSIP DataBase.

The information contained in Chapter 5 – Implementation Objectives Progress is deemed sufficient to satisfy State reporting requirements towards ICAO in relation to ASBU (Aviation System Block Upgrades) monitoring.

1. National ATM Environment

1.1. Geographical Scope

International Membership

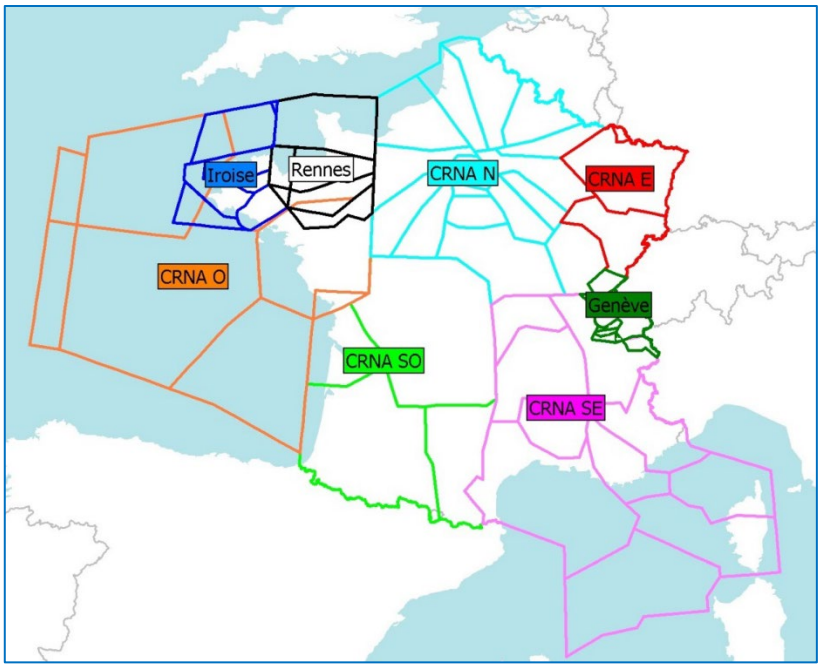
France is a Member of the following international organisations in the field of ATM:

Organisation		Since
ECAC	✓	1955
EUROCONTROL	✓	1960
European Union	✓	1951
EASA	✓	2002
ICAO	✓	1944
NATO	✓	1949
ITU	✓	1866
EDA	✓	2004

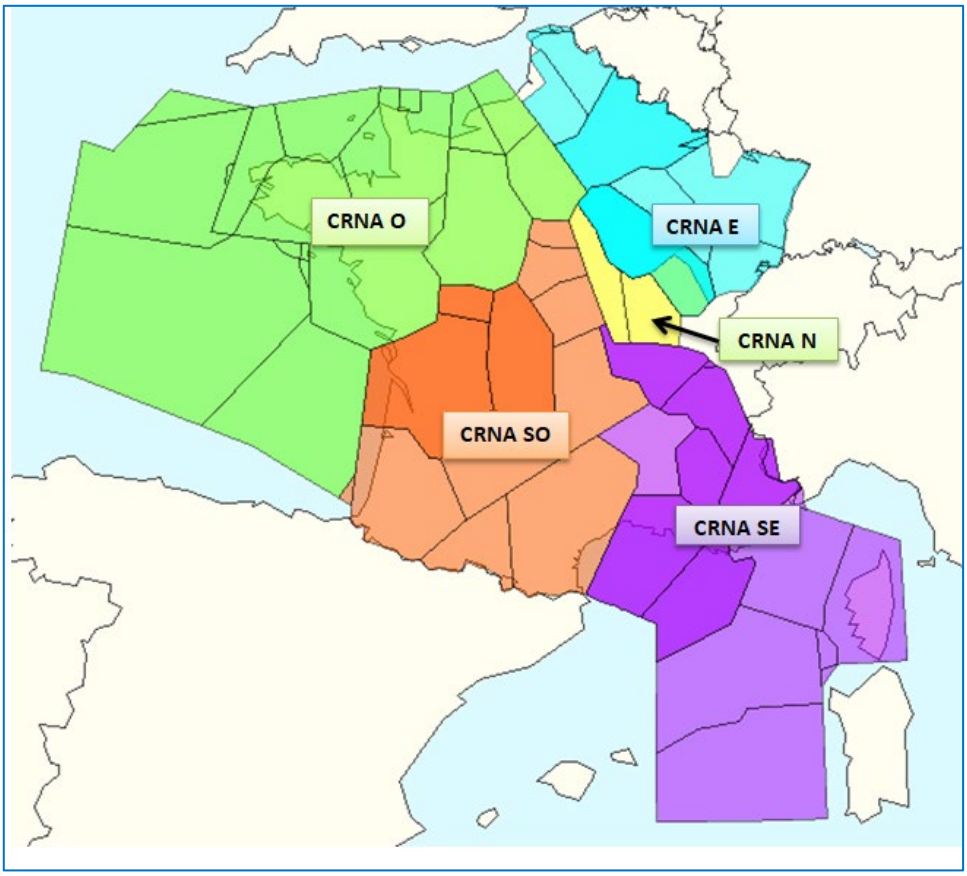
Geographical description of the FIR(s)

The geographical scope of this document addresses the BREST, PARIS, REIMS, BORDEAUX and MARSEILLE FIRs/ UIRs.

Lower Airspace (FL115 - FL195) – manage by ACC or APP



Upper Airspace: ACC in UIR France (above FL 365)



Airspace Classification and Organisation

CURRENT APPLICATION OF AIRSPACE CLASSIFICATIONS UP TO FL 660 - v1

FL or Alt Band	France
Upper Limit	660
410	C*
285	
195	
195	D
115	
115	G
3K* - 115	
SFC - 3K*	

Major TMA	A	C	D	E*
Minor TMA	C	D	E	
CTA/ Awy	D	E		
CTR	A	D*		
LTA*	D	E		

Legend	A	B	C	D	E	F	G	Unclassified or N/A	No Reply

C* = Class C with VFR restrictions, implemented above FL 195 in November 2004
3K* = FL55/ Alt 1,000 /1,500 /2,000 /2,500 /3,000 /3,500 /5,000 (ft AGL/AMSL)
E* = marginal portions of TMA or week-end periods;
D* = all CTR are class D except for Paris .
LTA* = special arrangements for mountainous regions and high seas which are classified E .
In France, Class A is only applied for Paris CTR and TMA.

ATC Units

The en-route ATC units in the French airspace which are of concern to this LSSIP are the following:

The maximum number of possible configurations

ATC Unit	Number of sectors		Associated FIR(s)	Remarks
	En-route	TMA		
BORDEAUX ACC	17	-	LFBB	
BREST ACC	16	-	LFRR	
MARSEILLE ACC	25	-	LFMM	
PARIS ACC	14	-	LFFF	
REIMS ACC	16	-	LFEE	

A total of 31 TMAs and 4 CTAs are managed in the French mainland airspace (excluding overseas regions) by APPs located at the principal airports. Most important of them are:

ATC Unit	Number of approach positions		Associated FIR(s)	Remarks
	En-route	TMA		
PARIS CDG	-	15 APP	LFFF	
PARIS ORLY	-	7 APP	LFFF	
BÂLE – MULHOUSE	-	6 APP + 2 FIS	LFEE	
BORDEAUX	-	4 APP + 1 FIS	LFBB	
LILLE	-	4 APP	LFFF	
LYON	-	8 APP + 2 FIS	LFMM	
MARSEILLE	-	6 APP + 2 FIS	LFMM	
MONTPELLIER	-	5 APP + 1 FIS	LFMM	
NANTES	-	4 APP + 3 FIS	LFRR	
NICE	-	9 APP + 4 FIS	LFMM	
STRASBOURG	-	5 APP+ 1 FIS	LFEE	
TOULOUSE	-	6 APP+ 1 FIS	LFBB	

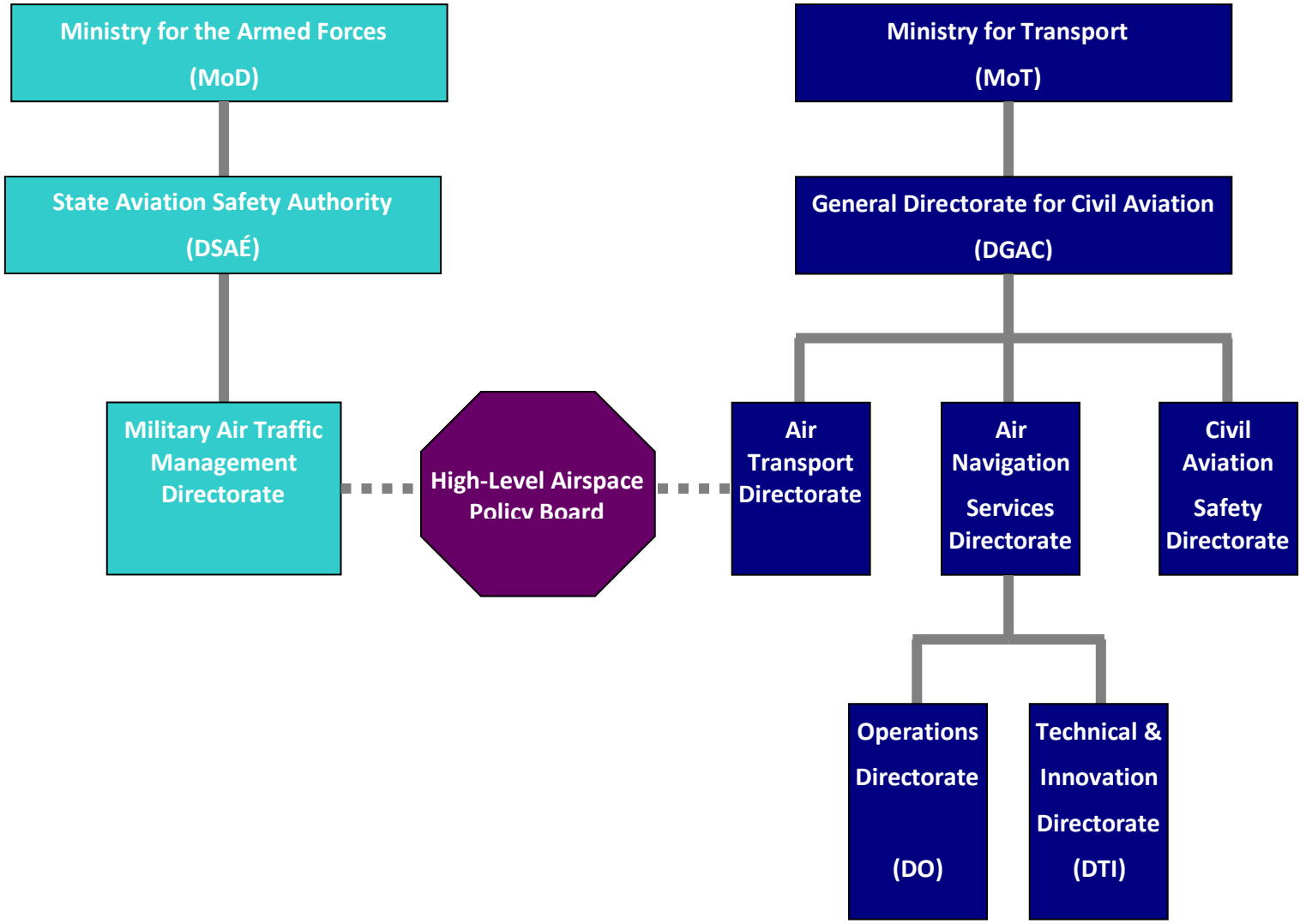
1.2. National Stakeholders

Civil aviation in France is under the responsibility of the "Ministère de la Transition écologique, chargé des Transports" (Ministry for the Ecological Transition, responsible for Transport) which represents France in the EUROCONTROL Provisional Council together with its military counterpart on behalf of the "Ministère des Armées" (Ministry for the Armed Forces).

The stakeholders involved in ATM/ANS in France are the following:

- Ministry for Transport, attached to the Ministry for the Ecological Transition;
- Direction Générale de l'Aviation Civile (DGAC);
- "Direction du transport aérien" (DTA), responsible for the rulemaking of air navigation under general air traffic rules and National Supervisory Authority for the charging and performance regulation (liaising with DSAC for safety performance);
- "Direction de la sécurité de l'aviation civile" (DSAC), the National Supervisory Authority except for charging and performance regulation (see above);
- "Direction des services de la navigation aérienne" (DSNA), as the main provider of Air Navigation Services.
- "Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile" (BEA) is an independent body responsable for accident and serious incident investigations reporting directly to the Ministry for the Ecological Transition;
- "Météo France", for the provision of meteorological services;
- "Ministry for the Armed Forces" (MoD);
- "Direction de la Circulation Aérienne Militaire" (DIRCAM): Military Air Traffic Management Directorate which is the regulator for all traffic flying under operational air traffic rules, and also for the provision of air traffic services to GAT in some parts of the French national airspace. DIRCAM performs oversight activities on behalf of DSAC, French national supervisory authority, regarding military providers providing air navigation services to general air traffic;
- CFA: Air Force Command, for the provision of air navigation service (ATS & CNS) in particular for the benefit of MIL aircraft and ANS providers;
- ALAVIA: Navy Aviation , for the provision of air traffic services;
- COMALAT: Army Aviation, for the provision of air traffic services and CNS;
- DGA/EV: Test and Acceptance Centre, for the provision of air traffic services;
- DIRISI: Defence network communication and information systems directorate, for the provision of ground - ground communication;
- DIA: Aeronautical Division Information for provision aeronautical information services for OAT only;
- In addition, in FIRs managed by France:
    - 65 independent air navigation service providers provide AFIS for GAT on 66 aerodromes;
    - the ESSP (European Satellite Services Providers), the members of which are AENA (ENAIRE), DFS, DSNA, ENAV, NATS , NAV and Skyguide, is in charge of the provision of the EGNOS Open Service (OS) and Safety of Life (SoL) Service. Since November 2012, EASA is competent authority for the certification and oversight of ESSP.

Their activities are detailed in the following subchapters and their relationships are shown in the diagram below. Main organisation charts are given in Annex B.


Ministry for the Armed Forces
(MoD)
State Aviation Safety Authority
(DSAÉ)
Military Air Traffic Management Directorate
High-Level Airspace Policy Board
Ministry for Transport
(MoT)
General Directorate for Civil Aviation
(DGAC)
Air Transport Directorate
Air Navigation Services Directorate
Civil Aviation Safety Directorate
Operations Directorate
(DO)
Technical & Innovation Directorate
(DTI)

Note: Apart from the civil BEA, a BEA-E (State aeronautic Accident Investigation Board) has been created in the same way in order to provide accidents and serious incidents involving State aircraft with investigations.

This defence organism is placed under the direct surveillance of the Ministry for the Armed Forces. The BEAD Air is coordinating with the BEA in some cases but remains independent.

Civil Regulator(s)

General Information

The different national entities having regulatory responsibilities in ATM are summarised in the table below. The DGAC is further detailed in the following sections.

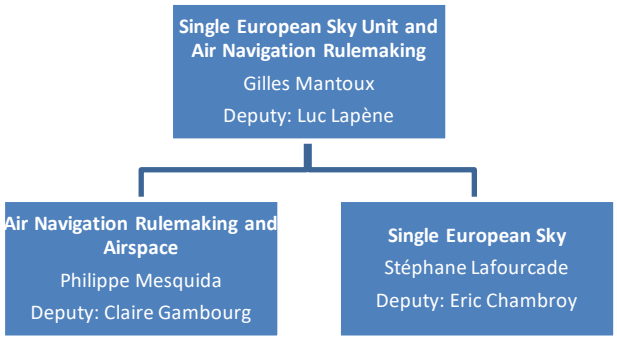
Activity in ATM:	Organisation responsible	Legal Basis
Rulemaking	Direction du Transport aérien (DTA)	Arrêté of July 9th, 2008 on the organisation of the MEEDDAT – Article 6.1.8 (NOR: DEVK0815773A)
Safety Oversight	Direction de la Sécurité de l'Aviation civile (DSAC)	Arrêté of December 19th, 2008 on the organisation of the DSAC (NOR: DEVA0828132A)
Enforcement actions in case of non-compliance with safety regulatory requirements	DSAC	DSAC sets the corrective measures or operational restrictions to be taken. Enforcement actions have different meanings, not used in our regulation on oversight.
Airspace	DTA	Arrêté of July 9th, 2008 on the organisation of the MEEDDAT- Article 6.1.8 (NOR: DEVK0815773A)
Economic	DTA	Arrêté of July 9th, 2008 on the organisation of the MEEDDAT – Article 6.1.7 (NOR: DEVK0815773A)
Environment	DTA	Arrêté of July 9th, 2008 on the organisation of the MEEDDAT- Article 6.1.1 (NOR: DEVK0815773A)
Security	DTA DSAC assists DTA with technical expertise regarding regulatory activities, monitoring and application of the Civil Aviation Security Quality Control National Program	Arrêté of July 9th, 2008 on the organisation of the MEEDDAT – Article 6.1.5 (NOR: DEVK0815773A) Arrêté of December 19th, 2008 on the organisation of the DSAC – Article 10 (NOR: DEVA0828132A)
Accident investigation		

DTA

In France, the Regulator is composed of different directorates of DGAC, which belongs to the Ministry for Transport: DTA and DSAC. They are functionally separated from DSNA, which is also part of DGAC.

The "Direction du Transport Aérien" (DTA) is entrusted with the Environment, Security, Economic regulation (airlines, airports, ANS, passenger rights) Social law issues within the industry, International matters and relationships, as well as airspace management, ATM/ANS safety rule-making and policy.

Within DTA, a dedicated unit, the "Mission Ciel Unique" (MCU), is responsible for the Single European Sky matters, and with Airspace organisation, ATM/ANS rulemaking (except ANS staff training and licensing issues) and performance regulation.



DSAC

Direction de la Sécurité de l'Aviation Civile (DSAC) is the national supervisory authority set up by the French order of the 7th December 2015.

DSAC, as French supervisory authority is in charge of ensuring compliance with international standards applicable to civil aviation, European regulations, and national legal provisions regarding safety, environment and security. As a consequence, DSAC has national authority for supervising, in particular, ATM/ANS safety, interoperability and security.

DSAC includes five central technical directorates addressing European cooperation and safety regulation, flight crews, airworthiness and operations, airports and air navigation and security. The national supervisory authority revolves around a central directorate in Paris and regional offices located throughout mainland France, overseas departments and territories of the Antilles-Guyana, and in the Indian Ocean region.

Annual Report published:	Y	The last (2019) Annual Report is available and can be downloaded: https://www.ecologie.gouv.fr/sites/default/files/rapport_securite_aerienne_2019_en_light.pdf

Air Navigation Service Provider(s)

DSNA

Service provided

"Direction des Services de la Navigation Aérienne" (DSNA) was created by decree of 28th February 2005. DSNA is the civil ANSP that provides air traffic control for en-route, TMA and aerodromes in FIR France, CNS and AIS. It is state-owned and is an entity of DGAC.

Functional separation is achieved between rule-making activities, supervisory activities and service provision activities.

Governance:	State	**Ownership:**	100% State
Services provided	**Y/N**	**Comment**	
ATC en-route	Y	Designated on 28th February 2005	
ATC approach	Y	Designated on 28th February 2005	
ATC Aerodrome(s)	Y	Designated on 28th February 2005 and 27th December 2016	
AIS	Y		
CNS	Y		
MET	N	METEO FRANCE is the only certified MET provider, and was designated on 20th December 2011.	
ATCO training	Y	Initial training is provided by ENAC (French Civil Aviation Academy)	
Others	N	AFIS service, where available, is generally provided by aerodrome operators. AFIS providers are certified as ANSP and were last designated on 21st August 2018.	
Additional information:			
Provision of services in other State(s):	Y	Existing ATS services through letters of agreement where appropriate	
Annual Report published:	Y	The last (2019) Annual Report is available and can be downloaded: https://www.ecologie.gouv.fr/sites/default/files/Annual_report_DSNA_2019.pdf	

For more information, see civil aviation website:

https://www.ecologie.gouv.fr/politiques/aviation-civile

ATC Systems in use

DACOTA	Thales Air systems	V9 (2020)
IRMA	Sogeti High Tech	V9 (2020)
ODS	Cap Gemini	6.4 et 7.6 (2020)
OMEGA	Sogeti High Tech	V5.2 (2018)
STIP	Thales Services	I 28 (2020)
STPV	Thales Services	V34 (2020)
S.Erato		V6.3 (2019)

Main ANSP part of any technology alliance[1]	Y	DSNA/ENAV

FDPS

Specify the manufacturer of the ATC system currently in use:	STIP/STPV: Thalès Services
Upgrade[2] of the ATC system is performed or planned?	N
Replacement of the ATC system by the new one is planned?	2022
ATC Unit	

SDPS

Specify the manufacturer of the ATC system currently in use:	ARTAS, EUROCONTROL (CAMOS)
Upgrade of the ATC system is performed or planned?	N
Replacement of the ATC system by the new one is planned?	N/A
ATC Unit	

[1] Technology alliance is an alliance with another service provider for joint procurement of technology from a particular supplier (e.g. COOPANS alliance)

[2] Upgrade is defined as any modification that changes the operational characteristics of the system (SES Framework Regulation 549/2004, Article 2 (40))

Airports

General information

In addition to aerodromes operated by “Aéroports De Paris” (ADP), eleven major airports (11), whose land belongs to the state, are operated by companies under concession by DGAC. This concession tasks the Airport Operator to manage not only the land side and the air terminals but also the air side (that includes signs and markings, lighting).

Regional airports property has been transferred to regional communities. These communities delegate the operation to airport operators under “statement of work”.

DSAC is the competent authority for Airport operators under Reg (EU) 2018/1139.

UAF (Union des Aéroports Français – www.aeroport.fr) is the association of the Airport Operators. An airport slot coordinator COHOR (Association pour la Coordination des Horaires – www.cohor.org), a different entity independent from State, airlines and airports, is responsible for the airport slot allocation for the airlines or any aircraft operator, for any operation at French coordinated airports, based on the EU Regulation 95/93 as amended.

Airport(s) covered by the LSSIP

The following airports are covered in this LSSIP:

- Paris Roissy - Charles de Gaulle (LFPG)
- Paris Orly (LFPO)
- Nice-Côte d’Azur (LFMN)
- Lyon-Saint Exupéry (LFLL)
- Marseille-Provence (LFML)
- Toulouse-Blagnac (LFBO)

Military Authorities

The defence activities encompass the functions of regulator, ANSP, airport operator, airspace user, aircraft operator, aeronautical information provider (only for OAT), for all the traffic flying OAT and also for the provision of air traffic services to OAT and GAT flights in some parts of national airspace and around some airports. Regulatory, service provision and user role in ATM are detailed below.

Regulatory role

DIRCAM (Military Air Traffic Management Directorate) is the defence authority responsible for providing regulation of air navigation under operational air traffic rules.

DIRCAM is embedded inside the State Aviation Safety Authority (DSAÉ), which deals with regulation and oversight for ATM and airworthiness, and also aircrew training and aircraft operations.

To ensure safety of air navigation in the whole French airspace, regulatory activities are coordinated between DIRCAM and DTA under the High-Level Airspace Policy Board ("Directoire de l'Espace Aérien").

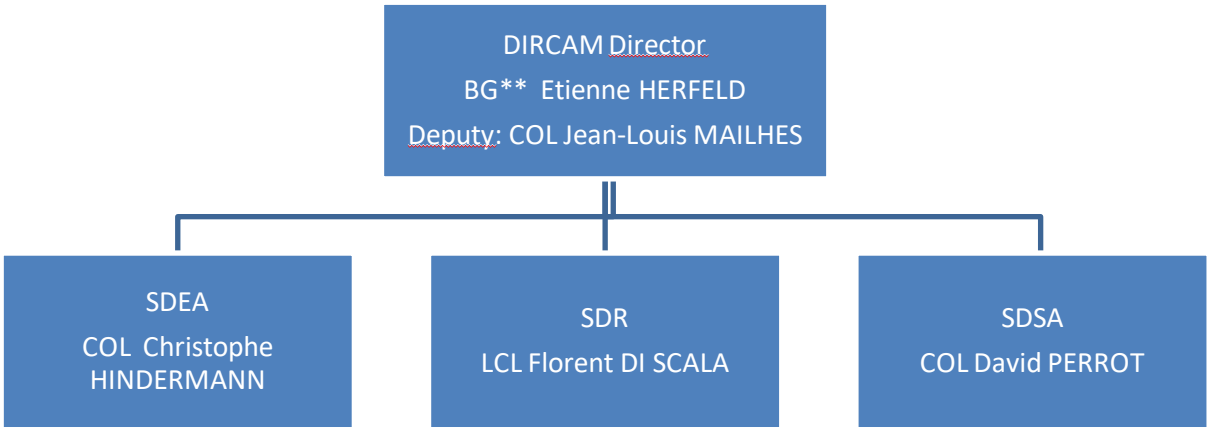
In the same way than DGAC organisation, military ATM safety regulatory functions have been separated in two parts, under the authority of the Director of the DIRCAM, which encompasses three sub-directorates:

- Airspace sub-directorate (SDEA) in charge of airspace and relevant rulemaking;

- Regulatory sub-directorate (SDR) in charge of Air navigation, Airspace and Aerodromes regulation;

- Surveillance and Audit sub-directorate (SDSA) in charge of military ANSPs supervisory activities, on behalf of DSAC for the services provided for GAT, approval of military aerodromes for the need of State aviation.

Therefore, DIRCAM is organized as follows:



Regulatory framework and rule making

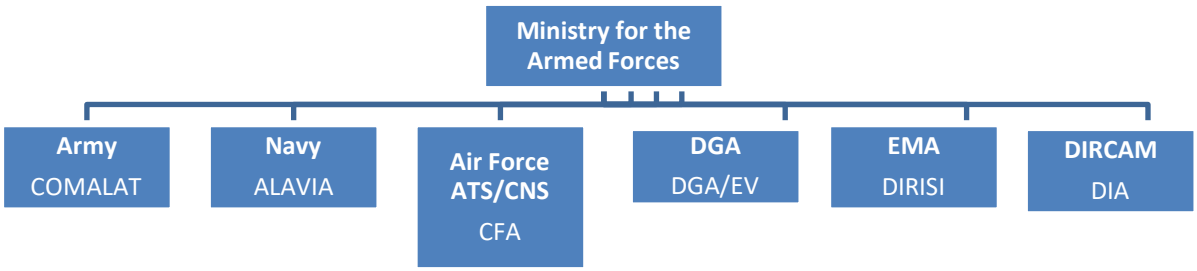
OAT		GAT	
OAT and provision of service for OAT governed by national legal provisions?	Y	Provision of service for GAT by the Military governed by national legal provisions?	Y
Level of such legal provision: Decrees in State council or Prime minister level. DIRCAM Regulation		Level of such legal provision: Decree in State council or prime minister level	
Authority signing such legal provision: Prime Minister, Minister of Defence		Authority signing such legal provision: Prime Minister	
These provisions cover:		These provisions cover:	
Rules of the Air for OAT	Y		
Organisation of military ATS for OAT	Y	Organisation of military ATS for GAT	Y
OAT/GAT Co-ordination	Y	OAT/GAT Co-ordination	Y
ATCO Training	N	ATCO Training	Y
ATCO Licensing	N	ATCO Licensing	N
ANSP Certification	N	ANSP Certification	N
ANSP Supervision	Y	ANSP Supervision	Y
Aircrew Training	N		
Aircrew Licensing	N		
Additional Information: Crews and controllers are both trained and licensed by relevant Defence Authorities but most of them have a civil licence too.		Additional Information ATCO licences are delivered by DSAC and trained in a military school certified by DSAC	
Means used to inform airspace users (other than military) about these provisions:		Means used to inform airspace users (other than military) about these provisions:	
National AIP	Y	National AIP	Y
National Military AIP	Y	National Military AIP	Y
EUROCONTROL eAIP	Y	EUROCONTROL eAIP	Y
Other:		Other:	

Oversight

OAT	GAT
National oversight body for OAT: DIRCAM OAT oversight has been launched in September 2012. Actually, it encompasses the oversight of training organisations, military ATCO licenses and OAT providers.	NSA (as per SES reg. 550/2004) for GAT services provided by the military: The French National Supervisory Authority for GAT services provided by military ANSPs is the DSAC. Some military ANSPs supervisory activities are performed by DIRCAM, on behalf of DSAC, through a national decree and an operational letter of agreement. Oversight methods used by DIRCAM are supervised by DSAC. Military ATCO training oversight and licensing are performed by DSAC.
Additional information:	Additional information:

Service Provision role

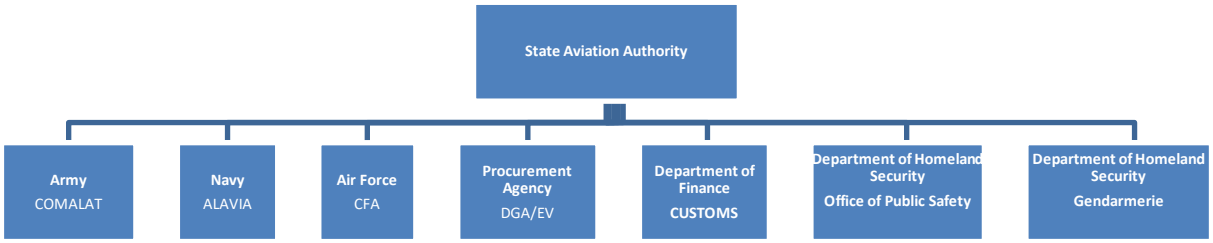
MoD organizations are providing ATS to general air traffic in some parts of the airspace. DIRCAM is responsible for providing aeronautical information at national level for OAT.



OAT			GAT	
Services Provided:			Services Provided:	
En-Route	Y	If not provided by MIL specify who does provide this service	En-Route	Y
Approach/TMA	Y	"	Approach/TMA	Y
Airfield/TWR/GND	Y	"	Airfield/TWR/GND	Y
AIS	Y	"	AIS	N
MET	Y	For observations and forecasting, data are provided by METEO FRANCE and military services under METEO FRANCE supervision, and tools are METEO FRANCE devices	MET	N
SAR	Y		SAR	Y
TSA/TRA monitoring	Y		FIS	Y
Other:			Other:	
Additional Information:			Additional Information:	

Military ANSP providing GAT services SES certified?	Y	CFA ALAVIA COMALAT DGA/EV DIRISI	15/12/20 07/12/20 07/12/20 07/12/20 04/12/20	Duration of the Certificate:	None None None None None
Certificate issued by:	DSAC		If NO, is this fact reported to the EC in accordance with SES regulations?		
Additional Information:					

User role



IFR inside controlled airspace, Military aircraft can fly?	OAT only		GAT only		Both OAT and GAT	Y

If Military fly OAT-IFR inside controlled airspace, specify the available options:			
Free Routing	N	Within specific corridors only	Y
Within the regular (GAT) national route network	N	Under radar control	Y
Within a special OAT route system	Y	Under radar advisory service	N

If Military fly GAT-IFR inside controlled airspace, specify existing special arrangements:							
No special arrangements	N			Exemption from Route Charges			Y
Exemption from flow and capacity (ATFCM) measures	Y			Provision of ATC in UHF			Y
CNS exemptions:	RVSM	Y	8.33	Y	Mode S	Y	ACAS	Y
Others:	Flow and capacity exemptions are only authorized for some governmental and prioritized flights.						

Flexible Use of Airspace (FUA)

Military in France applies FUA requirements as specified in the Regulation No 2150/2005: Y
FUA Level 1 implemented: Y
FUA Level 2 implemented: Y
FUA Level 3 implemented: Y

2. Traffic and Capacity

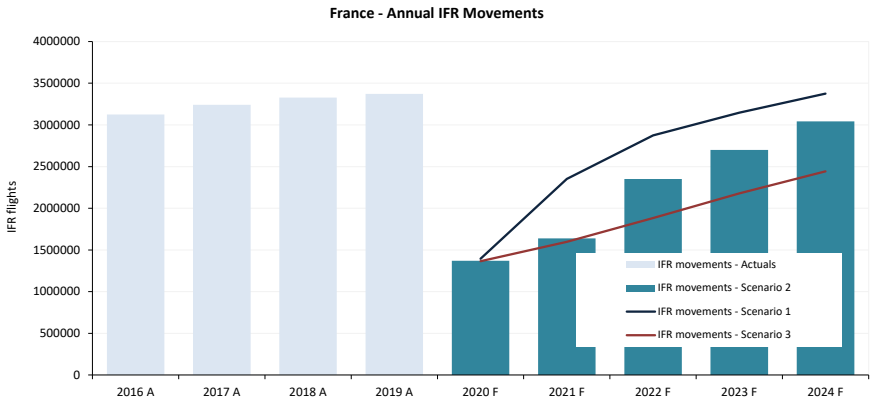
Disclaimer

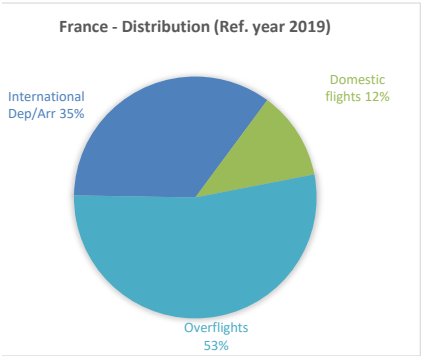
The Capacity targets for RP3 have been set at FABEC level and the 6 FABEC ANSPs, through ASB, are jointly accountable for it. Binding capacity targets, at FABEC level only, and relative assumptions for RP3 are set for capacity in the FABEC Performance Plan that has been submitted to the European Commission 1st October 2019.

Due to the COVID-19 pandemic outbreak in winter 2020, major initial RP3 assumptions, such as traffic forecast, which have been used to draft the FABEC RP3 Performance Plan are no longer valid. In order to address the impact of the pandemic on the performance and charging scheme the Commission has published an ad-hoc Implementing Regulation 2020/1627 of 3rd November 2020 on exceptional measures for the third reference period (2020-2024) of the single European sky performance and charging scheme due to the COVID-19 pandemic. New RP3 targets will be defined before 1st May 2021 and revised performance plans shall be submitted before 1st October 2021.

Therefore, a revised FABEC RP3 Performance Plan will be submitted 1st October 2021 setting new capacity targets. They would remain under discussion during the revision phase preceding final FABEC performance plan approval expected beginning of 2022. No direct link may be made between this document and these future targets.

2.1. Evolution of traffic in France





A = Actual

F = Forecast

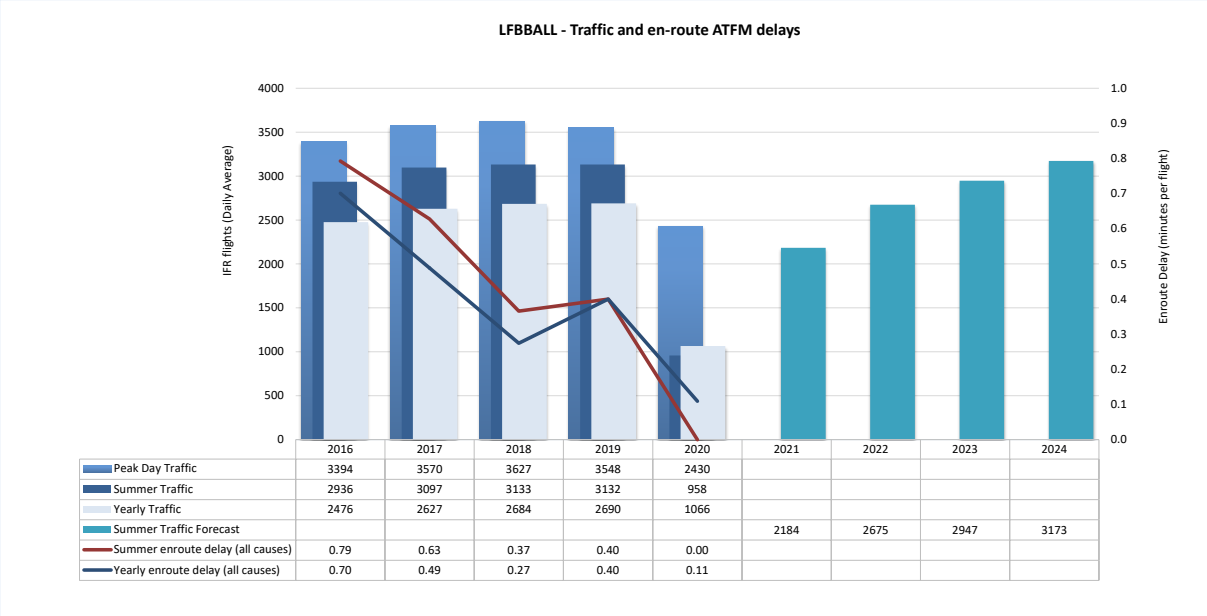
EUROCONTROL Five-Year Forecast 2020-2024									
IFR flights yearly growth		2017 A	2018 A	2019 A	2020 F	2021 F	2022 F	2023 F	2024 F
France	Sc1				-58.7%	68.8%	22.2%	9.5%	7.2%
	Sc2	3.8%	2.7%	1.3%	-59.4%	19.7%	43.5%	14.9%	12.6%
	Sc3				-59.5%	17.1%	17.9%	15.7%	12.2%
ECAC	Sc1				-55.1%	61.9%	21.9%	8.9%	6.8%
	Sc2	4.0%	3.8%	0.8%	-56.4%	16.6%	41.9%	14.1%	12.2%
	Sc3				-56.6%	14.5%	17.5%	14.8%	11.6%

2020

Traffic in France decreased by 59% in 2020 compared to 2019.

2.2.BORDEAUX ACC

Traffic and en-route ATFM delays 2016-2024



	2016	2017	2018	2019	2020	2021	2022	2023	2024
Peak Day Traffic	3394	3570	3627	3548	2430				
Summer Traffic	2936	3097	3133	3132	958				
Yearly Traffic	2476	2627	2684	2690	1066				
Summer Traffic Forecast						2184	2675	2947	3173
Summer enroute delay (all causes)	0.79	0.63	0.37	0.40	0.00				
Yearly enroute delay (all causes)	0.70	0.49	0.27	0.40	0.11				

2020 performance

Bordeaux ACC	Traffic evolution (2020 vs 2019)	En-route Delay (min. per flight)
	Actual Traffic	All reasons
Year	-60%	0.11
Summer	-69%	0.00

Summer 2020 performance assessment

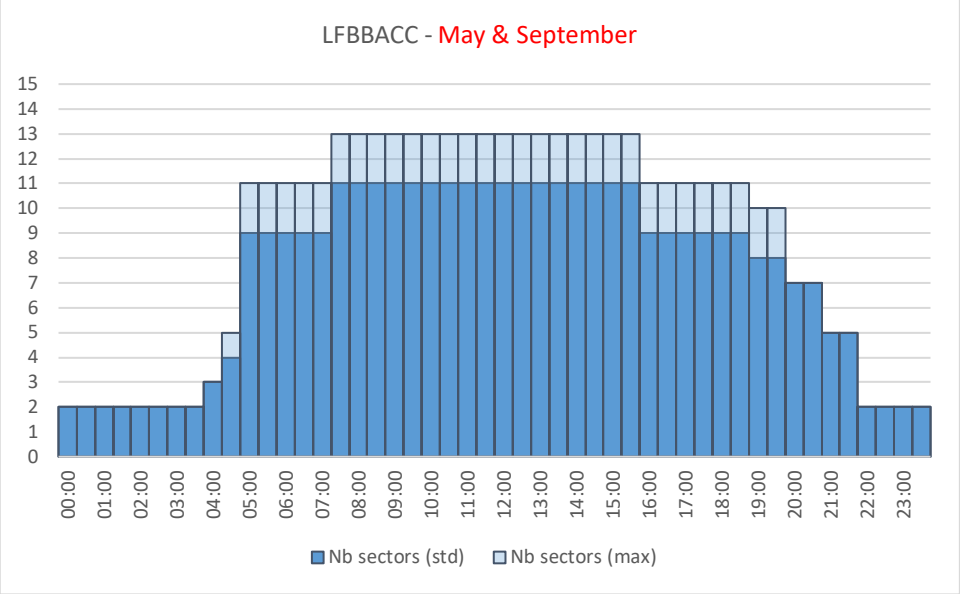
The average delay per flight was zero in summer 2020.
93% of the delays during the year 2020 were due to the reason Industrial action.

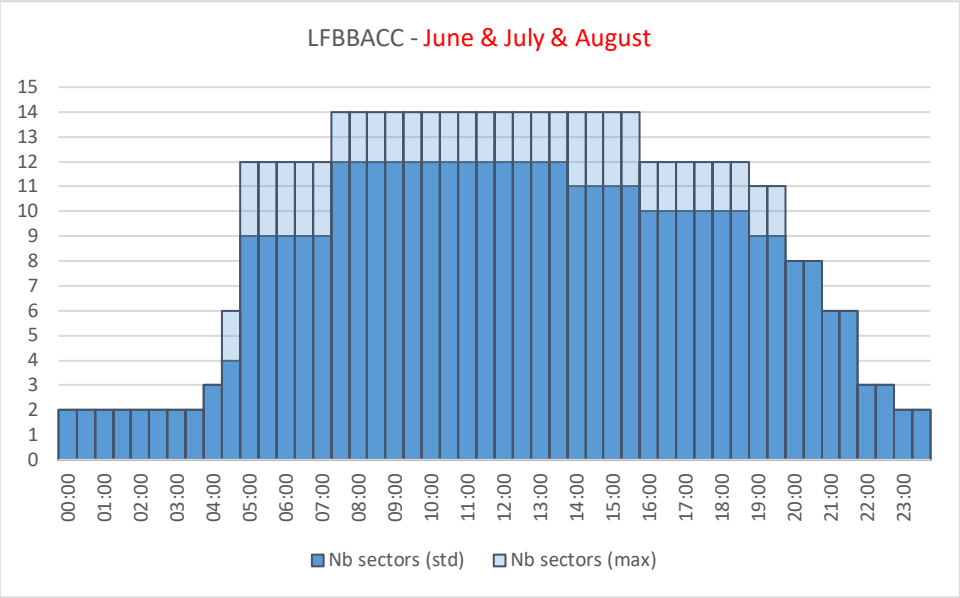
Operational actions	Achieved	Comments
Improved Airspace Management / FUA	Yes	- R108HW/RM/HS/HN/RT in March with FBZ - TRA42N/S in March with FBZ - TSA40 in March, with FBZ - TSA41 in March, with FBZ - TSA46N/S in March, with FBZ - R61H in October with FBZ - R9H1/H2/H3 in October with FBZ - R25H in October without FBZ - TSA43C/A/W/N in December with FBZ
ZENA Gascogne (big military area)	Yes	Experimental, via AIP SUPPs
Improved ATFCM Procedures and STAM	Yes	
CDM processes and procedures	Yes	28 files with AOs (Air France, HOP, Easyjet et TUI group)
MAC + eNM	Yes	RAD alleviation (green aviation)
5th layer in UIR south sectors (ZXNH)	Yes	
Flexible roster	Yes	Along with traffic demand

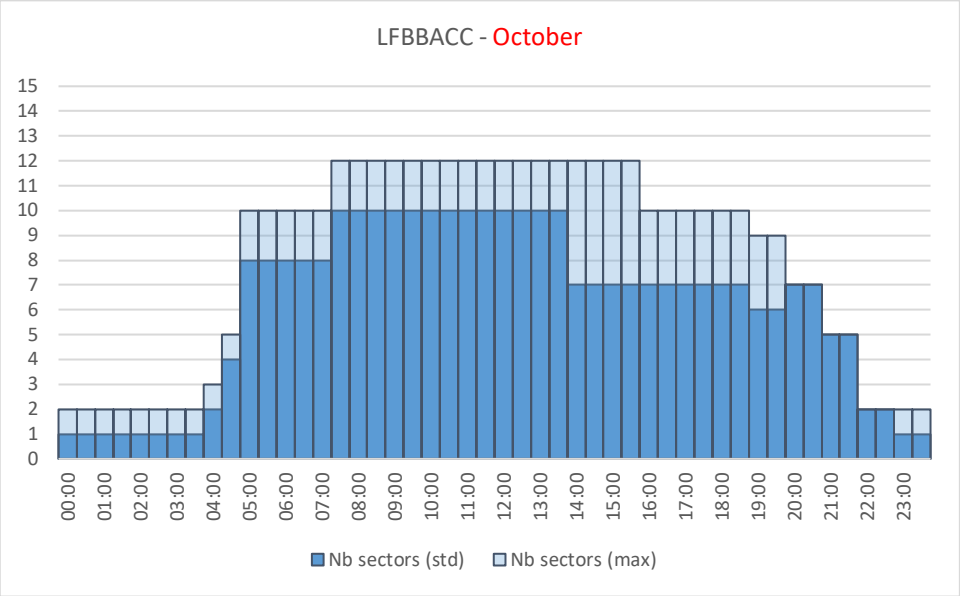
Maintain number of ATCOs	Yes	
SALTO incl. B2B regulations	Ongoing	Still works in progress
Improvement of safety net	Yes	TCT Implementation (BDR)

Planning Period – Summer 2021

2021 Summer Capacity Plan	
Free Route Airspace	Implementation expected 2nd December
Airspace Management **Advanced FUA**	Improved Airspace Management / FUA: All zones: D31D/R31H: February and R169
	ZENA South West (big military area): work in progress
	TSA9 evolution: work in progress
Airport & TMA Network Integration	
Cooperative Traffic Management	Improved ATFCM Procedures and STAM: work in progress - N'CAP with AOs (XP with Air France) -YYDG group: yoyos flights, sharp turns, high filers et intruders. - green aviation
	CDM processes and procedures: - meeting with CCO Vueling, Easyjet et Ryanair. - meeting ACDS-dispatch CCO Air France - meeting HOP
	MAC
Airspace	
Procedures	
Staffing	
	Maintain number of ATCOs
Technical	SALTO incl. B2B regulations
Capacity	
Significant Events	
Additional information	



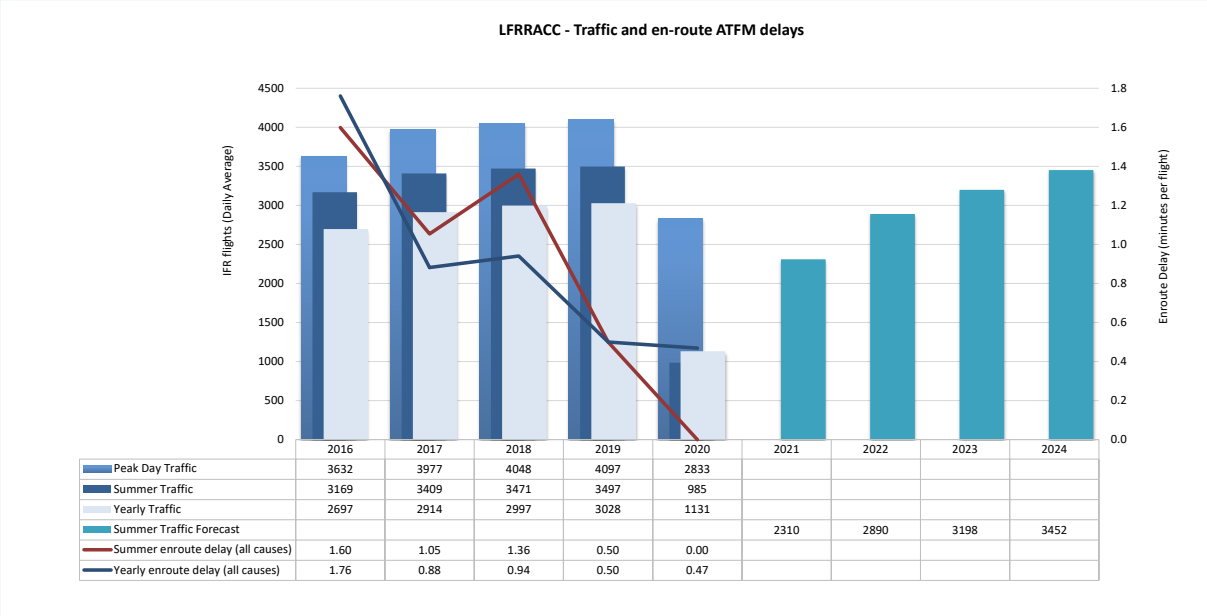




Summer 2021 Outlook
No capacity issues are foreseen for Bordeaux ACC in summer 2021.

2.3. BREST ACC

Traffic and en-route ATFM delays 2016-2024



	2016	2017	2018	2019	2020	2021	2022	2023	2024
Peak Day Traffic	3632	3977	4048	4097	2833				
Summer Traffic	3169	3409	3471	3497	985				
Yearly Traffic	2697	2914	2997	3028	1131				
Summer Traffic Forecast						2310	2890	3198	3452
Summer enroute delay (all causes)	1.60	1.05	1.36	0.50	0.00				
Yearly enroute delay (all causes)	1.76	0.88	0.94	0.50	0.47				

2020 performance

Brest ACC	Traffic evolution (2020 vs 2019)	En-route Delay (min. per flight)
	Actual Traffic	All reasons
Year	-63%	0.47
Summer	-72%	0.00

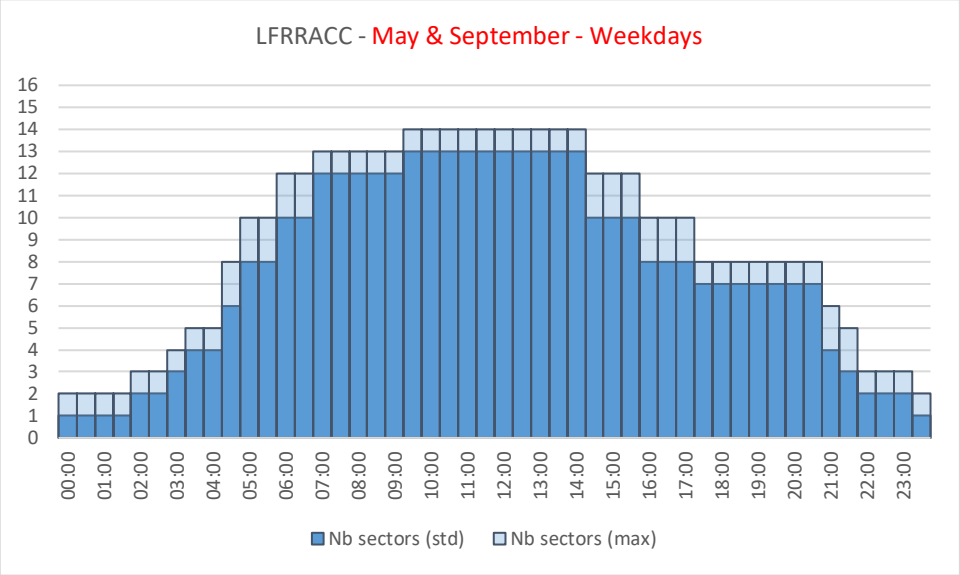
Summer 2020 performance assessment

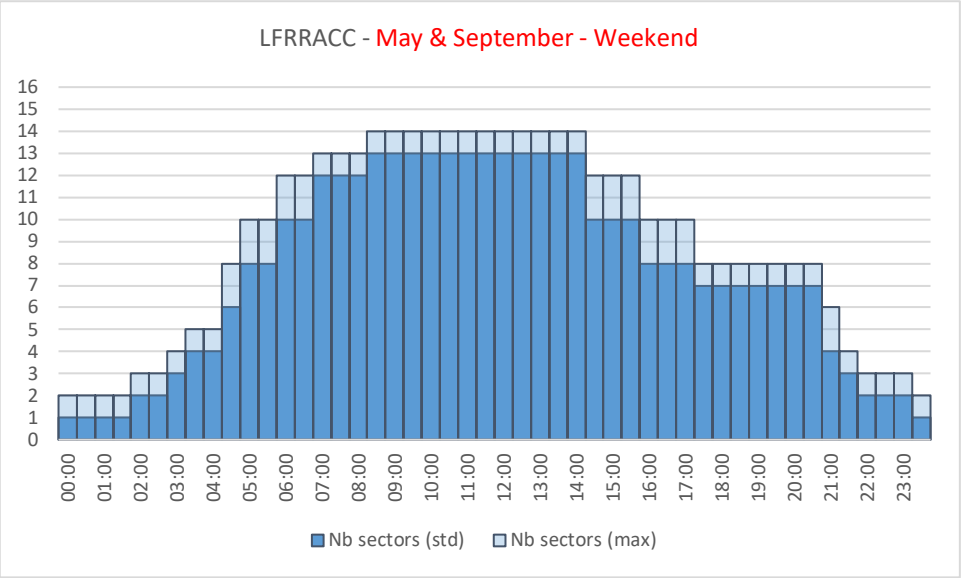
The average delay per flight was zero in summer 2020.
96% of the delays during the year 2020 were due to the reason Industrial action.

Operational actions	Achieved	Comments
Improved Airspace Management / FUA	Yes	
ZENA Atlantique + ZENA Gascogne (big military areas)	Yes	Still experimental through AIP Supps
Improved ATFCM Procedures and STAM	Yes	No operational improvement, but technical (SALTO and SINAPS in test, ATFCM and conf optimiser tool)
CDM processes and procedures	Yes	Support to Cies to implement RAD improvement
MAC + eNM	Yes	RAD alleviation (green aviation)
Reorganisation of airspace below FL195 phase 2 LFRN	Yes	
Flexible roster	Yes	Along with traffic demand
Maintain number of ATCOs	Yes	About
SALTO incl. B2B regulations	Ongoing	Still works in progress

Planning Period – Summer 2021

2021 Summer Capacity Plan	
Free Route Airspace	Step 1.0 (France NW1 cell) planned December 2nd, 2021
Airspace Management **Advanced FUA**	Improved Airspace Management / FUA
Airport & TMA Network Integration	XMAN Paris and London
Cooperative Traffic Management	Improved ATFCM Procedures and STAM
	CDM processes and procedures
	MAC
Airspace	25th February 2021: Reorganisation of airspace 1. below FL195 phase 3 LFRS and 2. above FL195 new DFL N sectors & group of North sectors
Procedures	
Staffing	
	ATCOs on request
Technical	SALTO incl. B2B regulations
Capacity	New sectors DFL => revision of sectors capacity
Significant Events	
Additional information	




LFRRACC - May & September - Weekend
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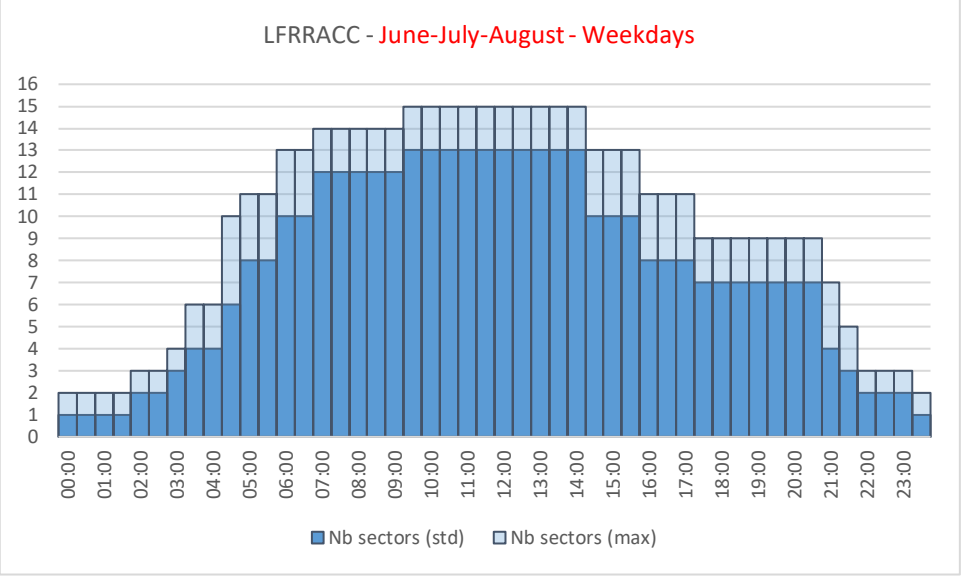
LFRRACC - June-July-August - Weekdays
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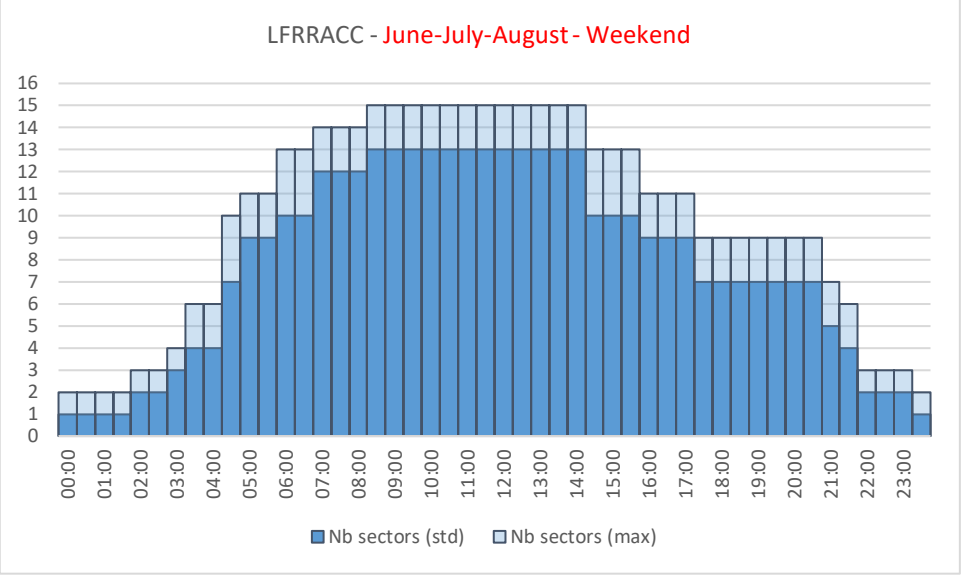
LFRRACC - June-July-August - Weekend
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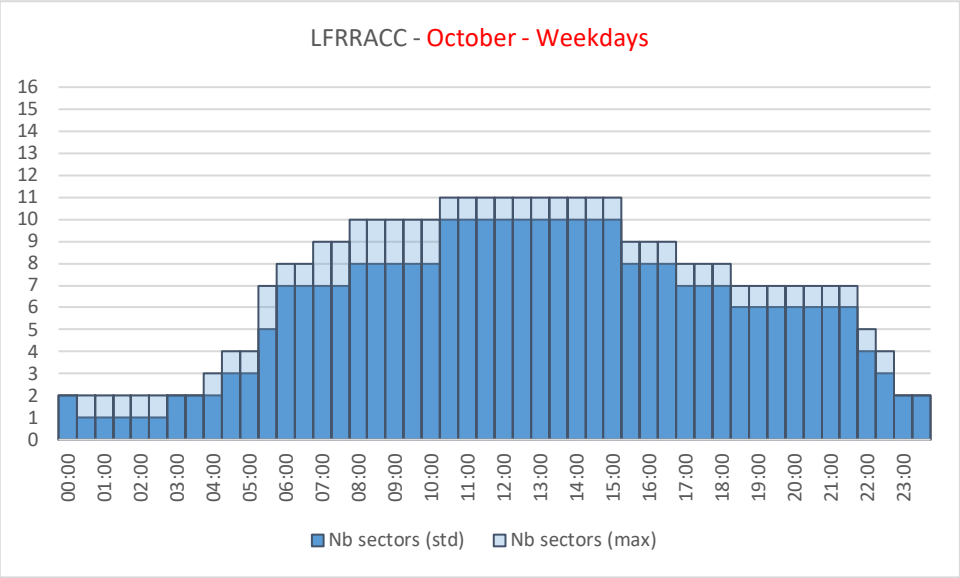
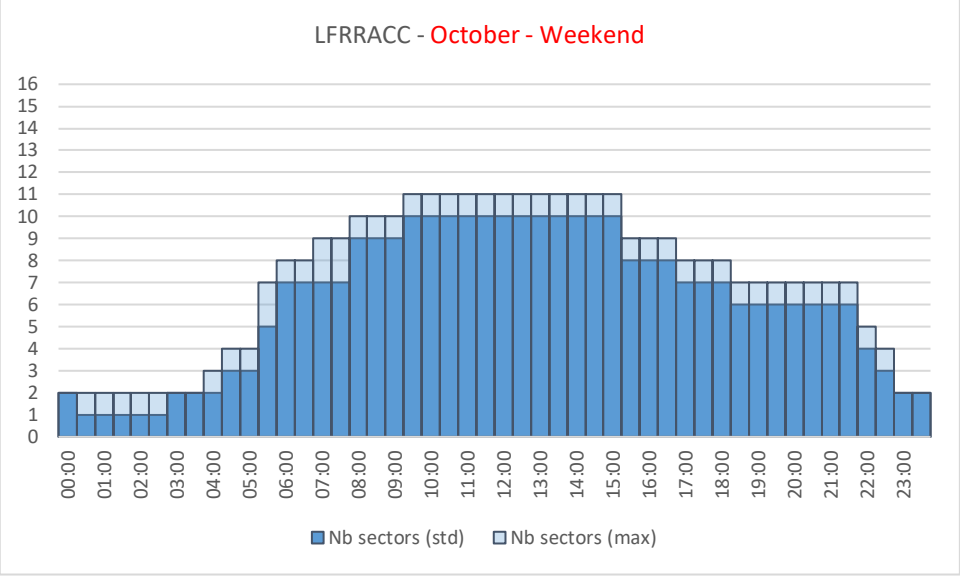
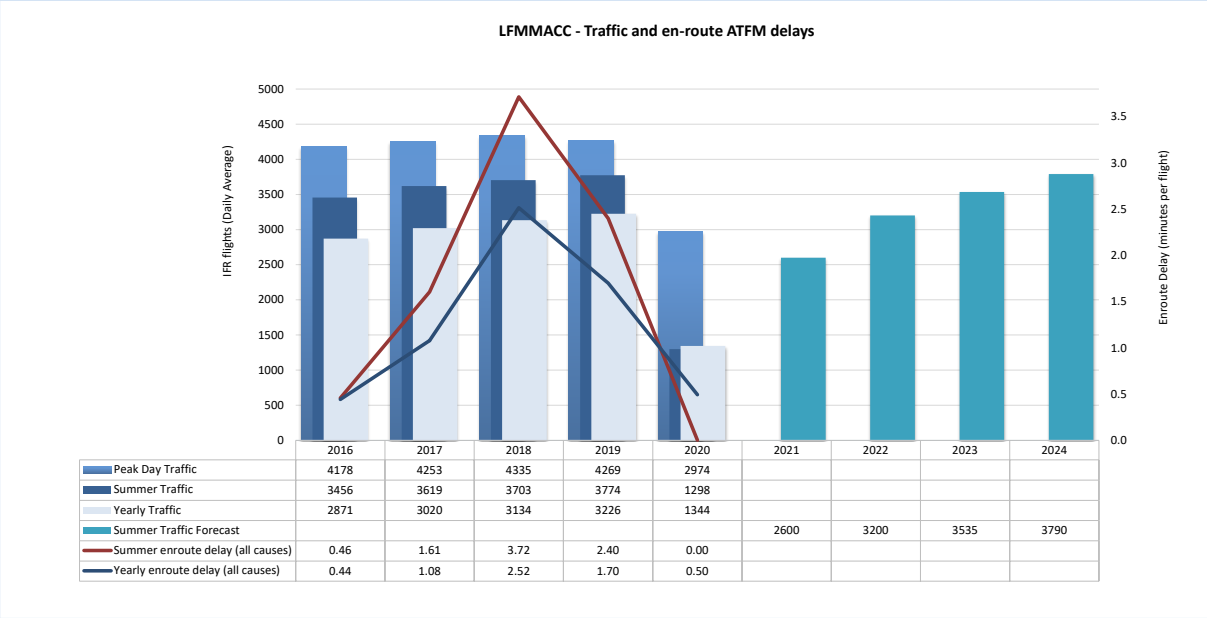




Summer 2021 Outlook
The traffic demand is expected to be slightly above declared capacity in some elementary sectors in the upper layer most of the days, mainly due to green RAD and more routeing flexibility given to AOs. ATFCM measures such as STAM or scenarios might be needed to better balance traffic between the different sector layers.

2.4.MARSEILLE ACC

Traffic and en-route ATFM delays 2016-2024



	2016	2017	2018	2019	2020	2021	2022	2023	2024
Peak Day Traffic	4178	4253	4335	4269	2974				
Summer Traffic	3456	3619	3703	3774	1298				
Yearly Traffic	2871	3020	3134	3226	1344				
Summer Traffic Forecast						2600	3200	3535	3790
Summer enroute delay (all causes)	0.46	1.61	3.72	2.40	0.00				
Yearly enroute delay (all causes)	0.44	1.08	2.52	1.70	0.50				

2020 performance

Marseille ACC	Traffic evolution (2020 vs 2019)	En-route Delay (min. per flight)
	Actual Traffic	All reasons
Year	-58%	0.50
Summer	-66%	0.00

Summer 2020 performance assessment

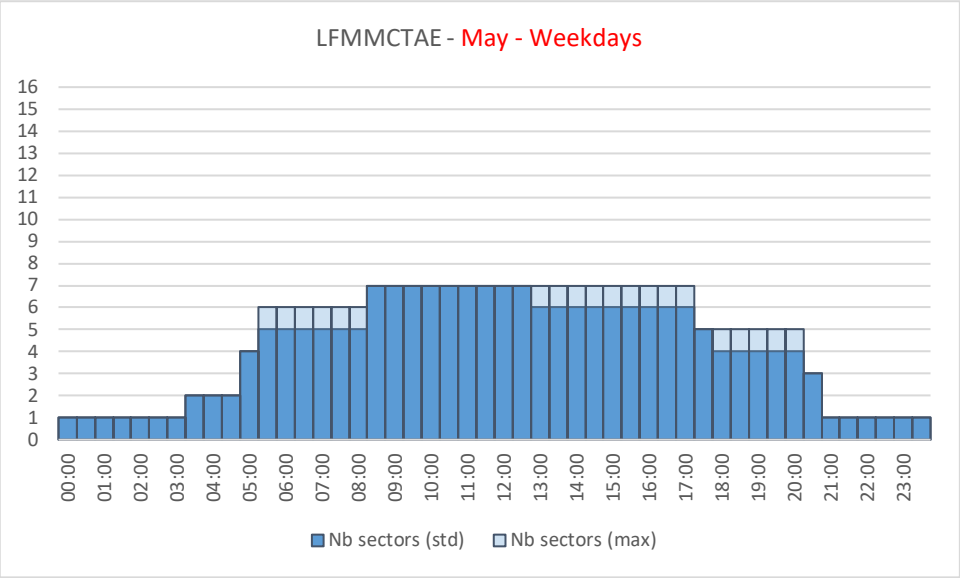
The average delay per flight was zero in summer 2020.
97% of the delays during the year 2020 were due to the reason Industrial action.
Up to 65% of the traffic of 2019 during summer Week-ends.

Operational actions	Achieved	Comments
Improved Airspace Management / FUA	Yes	Improved pre-tactical and tactical coordination with Spain regarding military use of airspace (R108HE)
Airspace management procedures for D54 and R108 during summer season	Yes	Improved pre-tactical and tactical coordination with Spain regarding military use of airspace (R108HE)
ZENA Med Corse	Yes	Work in progress on the definition of ZENA
Improved ATFM procedures and STAM	Yes	Improved weather coordination procedures with MIL and neighbouring ANSPs
CDM processes and procedures	Yes	Improved weather coordination procedures with MIL and neighbouring ANSPs
MAC + eNM	Yes	RAD alleviation (green aviation)
Improvement of cooperative traffic management during strong weather episodes.	Yes	Improved weather coordination procedures with MIL and neighbouring ANSPs
Improvement of FMP roster	N/A	Action postponed to 2021-2022 due to COVID crisis

East - Decrease number of ATCOs	Yes	Decrease of ATCOs until summer 2020. Starting increase of ATCOs from mid-2020 until 2023
West -Maintain number of ATCOs	Yes	Decrease of ATCOs until beginning 2020. Starting increase of ATCOs from mid-2020 until 2023
Flexible roster	Yes	Implementation of flexible rostering in beginning 2020 regarding 4-FLIGHT training impact. Step back to the previous rostering following COVID crisis
Improvement of radar and radio coverage in Mediterranean Sea	Yes	Technical Mode S upgrade & energy improvement of Figari radar Integration of Randa radar data in Mediterranean Sea
SALTO incl. B2B regulations	Yes	Implementation of SALTO incl. B2B regulations. CRNA-SE: pilot Center
Training for 4-Flight (January 2020 to end 2021)	Yes	Training for 4-Flight started in beginning 2020 until Spring 2022

Planning Period – Summer 2021

2021 Summer Capacity Plan	
Free Route Airspace	*Definition of FRA airspace in LFMM (no impact)*
Airspace Management **Advanced FUA**	Improved Airspace Management / FUA
	ZENA Med – Corse live trails via AIP supps
Airport & TMA Network Integration	XMAN Paris
Cooperative Traffic Management	Improved ATFCM Procedures and STAM
	CDM processes and procedures
	MAC
	Use of cooperative traffic management during strong weather episodes (implemented in 2020 but not much used due to COVID crisis).
Airspace	Improved interface LIRR/LFMM concerning Sardegna
Procedures	
Staffing	East and West - Gradual increase of number of ATCOs
Technical	FOC (datalink)
	Improvement of radio resilience
Capacity	
Significant Events	Training for 4-Flight (January 2020 to Spring 2022) – no impact during summer (mid-June to mid-September)
Additional information	


LFMMCTAE - May - Weekdays
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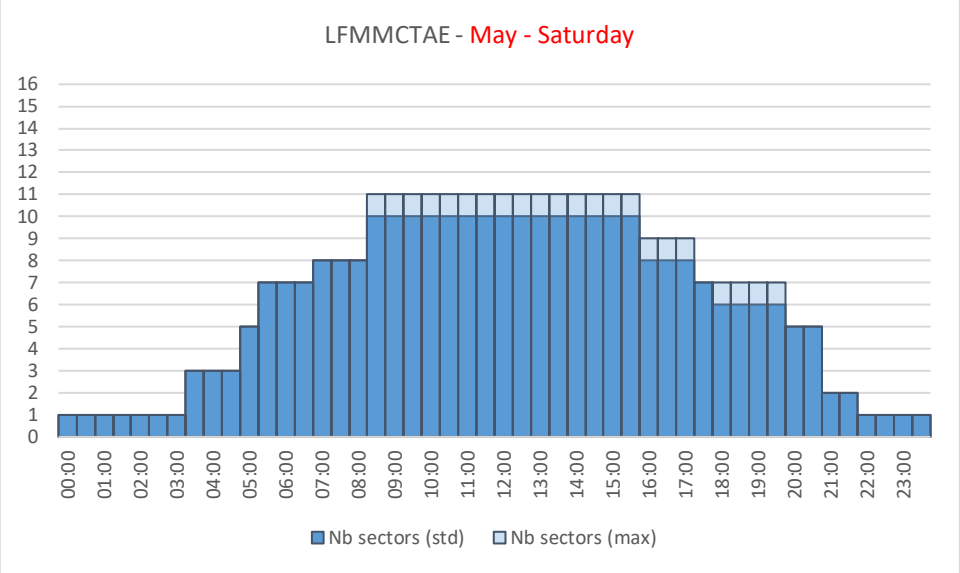
LFMMCTAE - May - Saturday
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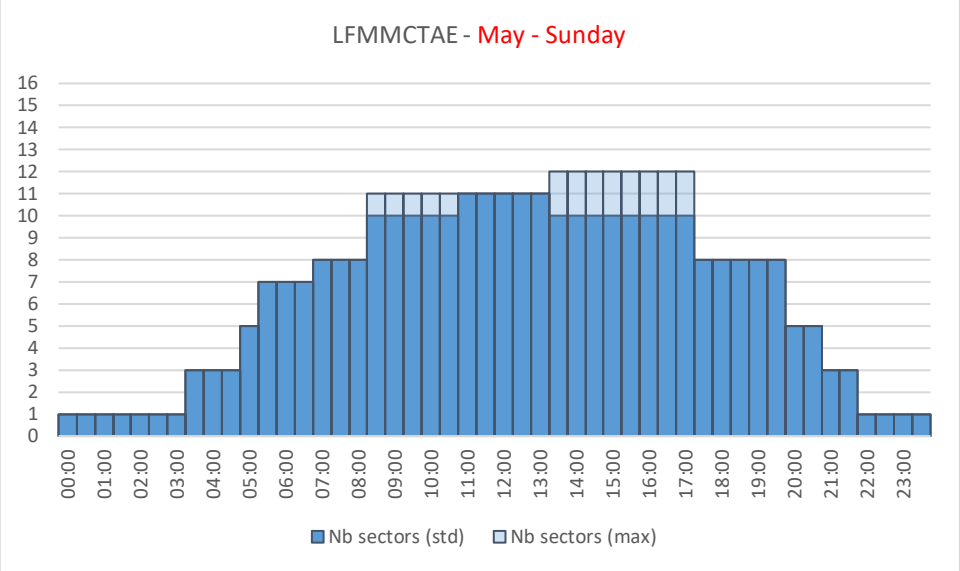
LFMMCTAE - May - Sunday
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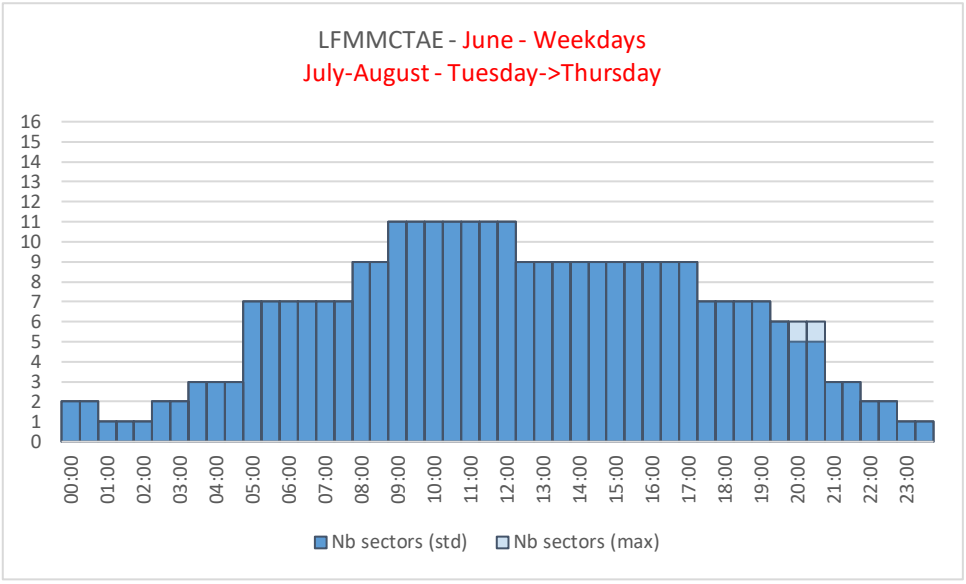
LFMMCTAE - June - Weekdays
July-August - Tuesday->Thursday
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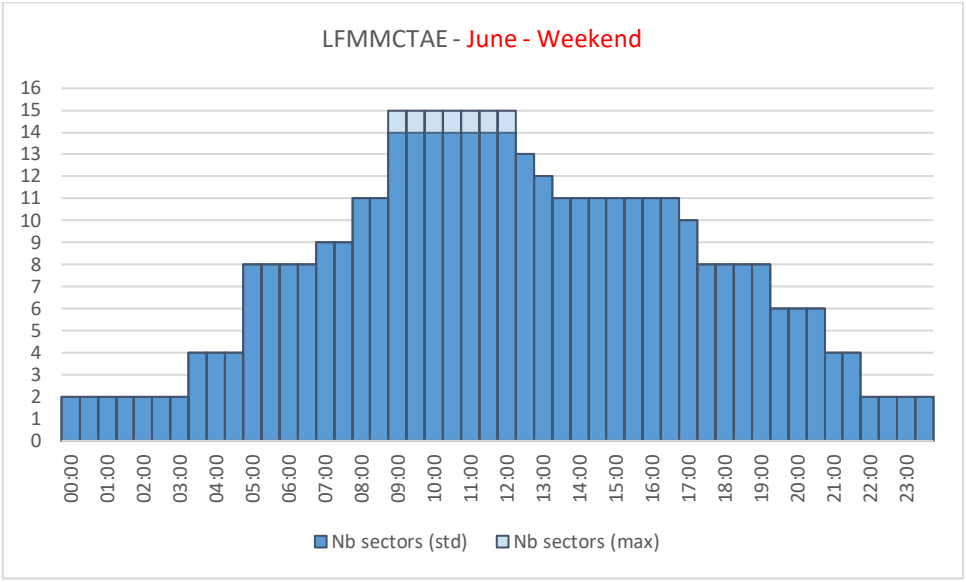
LFMMCTAE - June - Weekend
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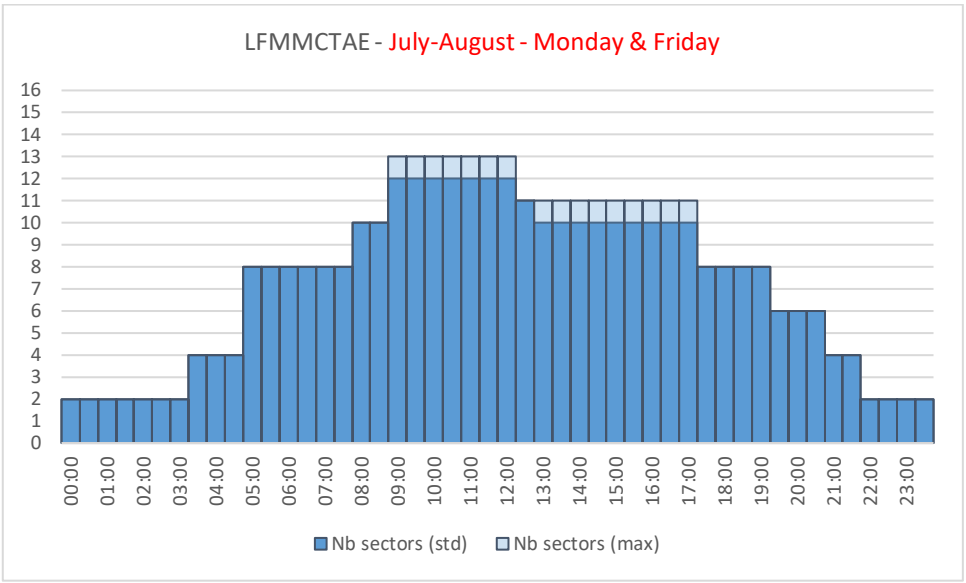
LFMMCTAE - July-August - Monday & Friday
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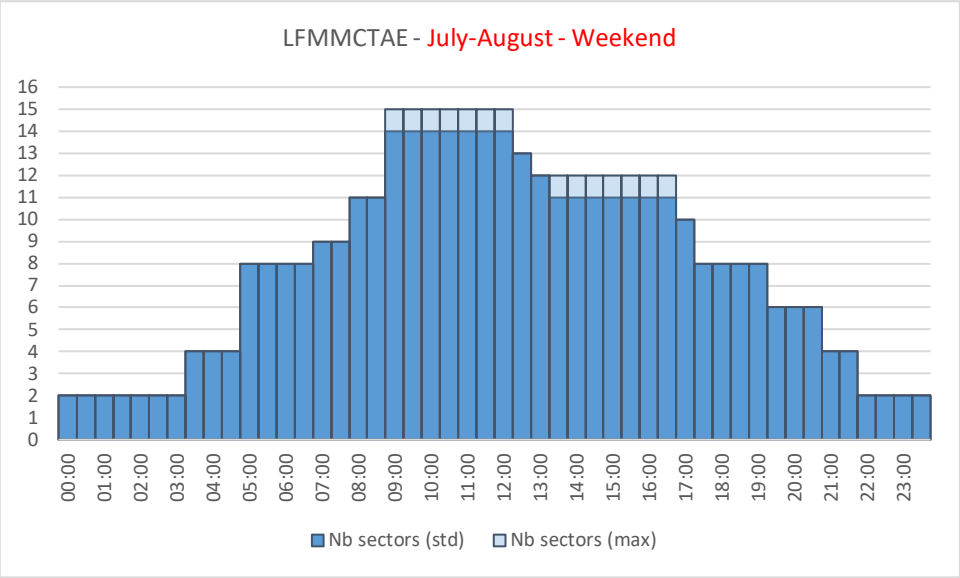
LFMMCTAE - July-August - Weekend
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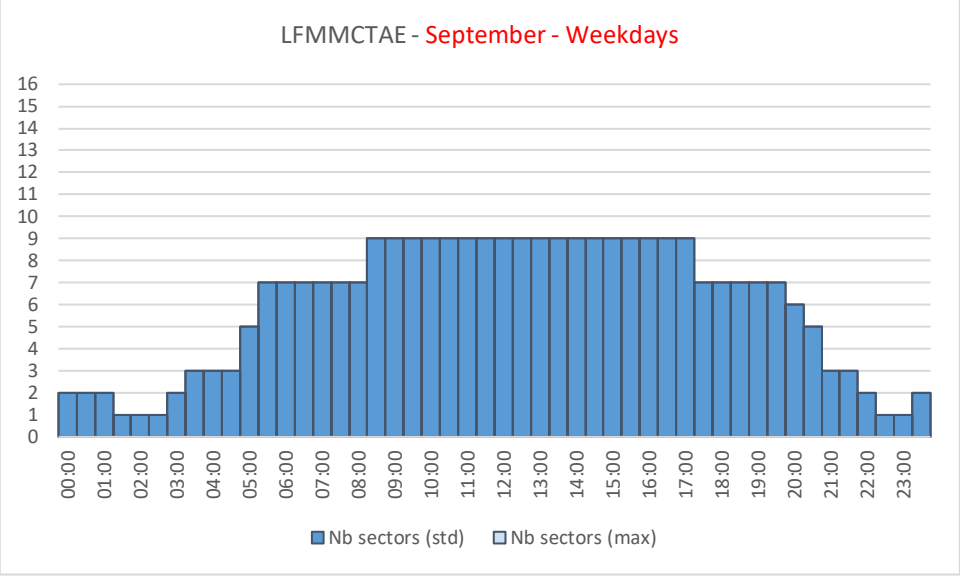
LFMMCTAE - September - Weekdays
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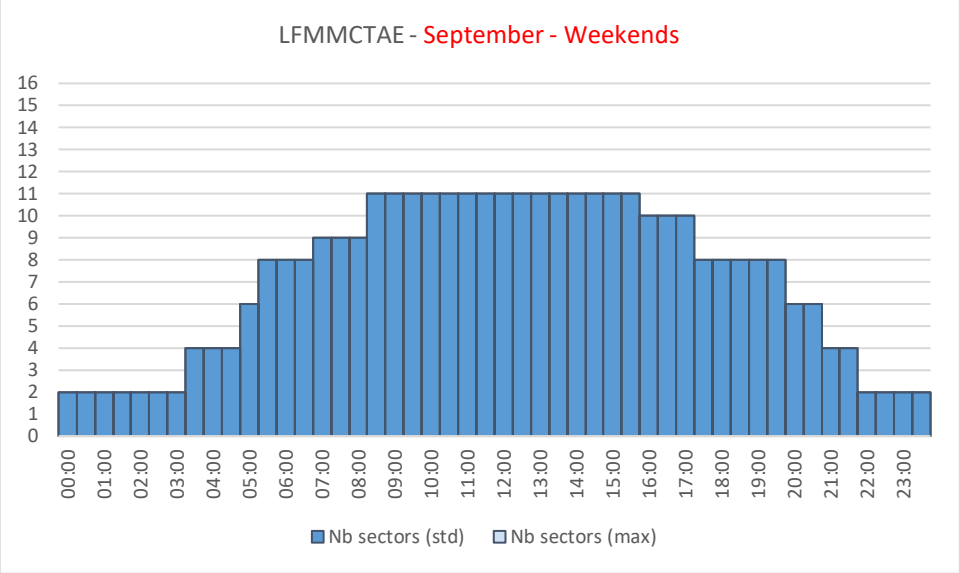
LFMMCTAE - September - Weekends
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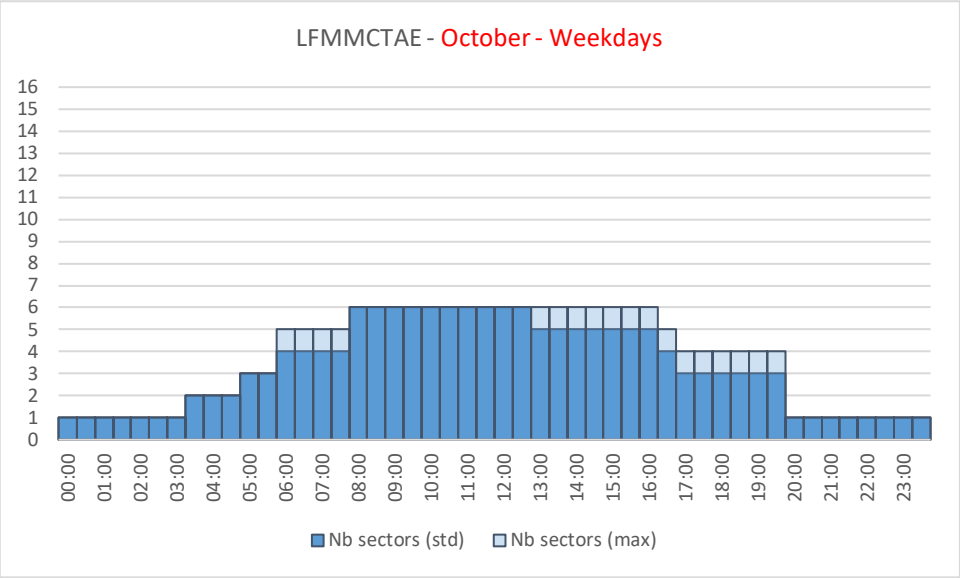
LFMMCTAE - October - Weekdays
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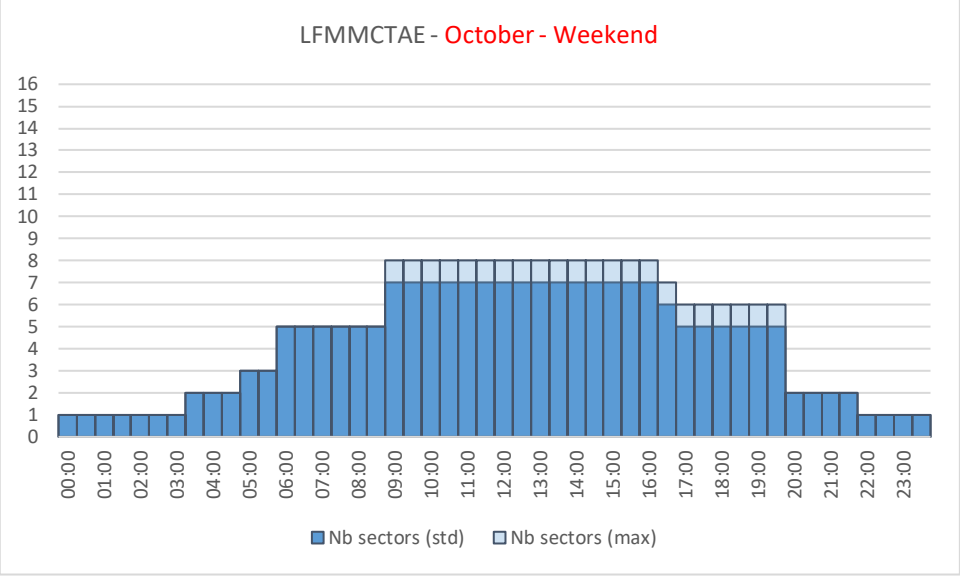
LFMMCTAE - October - Weekend
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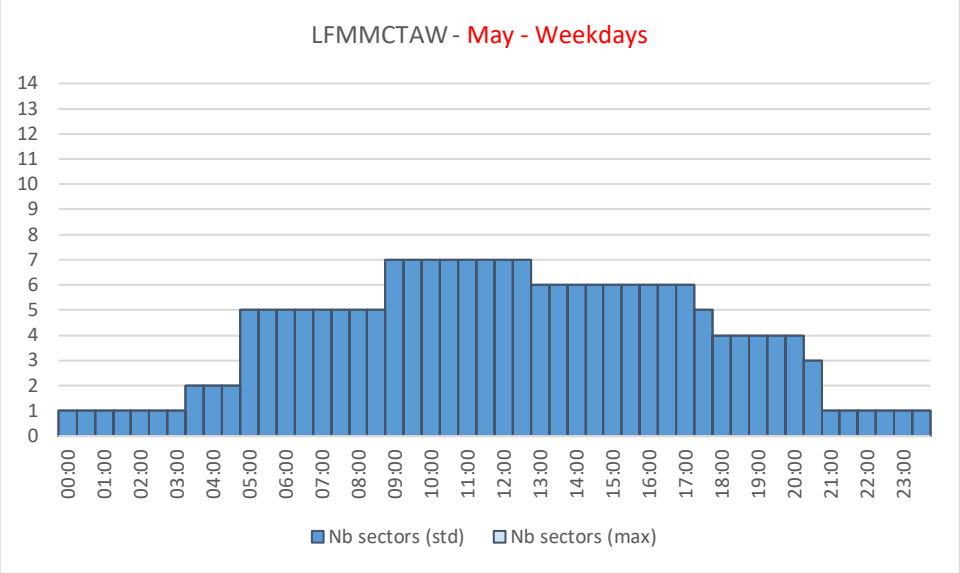
LFMMCTAW - May - Weekdays
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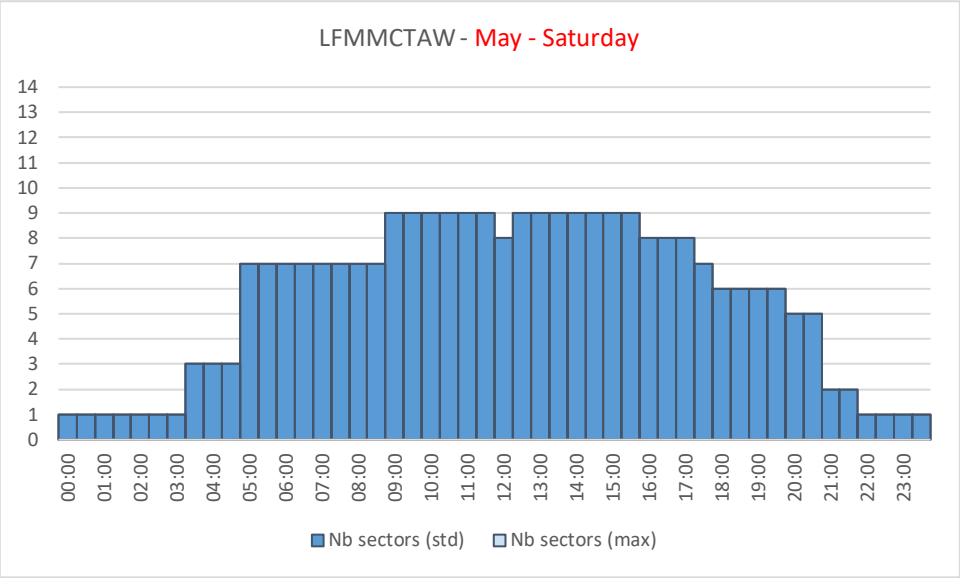
LFMMCTAW - May - Saturday
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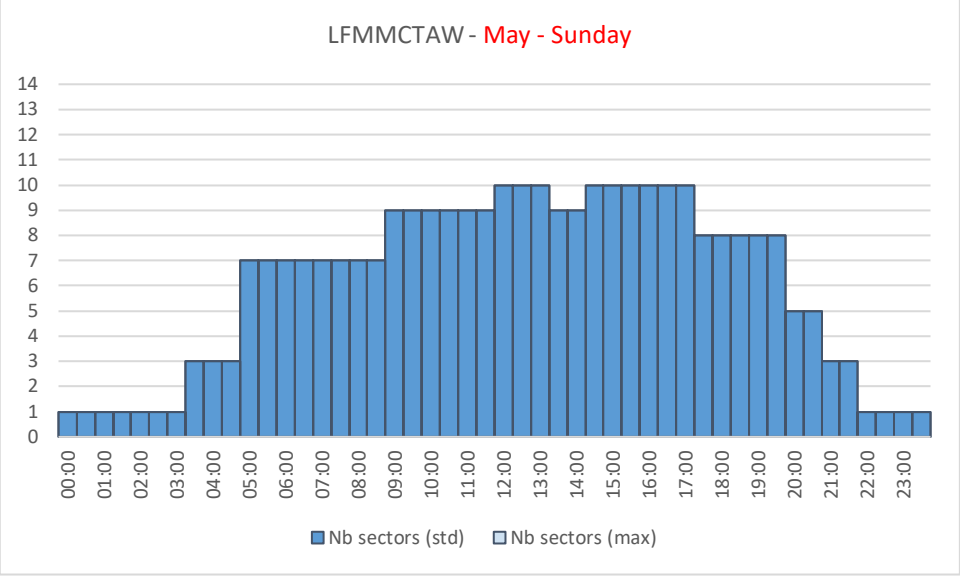
LFMMCTAW - May - Sunday
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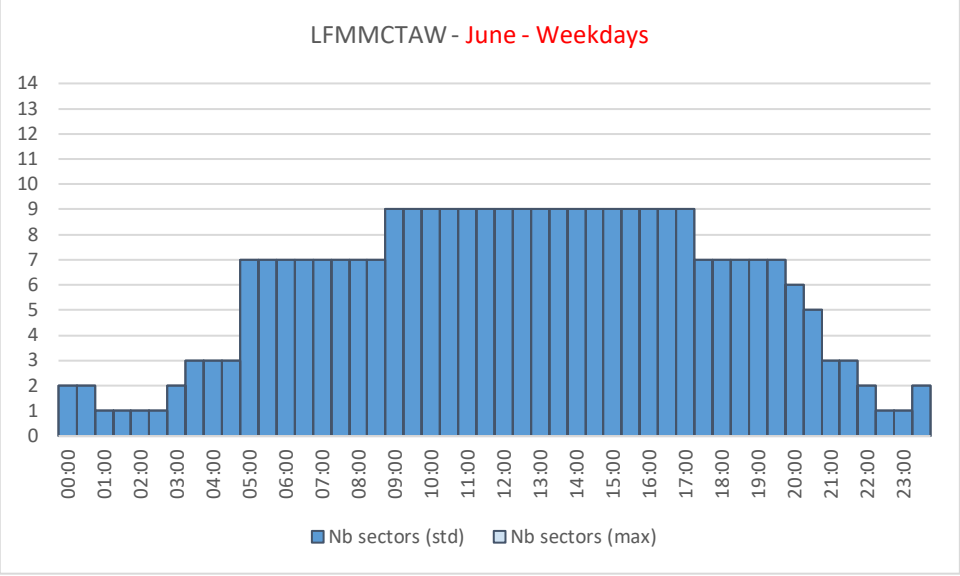
LFMMCTAW - June - Weekdays
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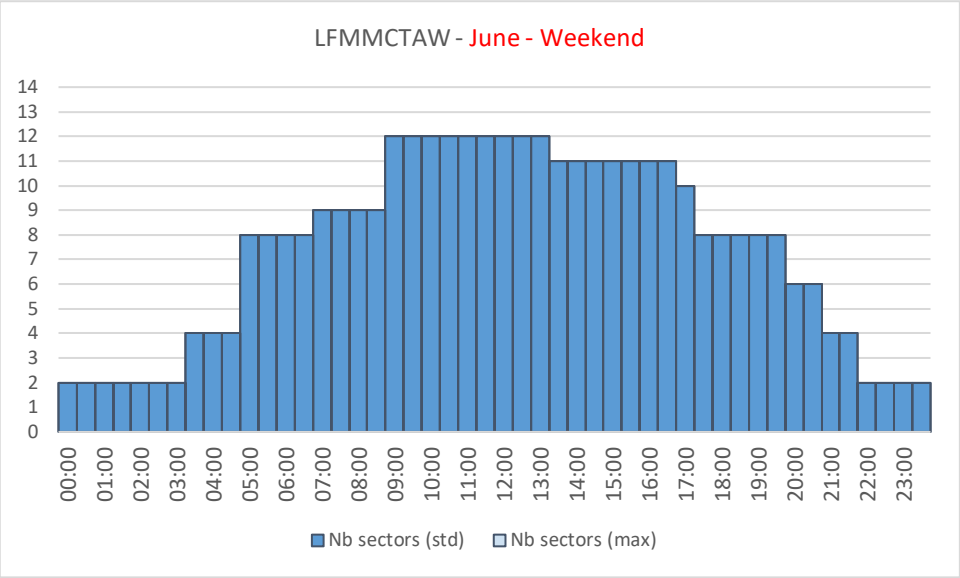
LFMMCTAW - June - Weekend
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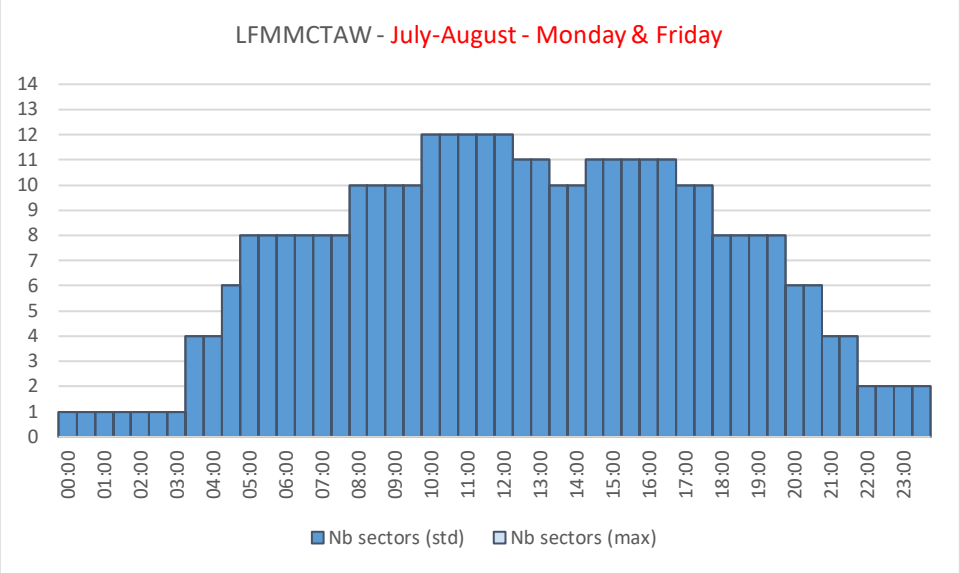
LFMMCTAW - July-August - Monday & Friday
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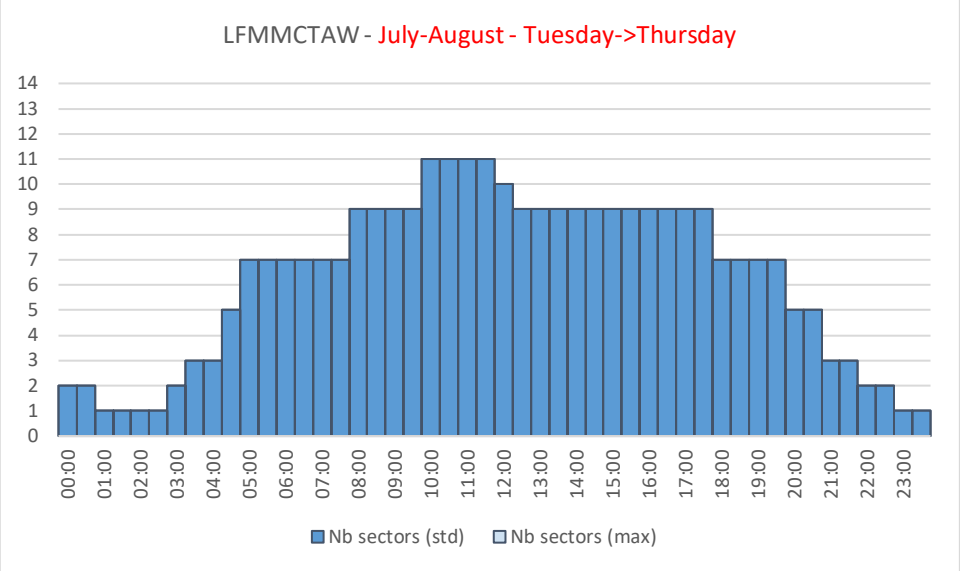
LFMMCTAW - July-August - Tuesday->Thursday
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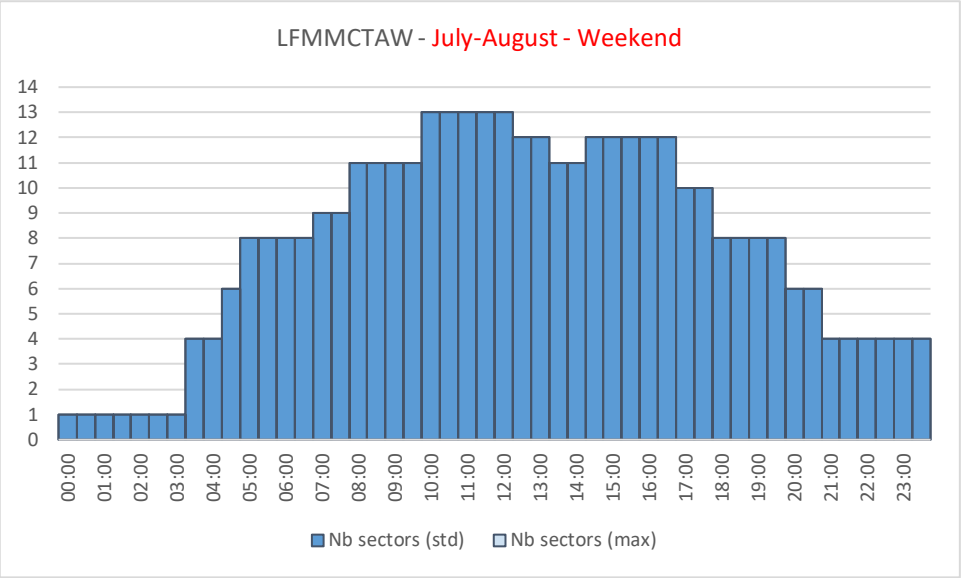
LFMMCTAW - July-August - Weekend
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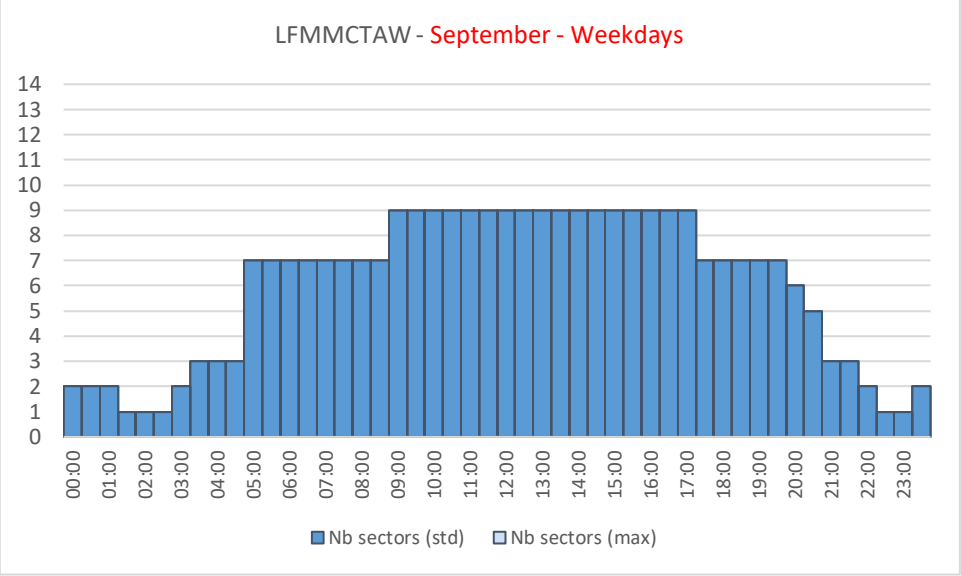
LFMMCTAW - September - Weekdays
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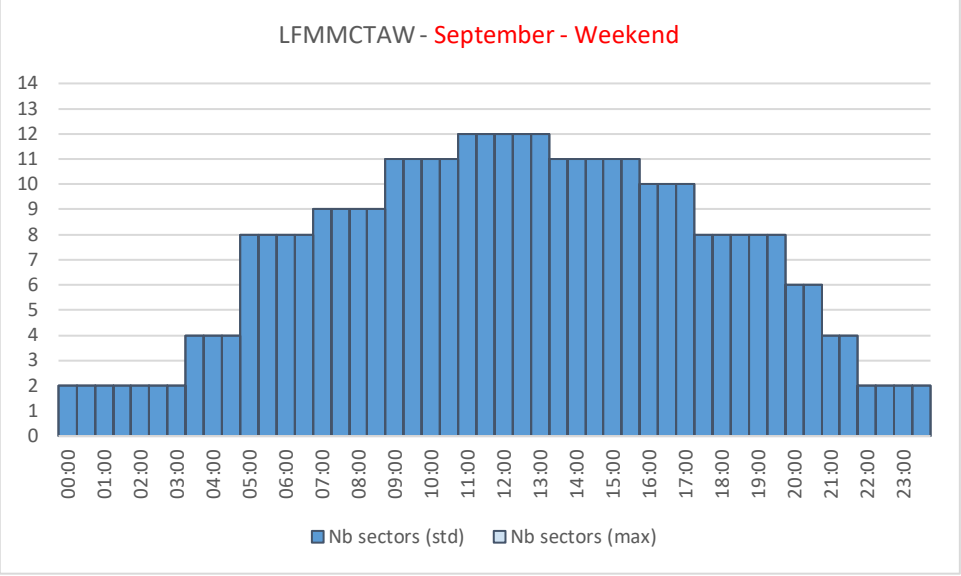
LFMMCTAW - September - Weekend
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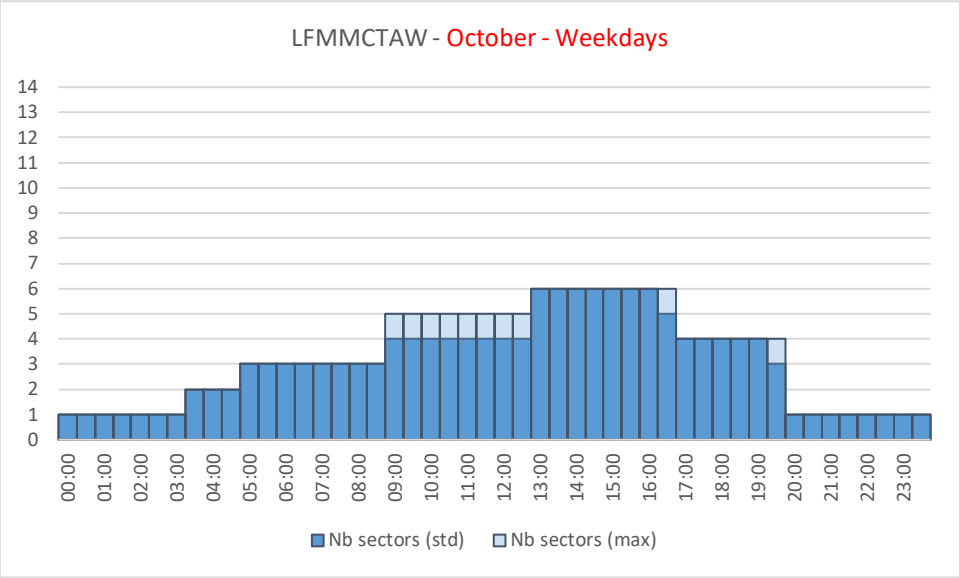
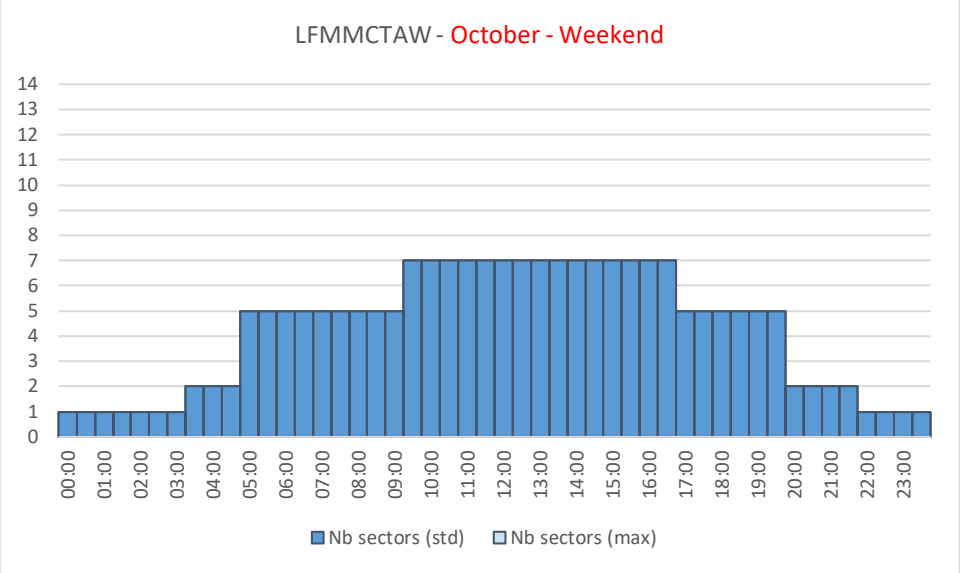
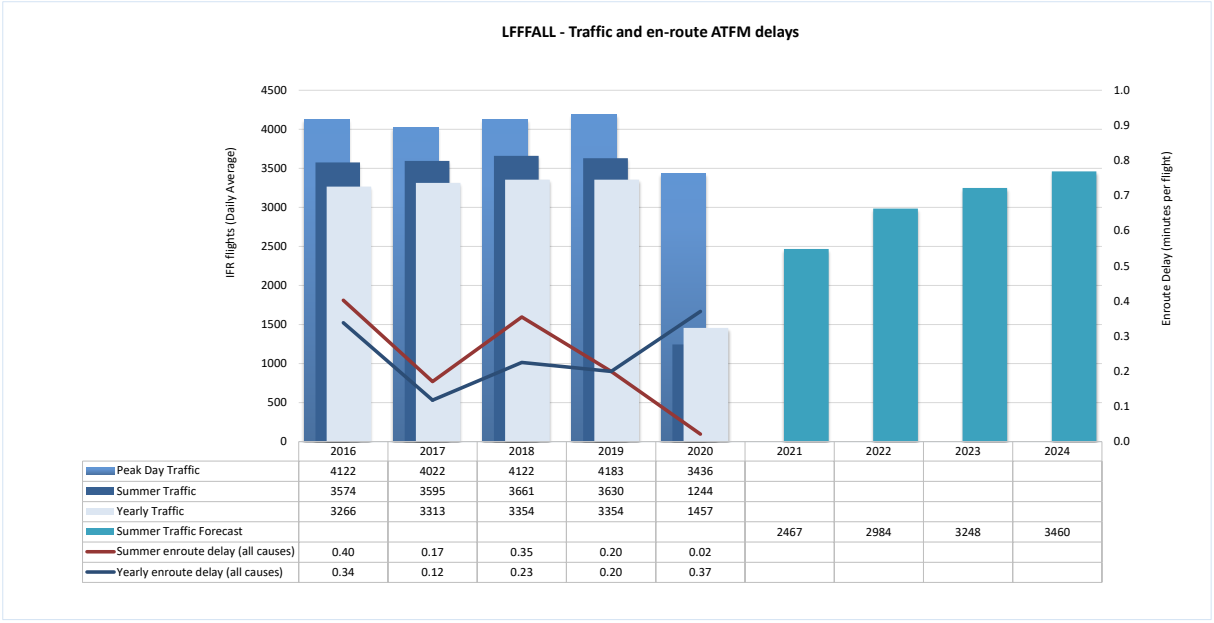




Summer 2021 Outlook
LFMMCTAE: In May & October, 4-Flight training is expected to impact the staffing situation and the number of sectors available. **May**: Traffic demand is expected to be close to capacity in the evening on weekdays. Some flexibility might be needed to extend the opening hour for short periods of time. **October:** On weekdays, traffic demand is expected to be above declared capacity with planned and maximum number of sectors in the evening. There is no possibility to program an additional sector in the evening now but work in progress to decrease the impact of 4F training during that period. ATFCM measures such as STAM or scenarios might be required. Additionally, on Fridays, demand is expected to be close to capacity during the day and some flexibility might be needed on the configuration choices or on the opening of an extra sector for short periods of time during traffic peaks. **LFMMCTAW:** In May & October, 4-Flight training is expected to impact the staffing situation and the number of sectors available. **May**: Traffic demand is expected to be close to capacity on weekdays. Some flexibility might be needed on the configuration choices during the day, and on the opening of an extra sector for short periods of time during traffic peaks in the evening. **October:** On weekdays, traffic demand is expected to be above declared capacity with planned and maximum number of sectors. There is no possibility to program an additional sector now but work in progress to decrease the impact of 4F training during that period. ATFCM measures such as STAM or scenarios might be required.

2.5.**PARIS ACC**

Traffic and en-route ATFM delays 2016-2024



	2016	2017	2018	2019	2020	2021	2022	2023	2024
Peak Day Traffic	4122	4022	4122	4183	3436				
Summer Traffic	3574	3595	3661	3630	1244				
Yearly Traffic	3266	3313	3354	3354	1457				
Summer Traffic Forecast						2467	2984	3248	3460
Summer enroute delay (all causes)	0.40	0.17	0.35	0.20	0.02				
Yearly enroute delay (all causes)	0.34	0.12	0.23	0.20	0.37				

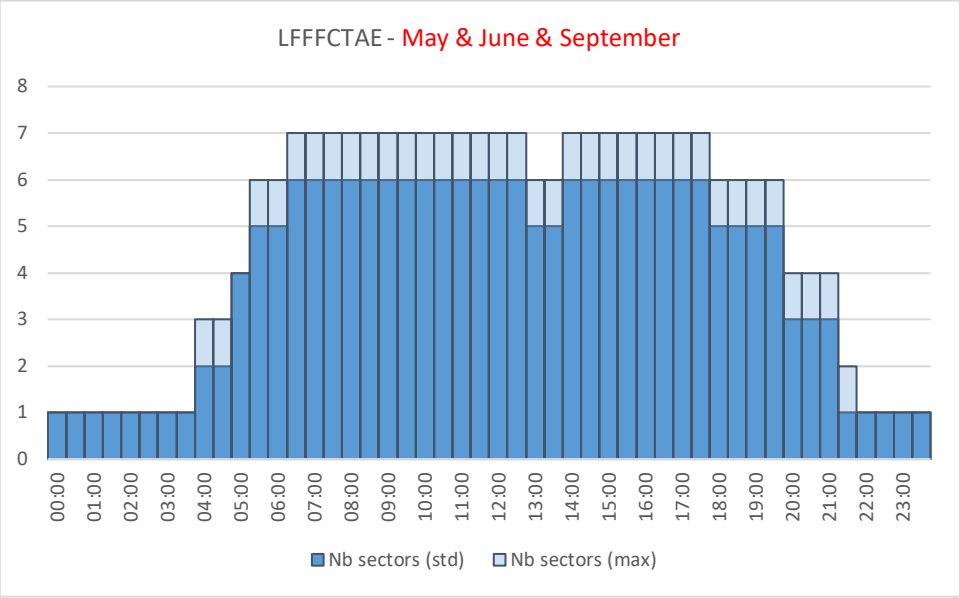
2020 performance

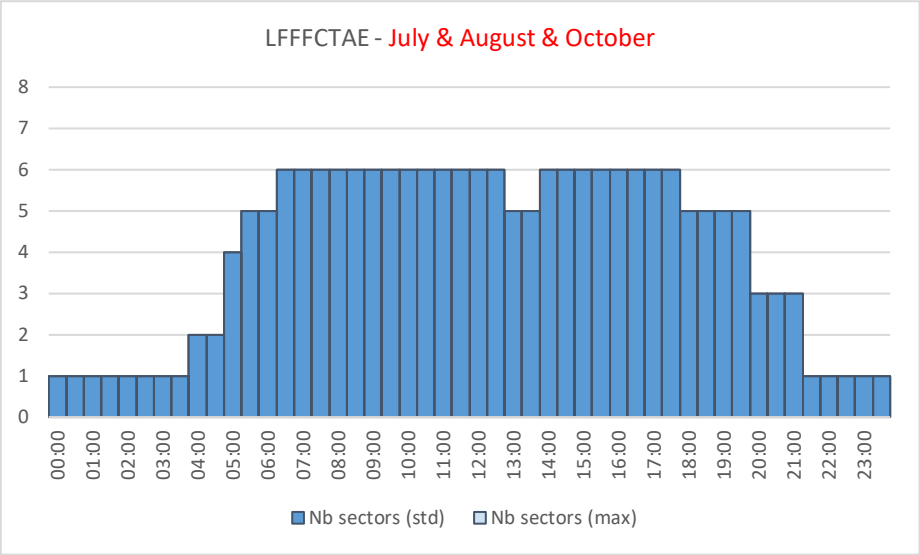
Paris ACC	Traffic evolution (2020 vs 2019)	En-route Delay (min. per flight)
	Actual Traffic	All reasons
Year	-57%	0.37
Summer	-66%	0.02

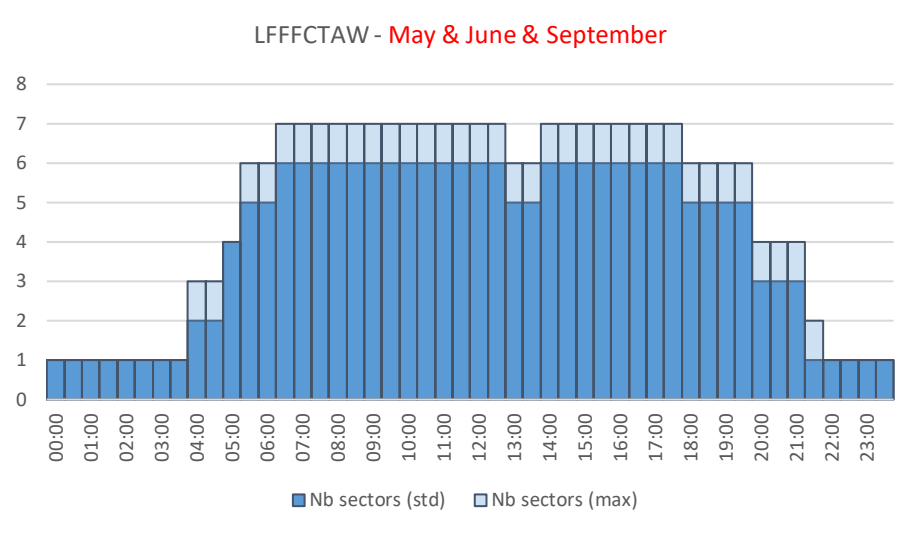
Summer 2020 performance assessment		
The average delay per flight was 0.02 minutes per flight in summer 2020. 85% of the delays during the year 2020 were due to the reason Industrial action.		
Operational actions	**Achieved**	**Comments**
Improved Airspace Management / FUA	Yes	FUA TSA200 and TSA24
Improved ATFM procedures and STAM / GF project	Yes	
CDM processes and procedures	Yes	XMAN implementation
MAC + eNM	Yes	RAD alleviation (green aviation)
Gradual roster improvements	Yes	Along with traffic demand
Decrease number of ATCOs	Yes	
SALTO incl. B2B regulations	On going	Still work in progress

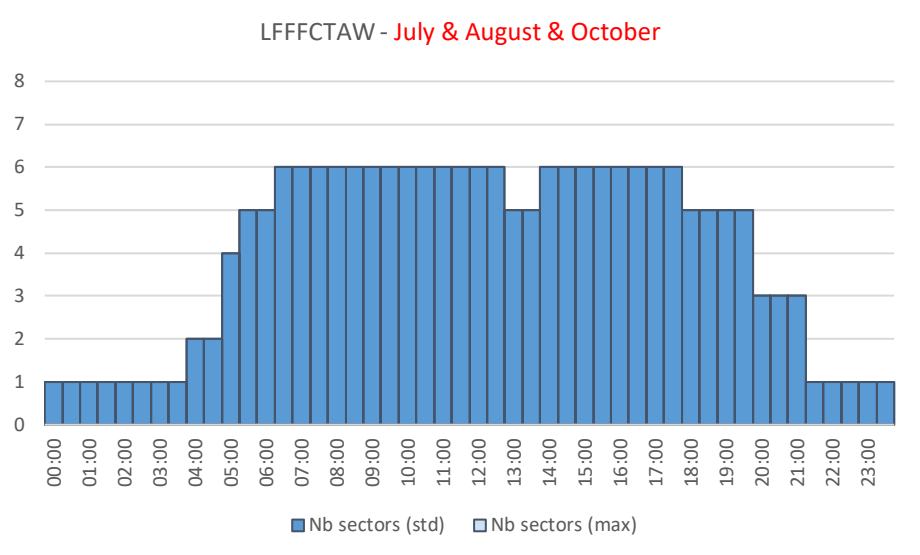
Planning Period – Summer 2021

2021 Summer Capacity Plan	
Free Route Airspace	Implementation on the 2nd of December 2021
Airspace Management **Advanced FUA**	Improved airspace management / FUA
Airport & TMA Network Integration	
Cooperative Traffic Management	XMAN implementation with LFRR and LFMM
	CDM Processes and procedures
Airspace	MODOU project (restructure of OG, OY, OT, RT and UZ Paris sectors), September 2021
Procedures	
Staffing	End of decrease of ATCOS
Technical	FOC (datalink) May 2021
Capacity	
Significant Events	
Additional information	4F training will start on beginning 2022





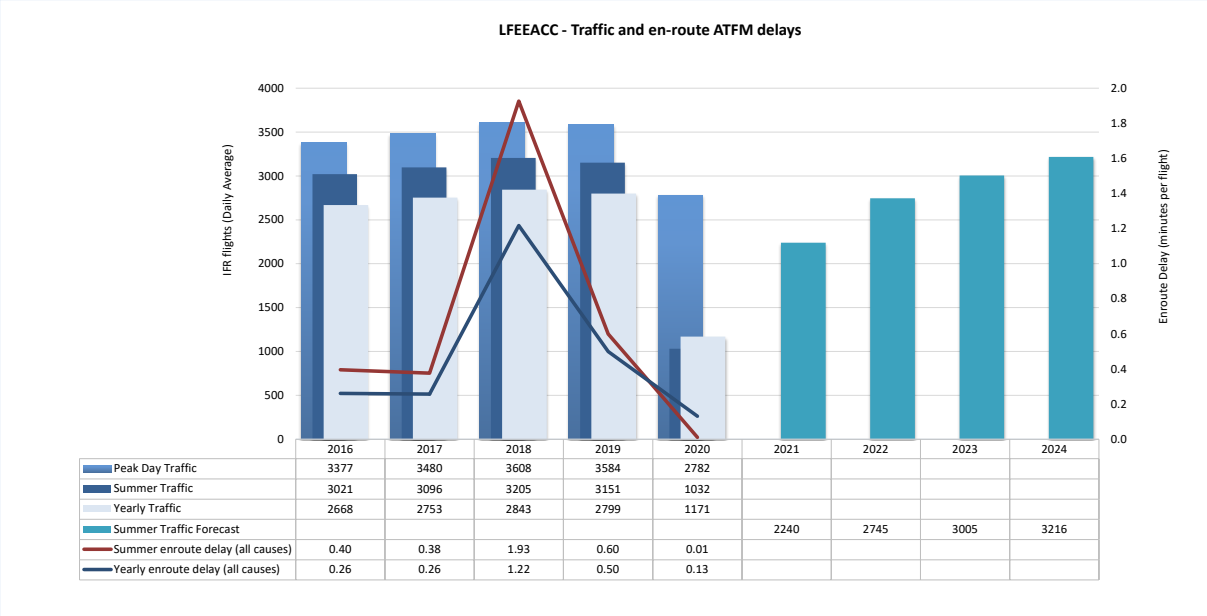




Summer 2021 Outlook
No capacity issues are foreseen for Paris ACC in summer 2021.

2.6.REIMS ACC

Traffic and en-route ATFM delays 2016-2024



	2016	2017	2018	2019	2020	2021	2022	2023	2024
Peak Day Traffic	3377	3480	3608	3584	2782				
Summer Traffic	3021	3096	3205	3151	1032				
Yearly Traffic	2668	2753	2843	2799	1171				
Summer Traffic Forecast						2240	2745	3005	3216
Summer enroute delay (all causes)	0.40	0.38	1.93	0.60	0.01				
Yearly enroute delay (all causes)	0.26	0.26	1.22	0.50	0.13				

2020 performance

Reims ACC	Traffic evolution (2020 vs 2019)	En-route Delay (min. per flight)
	Actual Traffic	All reasons
Year	-58%	0.13
Summer	-67%	0.01

Summer 2020 performance assessment

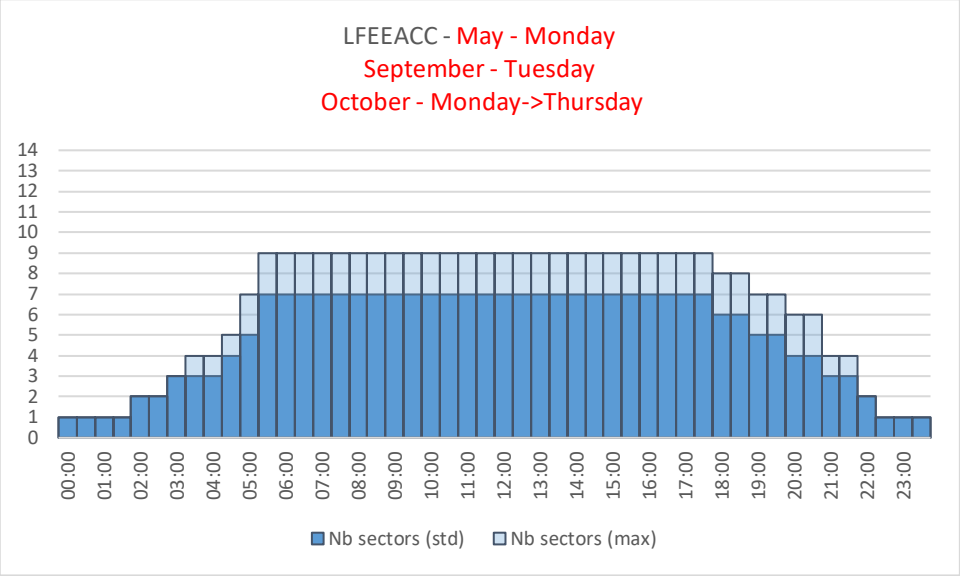
The average delay per flight was 0.01 minutes per flight in summer 2020.

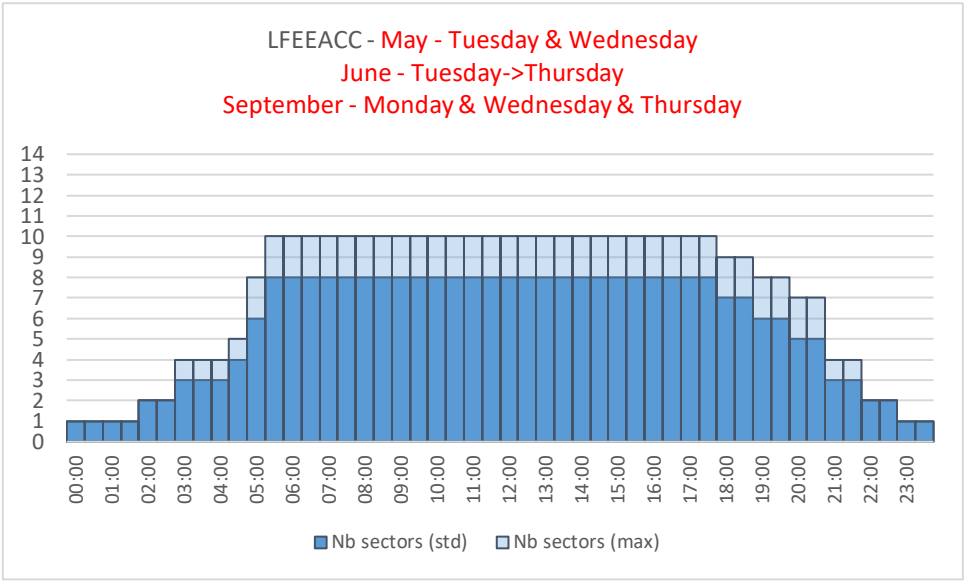
33% of the delays during the year 2020 were due to the reason Industrial action, 36% due to ATC Staffing and 22% due to ATC Capacity.

Operational actions	Achieved	Comments
Improved Airspace Management / FUA	Yes	Facilitation of military activities during low traffic crisis period
ZENA TRA22+TRA305	Ongoing	Ongoing process between German and French MoD
Improved ATFM procedures and STAM	Yes	Collaborative Advanced Planning and Airborne STAM, 4Cast development (conf optimizer)
CDM processes and procedures	Yes	NM XBorder Weather Procedure, Civ-Mil Weather Procedure, Vigiaero trial
MAC + eNM	Yes	NM coordination and RAD relaxation (green aviation). UL10/15
Flexible rostering	Yes	Additional capacity available but not used, ATCOs on call since COVID crisis
10% decrease in number of ATCOs (including trainers for 4Flight)	Yes	Stabilization thanks to the cancelation of the spring mobility campaign
SALTO incl. B2B regulations	Ongoing	Still work in progress
Training for 4-Flight (January 2020 to end 2021)	Yes	Training interruption during the core of the COVID crisis, replanned and ongoing

Planning Period – Summer 2021

2021 Summer Capacity Plan	
Free Route Airspace	FRA project initiated (no impact in 2021)
Airspace Management **Advanced FUA**	Improved Airspace Management / FUA, work on permanent availability of CBA1
Airport & TMA Network Integration	
Cooperative Traffic Management	Improved ATFCM Procedures and STAM, 4CAST (CONF optimizer) deployment
	CDM processes and procedures
	MAC
Airspace	Ongoing project at the Reims/MUAC interface, improvement of the interface between Reims ACC, Strasbourg and Luxembourg APP
Procedures	Green aviation initiatives
Staffing	Flexible rostering trials are on hold for 2021 but some flexible days remain.
	Decrease number of ATCOs expected Q4 2021
Technical	FOC (datalink), SALTO incl. B2B regulations
Capacity	
Significant Events	Training for 4-Flight (January 2020 to early 2022)
Additional information	




LFEEACC - May - Tuesday & Wednesday
June - Tuesday->Thursday
September - Monday & Wednesday & Thursday
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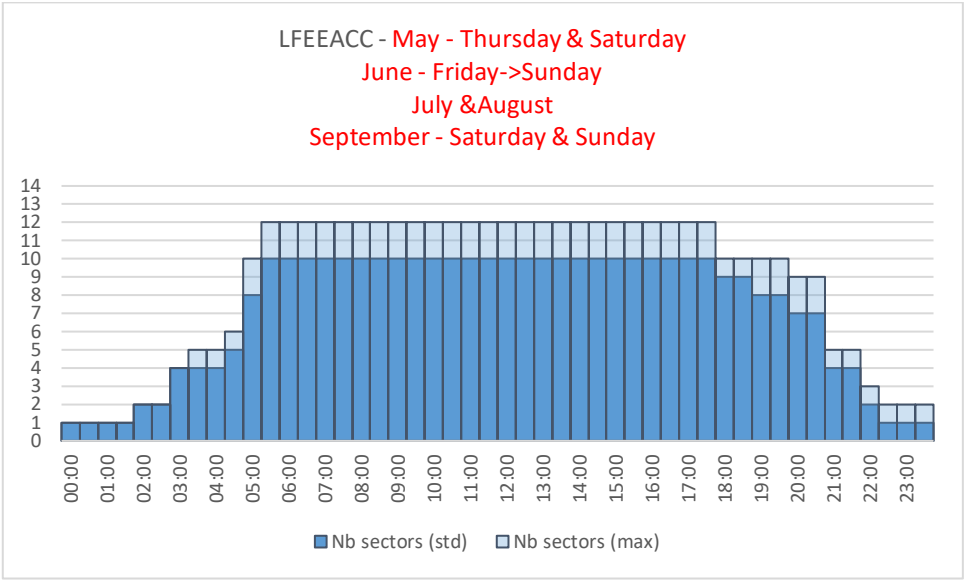
LFEEACC - May - Thursday & Saturday
June - Friday->Sunday
July &August
September - Saturday & Sunday
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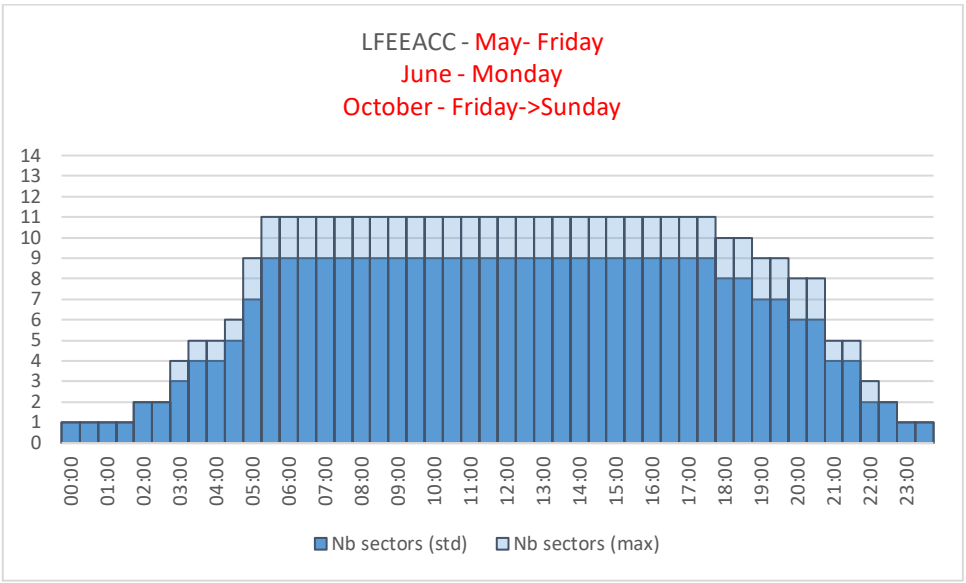
LFEEACC - May- Friday
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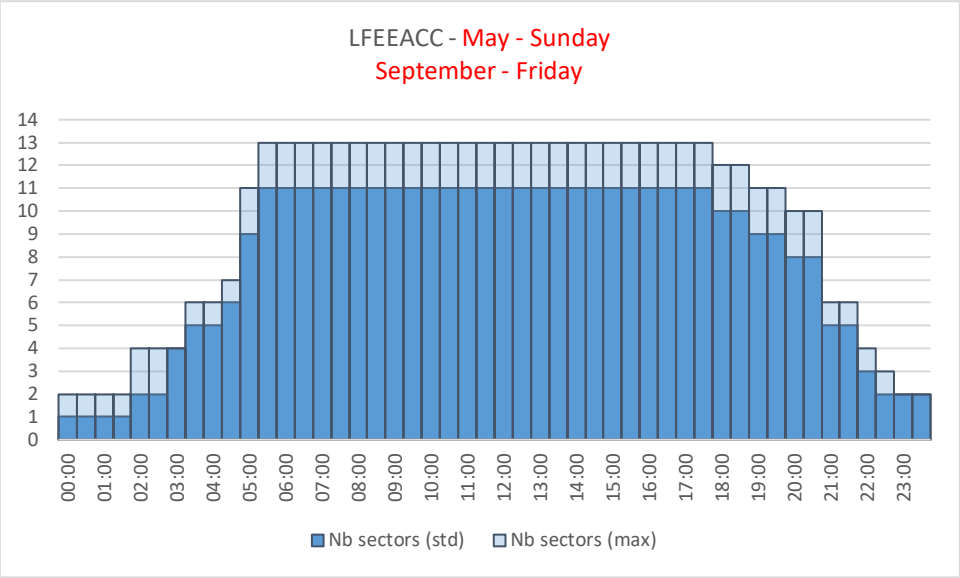


Summer 2021 Outlook
In May, June, September and October 4-Flight training is expected to impact the staffing situation and the number of sectors available. 4-Flight training in suspended during the school holidays. During the whole period, traffic demand is expected to be close to declared capacity. Some flexibility might be needed on the configuration choices and on the opening of an extra sector for short periods of time during traffic peaks. Additionally, the traffic demand is expected to be above declared capacity in some elementary sectors in the upper layer (LFEEHYR, LFEEKD) most of the days. ATFCM measures such as STAM or scenarios might be needed to better balance traffic between the different sector layers.

3. Implementation Projects

The tables below present the high-level information about the main projects currently ongoing in France. The details of each project are available in Chapter 2 of the Level 2 - Detailed Implementation Status document.

3.1. National projects

Name of project:	Organisation(s):	Schedule:	Progress Description:	Links:
4-FLIGHT	DSNA (FR)	2011-2025	The objective of 4-FLIGHT is the procurement of the next generation of the ATM system in order to prepare SESAR convergence. Implementation is on-going, partial planned operational use regularly performed in two pilot ACCs since 2017. Commissioning is planned in pilot ACCs (Reims and Marseille) in 2022.	L3: ATC12.1, ITY-AGDL, ATC07.1
4-FLIGHT Defence	DSNA (FR), Mil. Authority (FR)	2016-2020	Procurement is under final discussion for defence.	L3: ATC12.1, ITY-AGDL, ATC07.1
AMAN	DSNA (FR)	2019-2023	AMAN is operational at CDG, Orly and LFFF in the latest version available. An upgrade to such version is planned in 2021 in Lyon, Nice TMA, and LFMM	L3: ATC15.1, ATC07.1

Name of project:	Organisation(s):	Schedule:	Progress Description:	Links:
Geographic Data Base (including NODB (National Obstacle Data Base) for DSNA)	DSNA (FR), Groupe ADP (FR)	2017 to 2022	Joint project between DSNA and ADP, aiming to exchange aeronautical data via SEPIA between these 2 entities. DSNA and ADP will each inject their own data base in the system (respectively NODB and ADPIA) [NODB] The call for tender was published on 21 February 2020. The choice of the manufacturer was made on 16 September 2020. The manufacturer (Thales) was notified on 1 December 2020. In relation with the pandemic context, the operational implementation of NODB is planned for end 2022.	L3: ITY-ADQ DP: DP AF 5.3.1 (Compliance with SESAR interoperability standards are required)
ILS rationalisation	DSNA (FR)	Up to 2024	33 ILS have been decommissioned, 14 have been transferred to the airport operators.	-
PBN APV	DSNA (FR)	2012-2022	RNP approach procedures with LPV minima implemented for 98% of all applicable airports/runway ends, where possible. RNP approach procedures with LNAV/VNAV minima implemented for 93% of all applicable airports/runway ends, where possible.	L3: NAV10
SEPIA	DSNA (FR)	2017 to 2022	The call for tender was published on 1 July 2019. The choice of the manufacturer was made on 15 June 2020. The manufacturer (IDS AirNav) was notified on 14 August 2020 Despite the pandemic context, the operational implementation is still planned for 2022.	L3: ITY-ADQ DP: DP AF 5.3.1 (Compliance with SESAR interoperability standards are required)

Name of project:	Organisation(s):	Schedule:	Progress Description:	Links:
SOFIA	DSNA (FR)	2016 to 2022	Ongoing as planned.	L3: ITY-ADQ DP: DP AF 5.3.1 (Compliance with SESAR interoperability standards are required)
SOFIA Briefing	DSNA (FR)	2017 to 2021	Initial operation: March 2021	-
SYSAT	DSNA (FR)	From 2011 to 2030	The first set of commissioning are planned in CDG in 2022 and in Orly airport by winter 2023/2024 for a full implementation after the Olympic games in Paris. 75% of the group 2 airports will be equipped by SYSAT system by 2027, mostly based on internal developments.	L3: AOP04.1, AOP05, FCM03, AOP04.2
VOR Rationalisation	DSNA (FR)	2020 - 2030	36 VOR, representing 43% of the total amount of VOR operated in France, are planned to be decommissioned by end 2030. Most of the operation is foreseen between 2022 and 2024.	-

3.2. FAB projects

There are two main FABEC projects ongoing:

- XMAN (Extended Arrival Manager) and
- FRA (Free Route Airspace)

The tables below detail for each ongoing main FABEC project:

- which FABEC ANSPs and military partners are participating;
- a description, the scope and objectives;
- the schedule and implementation planning;
- the status end 2020;
- the link to the ATM Master Plan Level 3 (formerly ESSIP), if any and
- the expected performance contribution to the SES Key Performance Areas Capacity, Safety, Environment and Cost-Efficiency.

Project Name:	**Extended Arrival Management**	**Project Code:**	**XMAN**
Organisation(s)	skeyes (BE), DFS (DE), DSNA (FR), LVNL (NL), MUAC ANSP (MAS), skyguide (CH) and in direct coordination with NATS (UK).		
Description/Scope/Objectives			
The XMAN project (Cross-Border Arrival Management, also referred to as Extended Arrival Management E-AMAN) aims at improving and optimising arrival management operations for major airports. To achieve this the project develops and implements a harmonised approach to arrival management in the core area of Europe. This is a project at FAB level because it has to rely on cross-centre and cross-border processes and procedures. The implementation of XMAN will improve and optimise arrival management operations for the major five airports/TMAs (Munich, Amsterdam, Paris-CDG, Frankfurt, London-Heathrow) as well as for other selected intermediate airports within FABEC and FAB UK/IRL as defined by the Commission Implementing Regulation (EU) No 716/2014 (Zurich, Dusseldorf, Brussels, Berlin, Paris-Orly, Nice, London-Stansted, London-Gatwick, Manchester, Dublin). Additionally, airports outside these two FABs, e.g. Copenhagen and Italian airports, coordinate their plans through this XMAN project. One of the main characteristics of the XMAN project is the extension of the planning horizon of arrival management systems (AMAN) from the local TMA into the airspace of upstream control centres. The final extension of arrival management operations is expected to reach at least 180 NM in line with the CP1 (entering into force on 22 February 2021), depending on the operational environment and the needs of the stakeholders. These extended planning horizons will cover almost the entire FABEC airspace and, consequently, most of the FABEC control centres will be affected by extended AMAN operations and some feed several arrival streams for different airports/TMAs simultaneously.			
Schedule/Implementation planning			
The XMAN project envisaged three development and implementation steps: Basic – Advanced – Optimised. In December 2018, the project team decided to skip the Optimised Step and to incorporate the envisaged features of the Optimised Step into the Advanced Step. The planning is now as follows: 1. Basic Step - From 2012 to 2024 The Basic Step uses the currently available systems and technologies in order to establish cross-centre arrival management in the airspace controlled by skeyes, DFS, DSNA, LVNL, MUAC and skyguide. 2. Advanced Step - From 2013 to 2024 The Advanced Step takes into account validated SESAR results in order to improve the en-route part of cross-centre arrival management in the overall FABEC airspace. This step requires enhanced data exchange between ACC/UAC in order to support a delay sharing strategy. Additional planning information related to departures and airborne flights will be provided by Airport-CDM and Network Management. This step has an impact on all FABEC ACCs.			

This step will also take into account further validated SESAR results and will optimise the cooperation between arrival management and Airport-CDM, Aircraft Operators and Network Management in order to widely share Arrival Management (AM) information between all partners and to process and to apply Arrival Management information where needed.

Status

The FABEC XMAN Basic Step has already been implemented at several ACCs for several airports.
The implementation phase of the Basic Step will continue until 2024.
The Milestone 4 of the Advanced Step of the XMAN project was reached on 29 March 2019.
The XMAN Portal (main feature of the Advanced Step of the XMAN project) Prototype used for the SESAR2020 trials last year is technically ready at MUAC. The tool is permanently fed with XMAN London-Heathrow and -Gatwick data.
A complete XMAN review has been done. Following documents were updated and released:

- FABEC XMAN Implementation Roadmap: V5.0, 10.12.2020
- FABEC Extended Arrival management CONOPS Advanced: V1.5, 18.12.2020

The implementation phase of the Advanced Step will also continue until 2024.

Link to ATM Master Plan Level 3 / OI Steps (ATM Master Plan Level 2) / Other references

ATM Master Plan Level 3 (formerly ESSIP): ATC07.1, ATC15.1

OI Steps: TS-0102, TS-0305

Other References: PCP:
- AF1: Extended AMAN and PBN in high density TMA
Deployment Programme DP 2020:
- Family 1.1.1: Basic AMAN
- Family 1.1.2: AMAN upgrade to include Extended Horizon function

Expected Performance Contribution (specific to the participating organisation(s))

Capacity	Improved average punctuality: small positive effect. Better forecast for sector loads: small positive effect. Reduced controller workload in APP and ACC: no significant effect. Increased controller workload in UAC: effect depending on the number of airports to be serviced.
Safety	Improved situational awareness: small positive effect. Reduced tactical interventions: small positive effect.
Environment (including flight efficiency)	Reduction of: • Track miles and holdings: small to medium positive effect; • Fuel burn: large positive effect; • CO_2/NO_x emissions: large positive effect.
Cost-Efficiency	Investments at ANSP-level will deliver benefits in financial terms to users (e.g. less fuel burn), but not to ANSPs.

Cooperation Activities

Collaboration with FAB UK/IRL, Italy, Spain and Denmark is included. Collaboration with other surrounding FABs is ongoing.

Project Name:	Free Route Airspace	Project Code:	FRA
Organisation(s)	skeyes (BE), DFS (DE), DSNA (FR), LVNL (NL), MUAC ANSP (MAS), skyguide (CH), Mil. Authority (BE), Mil. Authority (DE), Mil. Authority (FR), Mil. Authority (NL)), Mil. Authority (CH)		

Description/Scope/Objectives

The Free Route Airspace (FRA) Programme aims at developing and implementing a Free Route Airspace FABEC wide.
The objective of the FRA implementation is to give users opportunities to improve the horizontal flight efficiency through both plannable direct routes and at a later stage defined volume/s of Free Route Airspace within FABEC airspace.
The FRA Programme defines a stepped and gradual implementation approach where FABEC ACCs will develop and implement various iterations of Free Route Airspace.

Schedule/Implementation planning

The FABEC FRA project was launched in 2011 with the objective of setting up a FABEC Free Route Airspace with Advanced Flexible Use of Airspace (A-FUA) at FL 365 (and lower when and where possible) in a stepped approach by the end of RP2.
In 2015, the project has been aligned with the requirements of the Pilot Common Project requirements. This induced an implementation of FABEC Free Route Airspace at FL310+ by 2022.
In 2016, the project was organised into two work streams

1. National and cross-border Direct Routes (DCT) including Long Range Direct Routings;
2. Free Routing.

All Free Route initiatives conducted locally, bilaterally or within a FABEC framework are under the FABEC FRA umbrella. Implementation activities are managed at ACC or national level using local management processes and are monitored at FABEC level.

In December 2017, the Project Management Plan version 4.0 has been approved. The project is now further supporting and monitoring the direct routing implementations and full FRA implementations.

In the CP1 (PCP review), entering into force on 22 February 2021, the deployment target date has been set as:

- Initial FRA by the implementation target date of 31 December 2022.
- Final FRA, including cross-border FRA with at least one neighbouring state and FRA connectivity with TMAs, by the implementation target date of 31 December 2025.

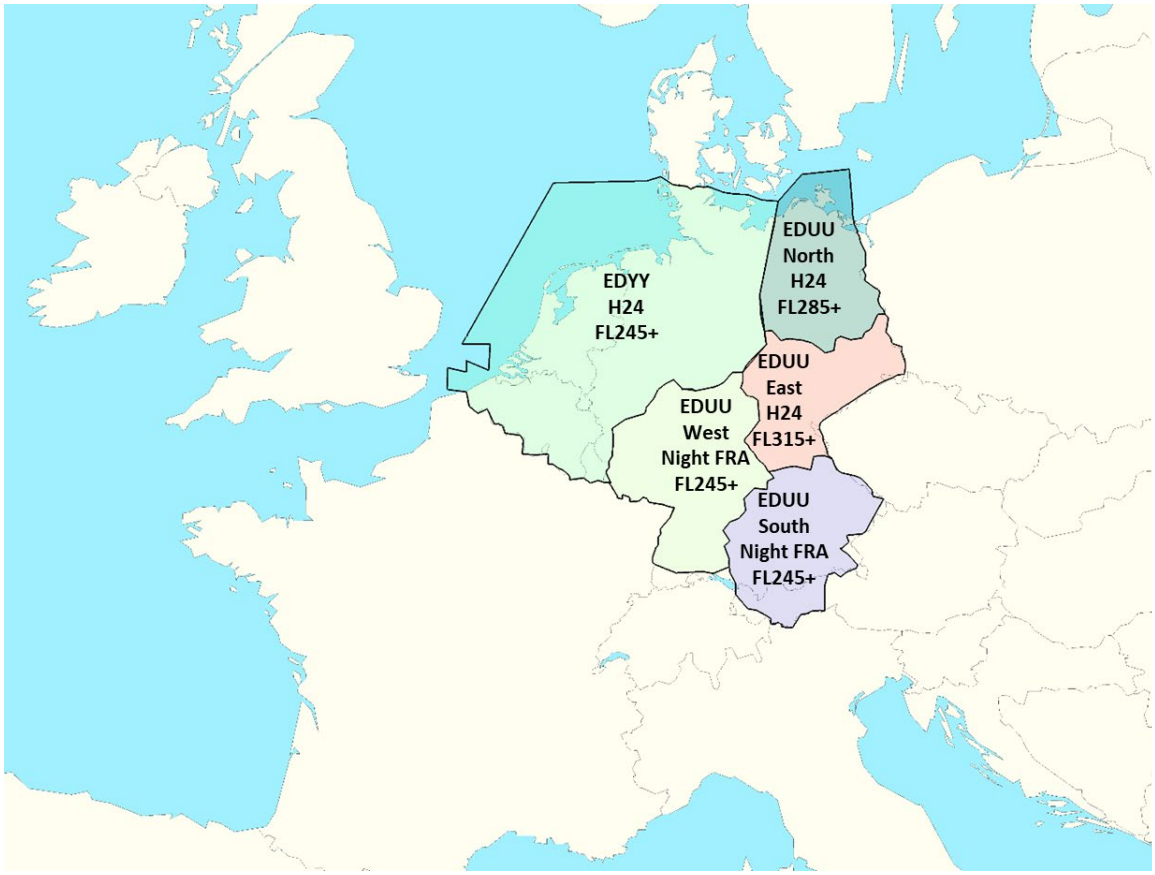
Status

The project work on Direct Routings and Free Route is in a rolling MS4 status with a yearly update of the implementation report and implementation plan.
In line with the new final target date of the CP1, the FABEC project will continue until end 2024.

DSNA and Skyguide have already implemented several direct routes and are preparing Full FRA.

Current status full FRA implementation (End 2020):

DFS has already implemented Full FRA H24 in EDDU North airspace above FL285 and EDDU East Airspace above FL 315 and Full FRA Night above FL245 in all the DFS airspace.
On 5 December 2019, MUAC has successfully implemented H24 FRA.



DFS plans H24 FRA FL245+ by December 2021.

Skyguide plans H24 FRA FL195+ including limited cross border FRA with DFS on 1 December 2022.

DSNA has defined its FRA implementation calendar as follows:

- Dec 2021: H24 FRA FL195+ North West 1 (LFRR Atlantic part), South West (LFBB) and Center (a portion of LFFF) with the current ATM system.
- Feb 2023: H24 FRA FL195+ North West 2 (LFRR Central)
- 2023-2025: phased implementation of H24 FRA FL195+ for the remaining parts of DSNA Airspace with 4-Flight new ATM system (North West 3 (LFRR East and a portion of LFFF beneath) + South East (LFMM) + North East (Reims and a portion of LFFF beneath)).

Link to ATM Master Plan Level 3 / OI Steps (ATM Master Plan Level 2) / Other references	
ATM Master Plan Level 3 (formerly ESSIP): AOM21.1, AOM21.2	
OI Steps: AOM-0401, AOM-0402, AOM-0500, AOM-0501, AOM-0505, AOM-0506, CM-0102-A	
Other References: PCP: - AF3.1.2, 3.2 & 3.3: Free Route Deployment Programme DP 2020: - Family 3.2.1: Upgrade of ATM systems (NM, ANSPs, AUs) to support Direct Routings (DCTs) and Free Routing Airspace (FRA) - Family 3.2.3: Implement Published Direct Routings (DCTs) - Family 3.2.4: Implement Free Route Airspace	
Expected Performance Contribution (specific to the participating organisation(s))	
Capacity	Capacity benefits could be foreseen since reduced average transit times may result in an increase in capacity. Capacity benefits may also be possible if there is proven to be a reduced number of conflicts, fewer redirects, and the resulting impact on controller tools. However, it is also possible that in some cases conflicts may become more complex and other or new choke points may emerge. Hence, the overall impact of FRA on sector capacity cannot be determined without simulations.
Safety	No impact
Environment (including flight efficiency)	FRA allows airspace users to fly more direct trajectories, thus potentially reducing flight distance flown, with consequent savings in fuel and direct and strategic operating costs. There environmental benefits from savings in CO_2-emissions might not be as significant in the core area as in the peripheral areas.
Cost-Efficiency	Investments at ANSP-level will deliver benefits in financial terms to users (e.g. less fuel burn), but not to ANSPs.
Cooperation Activities	
-	

3.3. Multinational projects

Name of project:	Organisation(s):	Schedule:	Progress Description:	Links:
COFLIGHT	DSNA (FR), ENAV (IT)	2006 - 2027	Implementation phase on going. First deployment in pilot ACCs performed. Commissioning is planned for DSNA 4-Flight in pilot ACCs (Reims and Marseille) by 2022.	L3: ITY-FMTP, ITY-AGDL, ATC07.1
Coflight Cloud Service	DSNA (FR), ENAV (IT)	2014 - 2024	Implementation phase on going. Further services will be deployed over the time, until 2024: • Technical integration service • Validation service • Training service • Continuity service Operational service First Technical Integration service commissioning for skyguide planned on 2020.	-
New Voice Communication System (NVCS)	DSNA (FR), MUAC ANSP (MAS)	MUAC: 2016 DSNA: 2017 - 2024	Software development on going Systems installation in progress at CRNA/O CRNA/SO systems under development in Factory	-

4. Cooperation activities

4.1. FAB Co-ordination

FAB Europe Central (FABEC) is the functional airspace block established jointly by the Federal Republic of Germany, the Kingdom of Belgium, the French Republic, the Grand Duchy of Luxembourg, the Kingdom of the Netherlands and the Swiss confederation.

The objective of the FABEC, formally entered into force on the 1st of June 2013, is to achieve optimal performance in the areas relating to safety, environmental sustainability, capacity, cost-efficiency, flight efficiency and military mission effectiveness, by the design of airspace and the organisation of air traffic management in the airspace concerned regardless of existing boundaries. It is a collaboration platform allowing all operational partners - ANSP, military and civil aircraft operators and staff - to work together to optimize daily cross border operations between the neighbouring FABEC states.

Several airspace related co-ordination activities are ongoing to achieve these goals within FABEC. The airspace related activities in 2020 mainly focussed on FUA in the aim of reducing bottlenecks and the follow up of the airspace redesign programme. To improve FUA harmonisation and cooperation a FABEC ASM Training and Qualification Manual for AMC (Airspace Management Cell) staff is under development, ASM Data sharing solutions between FABEC AMCs are studied at technical and operational levels and AMA (AMC Manageable Area) templates are made available for sharing good practices among FABEC AMCs. The Airspace Design Coordination Group (ADCG) was created in 2019 for the coordination between FABEC States/ANSPs and NM on solving bottlenecks. The ADCG provides and coordinates the FABEC input for the NM Airspace Reconfiguration Programme (ARP).

4.2. Multinational cooperation initiatives

Continuous cooperation relating to coordination and transfer procedures, airspace and route planning, etc., normally takes place between adjacent States, in accordance with ICAO SARPs and PANS. This cooperation is, among other issues, focused towards implementation of the ECAC Objectives and is complementary to the work undertaken for implementation of the European ATM Master Plan. More specific cooperation/coordination arrangements, which may be useful in coordinating Local Actions between adjacent States, are highlighted below.

The ATM Master Plan, its level 3 ESSIP components and the Pilot Common Project provide the main framework on which these Regional Plans rely. In addition to the involvement in the FABEC initiative, the bilateral or multilateral coordination arrangements already set up by DSNA are the following:

- AEFMP cooperation, started in 1991 with Spanish and Portuguese ANSPs, progressively joined by Algerian, Moroccan ones and more recently by Tunisian OACA.
- Member of A6 (ENAIRE, DFS, DSNA, ENAV, NATS, PANSA, COOPANS) in close cooperation with Skyguide,
- Coordination with the 6-States/EUROCONTROL (Belgium, France, Germany, Luxembourg, The Netherlands, United Kingdom),
- SOUTH-WEST AXIS, to improve ATM capacity and reduce delays in the area of Switzerland, Northern-Italy, Northern Eastern Spain, France and United Kingdom with EUROCONTROL collaboration,
- Member of ESSP (European Satellite Service Provider) EGNOS,
- Member of the SESAR JU and SESAR Deployment Alliance that drive the Deployment of SESAR as “SESAR Deployment Manager”,
- Member of ANSPs cooperation for system developments such as New Voice Communication System implementation and ATM system developments,

Some DSNA partnerships

DSNA is involved in three major projects in partnership with ENAV:

- The aim of COFLIGHT is to implement with ENAV a new FDP system that will be compliant to SES interoperability regulation. Following the definition phase, the realization of the COFLIGHT software has started in 2006, and several versions have been delivered.
- Based on COFLIGHT, DSNA and its partners ENAV and skyguide have launched the "Coflight Cloud Services". The objective is to rely on the Coflight product to provide FDP remotely service and system's maintenance to other ANSPs.
- The ERATO partnership signed in 2015 aims at developing and maintaining together the ERATO MTCD tool. ERATO has been operational in DSNA Brest and Bordeaux ACCs since 2015 and has been commissioned in the 4 ENAV ACCs in 2019. DSNA and ENAV have established a joint procurement grouping and have signed in 2020a long term contract with Industry for defining, developing and maintaining a new generation MTCD tool based on ERATO to be operational in all DSNA and ENAV ACCs.

DSNA is also involved in:

- Common specification and procurement with Maastricht ACC (MUAC) of a next generation VCS (Voice Communications System).
    - In 2008, a working group of FABEC members developed the specifications for a new VCS (Voice Communication System) taking into account the needs of the FABEC ANSPs as well as the evolutions towards new common functional needs such as the management of the radio and the telephone on the same VCS. It was also an opportunity to take into account compulsory technological evolutions such as the transportation of the voice communications over IP.
    - Following the preparation of these specifications, DSNA and MUAC/EUROCONTROL (Maastricht ACC Center) decided to collaborate to conduct a tender procedure for the development, supply and maintenance of New VCS (NVCS Project). A cooperation agreement has been drawn up between MUAC and DSNA to determine the rules for collaboration between the two organizations. One of the characteristics of this cooperation agreement was that a 20-year framework agreement would be awarded in partnership between MUAC and DSNA and that the tendering procedure would be carried out by DSNA, according to the rules of the French Public Procurement Code.
    - The framework agreement offers the possibility for other FABEC ANSPs, if they wish, to integrate the cooperation agreement and to benefit rapidly of a NVCS system "ready for use", compliant with European regulation and using state of the art technologies as well as from all the services offered by Framework agreement under the same conditions as the DSNA and MUAC.
    - The NVCS project enable DSNA, MUAC to satisfy the following objectives:
        - Purchasing of NVCS primary and backup systems under a common framework contract
        - Implement an advanced Voice Communications System capable of delivering voice services over any possible telecom infrastructure in the foreseeable future.
        - Support a coordinated transition from TDM (Time Division Multiplexing) based switching to Voice over IP (VoIP) among different Air Navigation Services Providers (ANSPs).
        - Increased cost-effectiveness of the ANSP's investments as a result of scale effects in the acquisition process as well as during the maintenance phase.
        - NVCS Backup will replace current radio and telephone backup at CDG Airport. Radio backup functionalities will be taken into service in 2020.
    - The perimeter of NVCS project in DSNA is to replace main and backup radio/telephone chains of the five French ACCs and also replace Back-up VCS for CDG airport.
    - It takes onboard the NIS (Network and Information Security - EU Directive 2016/1148 of 06/07/16) as new security functionalities are mandatory for entry into operational service.

- Brest ACC will be the first of five DSNA area control centres (ACCs) to be equipped with Main and Backup NVCS. Start of operation is planned for early 2023
- Bordeaux project was launched in 2017, contract has been notified on November 2017. The start of operation is planned for 2024/2025.
- Aix-en-Provence, Reims, and Athis ACCs will follow.

➢ Projects where sound importance is given to partnership with European ANSPs:

- PENS, its evolution New PENS in which DSNA is deeply involved in the definition and the governance.
- SPINET (Safety Phone IP Network) is a bi-national project between Skyguide and DSNA. Skyguide has been operating a network providing telecommunications links for inter ACCs audio communications, named SETINET, used for DSNA-Skyguide and DSNA-ENAV communications in the last 10 years, and based on the TDM (Time Division Multiplex) technique, which was getting obsolete and costly. Every telecom operator having phased out this kind of links, the end of service is planned for mid 2021. In order to cope with this issue, Skyguide and DSNA decided two years ago to study and put in operation a new solution, designed to replace this network and foreseen to be cheaper, more resilient, more flexible and more reliable. In this network, each ANSP operates a dedicated MPLS (Multi-Protocol Label Switching) over IP network and shares its telecommunication capacity with the other ANSP, thanks to inter-links between the networks in each access point. In order to mitigate common-mode outages, the ANSPs procure their networks from different telecom operators. Each ANSP could expand its own network with new access points anywhere else. SPINET will fully replace SETINET by mid 2021;
- ESSP: DSNA is a shareholder of the ESSP SAS Company established in Toulouse in 2009, along with other European ANSPs (DFS, ENAIRE, ENAV, NATS, NAV-P, skyguide). The main aim of the cooperation between these seven ANSPs is having ESSP operating the EGNOS infrastructure and delivering several services, in particular the EGNOS Safety of Life service used by aviation to provide LPV approaches over Europe. A Board of Directors ensures the governance of the ESSP where shareholders are represented. The Board of Directors meets on a quarterly basis and it is supported by the CEO of the company, as well as by the financial and strategic direction. ESSP has won in 2014 the EGNOS operating contract for 8 years, following a competitive call for tender managed by GSA, the European GNSS Agency. ESSP is now an established and a key player in Europe in the field of satellite navigation services. ESSP is also developing business and consulting activities in several areas, ranging from expanding EGNOS services and user communities, to managing pan European networks.
- SWIM: DSNA is leading the SWIM governance ini.a.ve in the SDM framework, together with 23 partners representing ANSPs, airports, airlines, EUROCONTROL, MET providers and the Military. In addition, together with ENAV, DSNA is pioneering SWIM compliant services with Coflight Cloud Services, the first actual candidate SWIM service to be registered in the European SWIM registry. DSNA has started to deliver ED-254 SWIM AMAN service to two partners, namely Air France and Aéroport de Paris. A new service, the Military Activity Planning Distribution, was designed to deliver at a national level an updated and accurate situation of planned military activity, including eAUP/eUUP updates, to any ASM/ATFCM consumer. Another service, the Sector Configuration Distribution Service, supports the distribution of the current sector configuration for a given ATSU. In the MET domain.

  DSNA has been consuming Meteorology OPMET services operationally in its five ACCs for more than 2 years and has started to test the METGATE broker designed by Meteo France to provide SWIM services. From an infrastructure point of view, the SWIM infrastructure component deployed earlier was upgraded in Paris ACC, and a license agreement was signed with Eurocontrol regarding the delivery by Eurocontrol to DSNA of a Service Registry for SWIM and non-SWIM data services, which is now operational.

A6 Alliance

The A6 Alliance was founded in 2011 by six ANSP members of the SESAR JU – DFS (Germany), DSNA (France), AENA (Spain) renamed later to ENAIRE, ENAV (Italy), NATS (UK) and NORACON – a consortium of Austro Control (Austria), AVINOR (Norway), EANS (Estonia), Finavia (Finland), IAA (Ireland), LFV (Sweden) and Naviair (Denmark).

In 2015, PANSA became a full member of the A6 Alliance. At the same time, the COOPANS consortium replaced NORACON in all A6 activities and the B4 Consortium joined A6 in the area of SESAR 2020.

The A6 Alliance has also concluded a collaboration agreement with Skyguide in relation to SESAR 2020 R&D activities, as well as with ROMATSA and HungaroControl in relation to SESAR Deployment Manager.

The A6 Alliance plays a significant role in Research & Development through active participation in the SESAR Program.

The A6+ partners participate in 68 of the 80 ATM-solution projects, leading 30 of them. Furthermore, the A6+ partners hold an active role in transversal activities including the Masterplan and in Very Large Scale Demonstrations.

Since the launch of SESAR 1, members of the A6 Alliance have achieved significant results together with other SJU partners (development of 63 successfully completed SESAR solutions).

The members of the A6 Alliance control more than 80 % of EU air traffic. They are responsible for more than 70 % of the investment in the future air traffic management infrastructure.

Areas of DSNA involvement in 2020:

- preparation of positions regarding operational/technical, policy and legal regulations proposals prepared or led by the EU institutions/bodies together with other partners (Airspace Architecture Study, Wise Persons Group, RP3, CEF funding, PCP Review, etc.);
- participation in the SESAR Joint Undertaking (mainly focusing on a successful closing of Wave 1 and preparing the call for Wave 2 of SESAR 2020 Programme), SESAR Deployment Manager and initiatives/projects financed by INEA (SWIM, DLS, etc.);
- A6 activities: develop proposals for improvement of the ATM system in Europe and drive their implementation (e.g. SESAR Digital Backbone).
- Preparation of the future of SDM
- CoDE Project : DSNA took part of the Common Datalink services Governance for European (CoDE) project that was launched in 2020 by A6 for implementing the SDM DataLink recovery plan recommendations : setup a DL governance structure at European level, seek for and select a DL Service Provider (DSP) starting to operate a DL Service by 2023. A6 proposed to ANSP that expressed their interest to join the project so that they can contribute to starting of DSP operation foreseen by 2023. Members will be able to take benefit of expected advantages brought by the structure such as defragmentation, enhancement of infrastructure and its performances, make system for future ATM promising evolutions, capacity increase, etc.

Regional AEFMP Framework

The AEFMP initiative was set up in 1996 in order to harmonize and optimize the air navigation operations among Algeria, Spain, France, Morocco and Portugal. This collaboration was renewed in 2002 with the signature of a Joint AEFMP Plan.

It aims at promoting the establishment of common regional convergence objectives in order to increase safety and achieve a high operational efficiency in the provision of services.

After 14 years of fruitful cooperation, the AEFMP MoU (Memorandum of Understanding) was signed in January 2016 among the five countries, and publicly ratified during the WAC (World ATM Congress) held in Madrid, in March 2016, with the attendance of representatives of the European Commission.

The renewed framework of cooperation includes updated leading principles and reinforced cooperation to face the then current and future ATM (Air Traffic Management) developments steaming from the SES (Single European Sky) framework evolution.

Having celebrated in 2018 the inclusion of Tunisia in the membership, AEFMP was gratified on 12th March 2019 for its activities by a Single European Sky Special Mention for “Cooperation”.

Such AEFMP's activities are particularly focused on harmonization of procedures, improvement of interoperability and management of implementation of new systems. Accordingly, the main AEFMP objectives are to:

- coordinate and collaborate on the operational and technical enablers' alignment;
- harmonize and optimize the deployment timeline of the operational and technical enablers;
- push towards more interoperable systems;
- optimize the traffic flows across the AEFMP area; and
- interconnect ATM systems, share data stemming from AEFMP facilities and systems.

The main achievements of the AEFMP have been the result of the collaboration in the following areas:

- **Optimum use of Technical Systems:** technical optimization is considered essential to provide the users with systems aimed at improving or maintaining performance through synchronized interoperable technology deployment. Likewise, the main general objectives are to:
    - establish systems and common protocols allowing a reliable, quick and effective exchange of information between operational centres;
    - share data stemming from technical premises between cross-border units, when pertinent;
    - share technical knowledge and experience between AEFMP ANSPs and propose new technical ways of improving CNS/ATM systems.
- **Optimum use of Airspace: common methods and procedures as well as operational changes have** been and shall be assessed considering the impact on global performance and in order to optimize the use of the AEFMP airspace by its users. Also, some of the general objectives are to:
    - study and elaborate common working methods for the area, as well as establishing support systems necessities;
    - establish common criteria for airspace organization and co-ordination of adjacent units in order to avoid bottlenecks;
    - analyse delays in the AEFMP area and propose joint measures in order to reduce delays in the area.

AEFMP areas of work include inter-FAB and other non AEFMP countries collaboration activities, with the aim to promote SES objectives to EU neighbouring airspaces in Western Mediterranean.

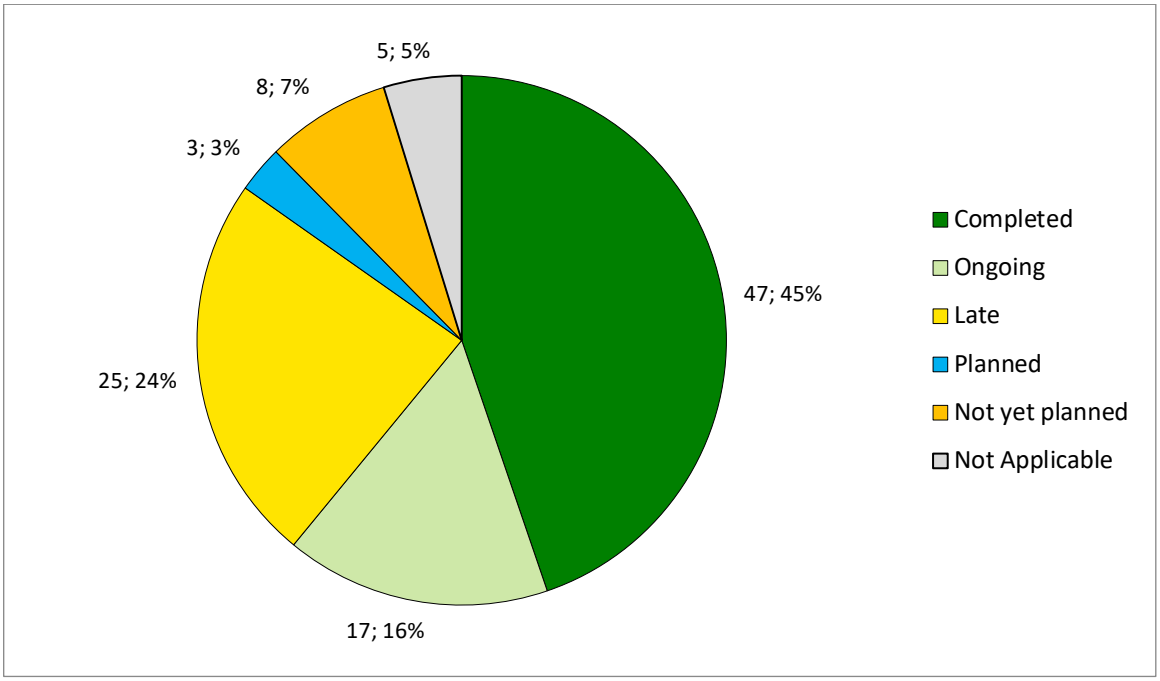
Due to the COVID-19 pandemic situation, which affected the international face to face meetings during 2020, the AFEMP groups adapted their coordination procedures to keep the communications active over telecommunication channels.

For further information on AEFMP, please consult our website: https://www.aefmp-atm.org/

5. Implementation Objectives Progress

5.1. State View: Overall Objective Implementation Progress

The graph below shows progress for all Implementation Objectives (applicable and not applicable to the State).
Globally, 61% of the objectives are already implemented or ongoing according to schedule and 24% of them are considered late according to current deadlines.



Summary of the implementation of the objectives

State related objectives

The status of compliance, achievements and main points of concerns for ESSIP objectives applicable to France can be summarized as follows regarding State related 41 applicable objectives:

16 objectives are already completed:

AOM13.1	Harmonise Airt Traffic (OAT) and General Air Traffic (GAT) Handling
AOM19.1	ASM Support Tools to support Advanced FUA (AFUA)
AOM19.3	Full Rolling ASM/ATFCM Process and ASM Information Sharing
AOM21.1	Direct Routing
ATC02.2	Implement ground based safety nets - Short Term Conflict Alert (STCA) - level 2 for en-route operations
ATC02.8	Ground-based Safety Nets
ATC02.9	Enhanced Short Term Conflict Alert (SCTA) for TMAs

ATC15.1	Information Exchange with En-route in Support of AMAN
ATC16	Implement ACAS II Compliant TCAS change 7.1
COM11.2	Voice over Internet Protocol (VoIP) in Airport/Terminal
COM12	New Pan-European Network Service (NewPENS)
FCM01	Implement enhanced tactical flow management services
FCM04.2	Short Term ATFCM Measures (STAM) - Phase 2
INF07	Electronic Terrain and Obstacle Data (eTOD)
ITY-COTR	Implementation of ground-ground automated coordination process
SAF11	Improve Runway Safety Preventing Runway Excursions

14 objectives are considered as late:

AOM21.2	Free Route Airspace
ATC12.1	Automated Support for Conflict Detection, Resolution Support Information and Conformance Monitoring
ATC17	Electronic Dialogue as automated assistance to controller during coordination and transfer
COM10	Migrate from AFTN to AMHS
COM11.1	Voice over Internet Protocol (VoIP) in En-Route
FCM03	Collaborative Flight Planning
FCM05	Interactive Rolling NOP
INF08.1	Information Exchanges using the SWIM Yellow TI Profile
ITY-ACID	Aircraft identification
ITY-ADQ	Ensure quality of aeronautical data and aeronautical information
ITY-AGDL	Initial ATC air-ground data link services
ITY-AGVCS2	8,33 kHz air-ground voice channel spacing below FL195
ITY-FMTP	Common Flight Message Transfer Protocol (FMTP)
ITY-SPI	Surveillance Performance and Interoperability

Delays impacting the full achievement of these objectives are mainly linked to two ongoing major national projects and investments for the renewal of legacy systems: CSSIP program for deployment of a new network infrastructure enabling for voice and data over IP, and 4-Flight for transition to a new SESAR compliant ATM system including final Data-Link capabilities (as from 2018), for which a new implementation plan has been presented by DSNA to the Users and to the Commission (final implementation spring 2021). Regarding ADQ and AGVCS2 implementations, delays are mainly due to the complexity of implementation with numerous stakeholders.

3 objectives have not been planned yet (NAV3.2, RNP 1 in TMA Operations, ATC19, Enhanced AMAN-DMAN integration and ATC20, Enhanced STCA with down-linked parameters via Mode S EHS). They are currently under study before establishing the final planning.

2 objectives are considered as not applicable as no implementation is currently foreseen by DSNA in France (NAV12, ATS IFR Routes for Rotorcraft Operations and ATC18, Multi-Sector Planning En-route - 1P2T).

The remaining objectives are ongoing or planned and are progressing according to the implementation milestones.

Airports related objectives

Three airports operators of the four coordinated French airports (Paris Roissy-CDG, Paris Orly, Nice-Côte d'Azur) and the two other LSSIP French airports involved (Toulouse-Blagnac, Marseille-Provence) have provided data together with DTA, DSAC, DSNA and DIRCAM; however, Lyon-Saint-Exupéry could only allocate limited resources to this activity in relation with COVID 19 furlough and internal restructuring.

Regarding environmental objectives:

- ENV1 is ongoing (CDAs planned or in place in these six airports regarding ASBU Block 0 and ongoing regarding ASBU Block 1),
- ENV2: environmental management is in place between all involved stakeholders of those airports,
- ENV3: continuous climb operations are implemented at all of those airports

AMAN tools and procedures are implemented according to the related objective in the concerned French airports (Paris-Orly, Paris-Roissy- and Nice-Côte d'Azur).

Paris-Roissy is labelled A-CDM since November 2010 (FUM process implementation in February 2013 and procedures in adverse conditions including de-icing prior to end 2013). Paris-Orly CDM has been implemented 17th November 2016. Lyon-Sain-Exupéry is labelled A-CDM since November 2016 and Nice-Côte d'Azur was labelled A-CDM in September 2020. No A-CDM implementation is planned in Toulouse-Blagnac and Marseille-Provence airports but the Advanced Tower Concept implementation is under study.

A-SMGCS level 1 and level 2 objectives are completed for both major Paris airports and Nice-côte d'Azur. A-SMGCS level 1 is also implemented at Lyon-Saint Exupéry airport but, due to the level of required investments (mainly surveillance systems), achievement of the A-SMGCS level 1 is late for other airports (Toulouse, Marseille) and for level 2 in Lyon-Saint Exupéry. Nevertheless, the projects are running, and full implementation is planned by mid-2023.

Initial Airport Operations Plan objectives are formally late but are progressing according to the recently published CP1 regulation and associated implementation milestones (alignment of LSSIP DB to be performed accordingly in 2021).

Improve runway and airfield safety with ATC clearances monitoring objective is late at Paris airports and Nice-Côte d'Azur due to the deployment of SYSAT (new ATM system for TMAs) expected by the end of 2025.

Automated assistance to Controller for Surface Movement Planning and Routing is not yet planned.

Remaining objectives are ongoing according to schedule.

It should also be noted that 3 remote tower systems and services are currently planned to be implemented in France by DSNA from 2021 to 2024 in Cannes-Mandelieu, Pau-Pyrénées and Tours-Val de Loire.

5.2. Objective Progress per SESAR Essential Operational Changes

Legend:

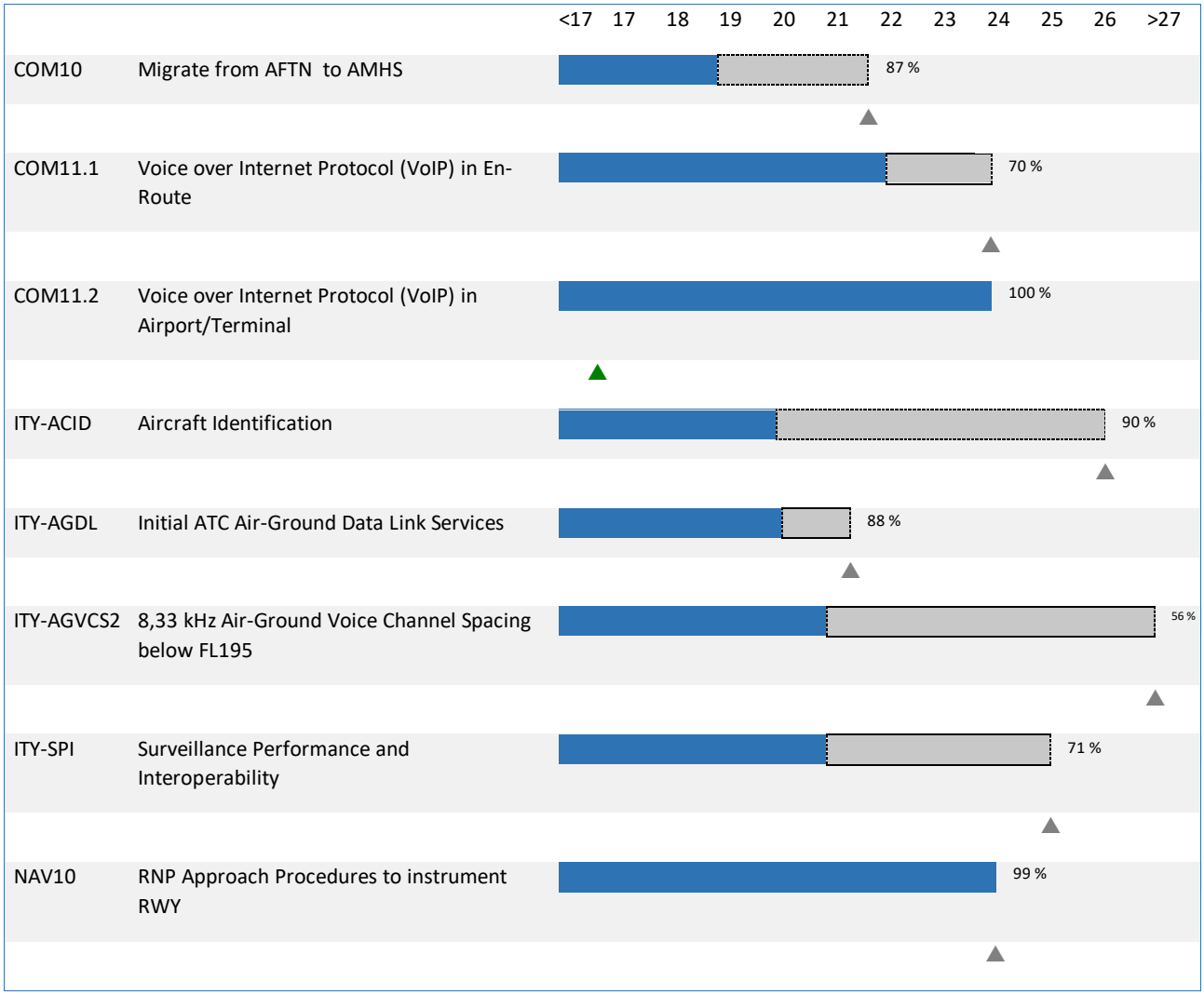
▲ 100% = Objective completed

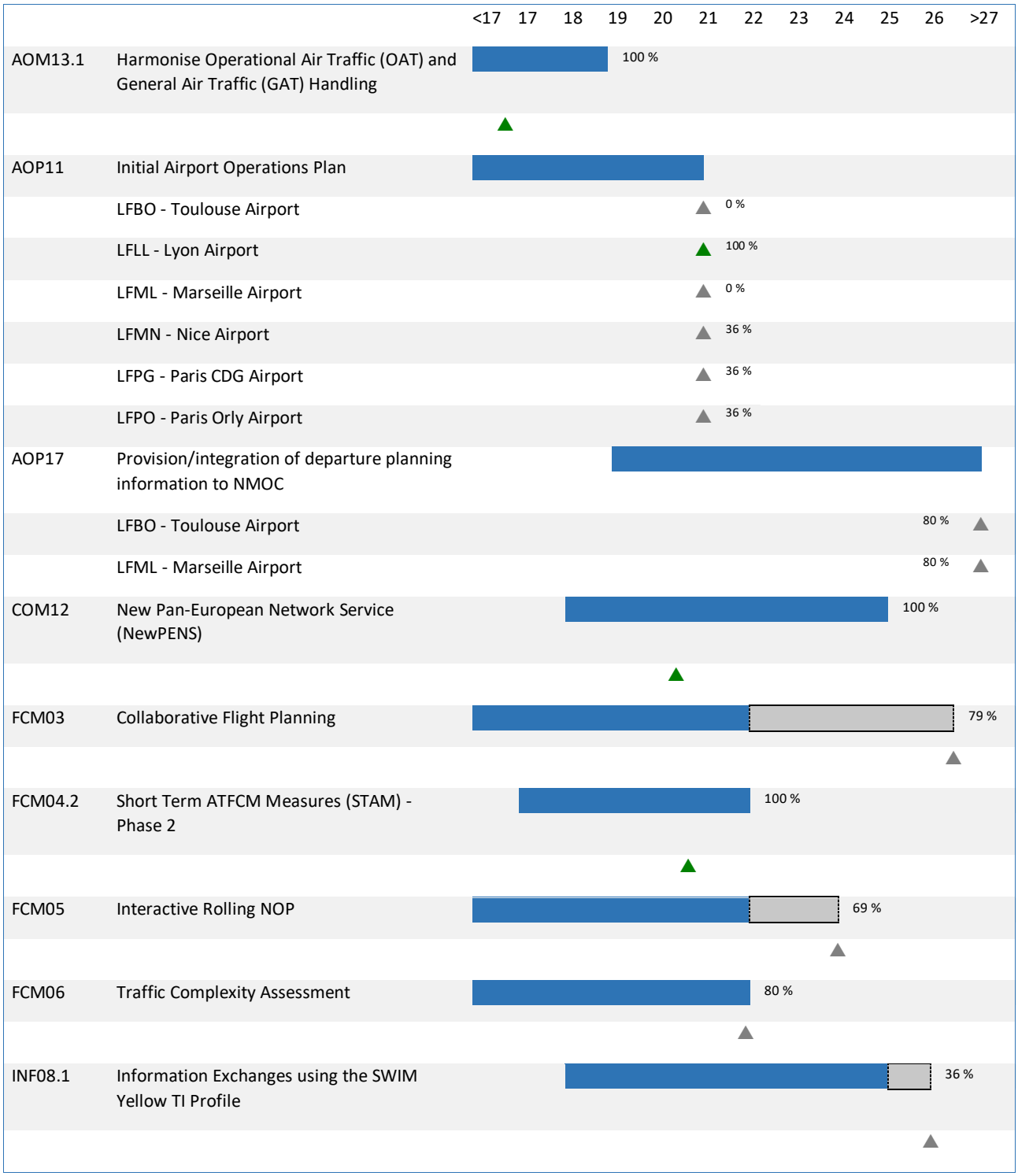
▲ ## % = Expected completion / % Progress

= Implementation Objective timeline (to FOC date)

= Completion beyond Implementation Objective timeline

CNS infrastructure and services




<17
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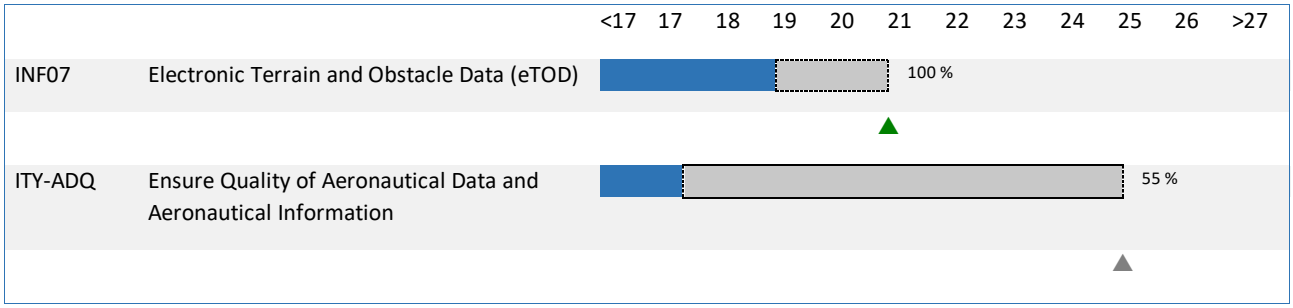
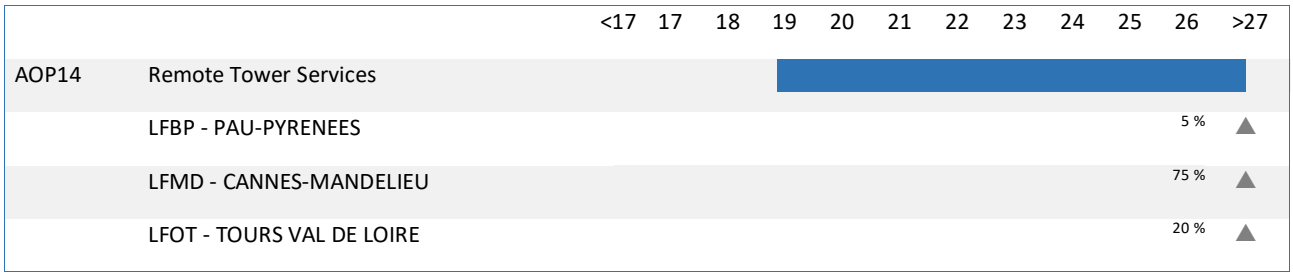
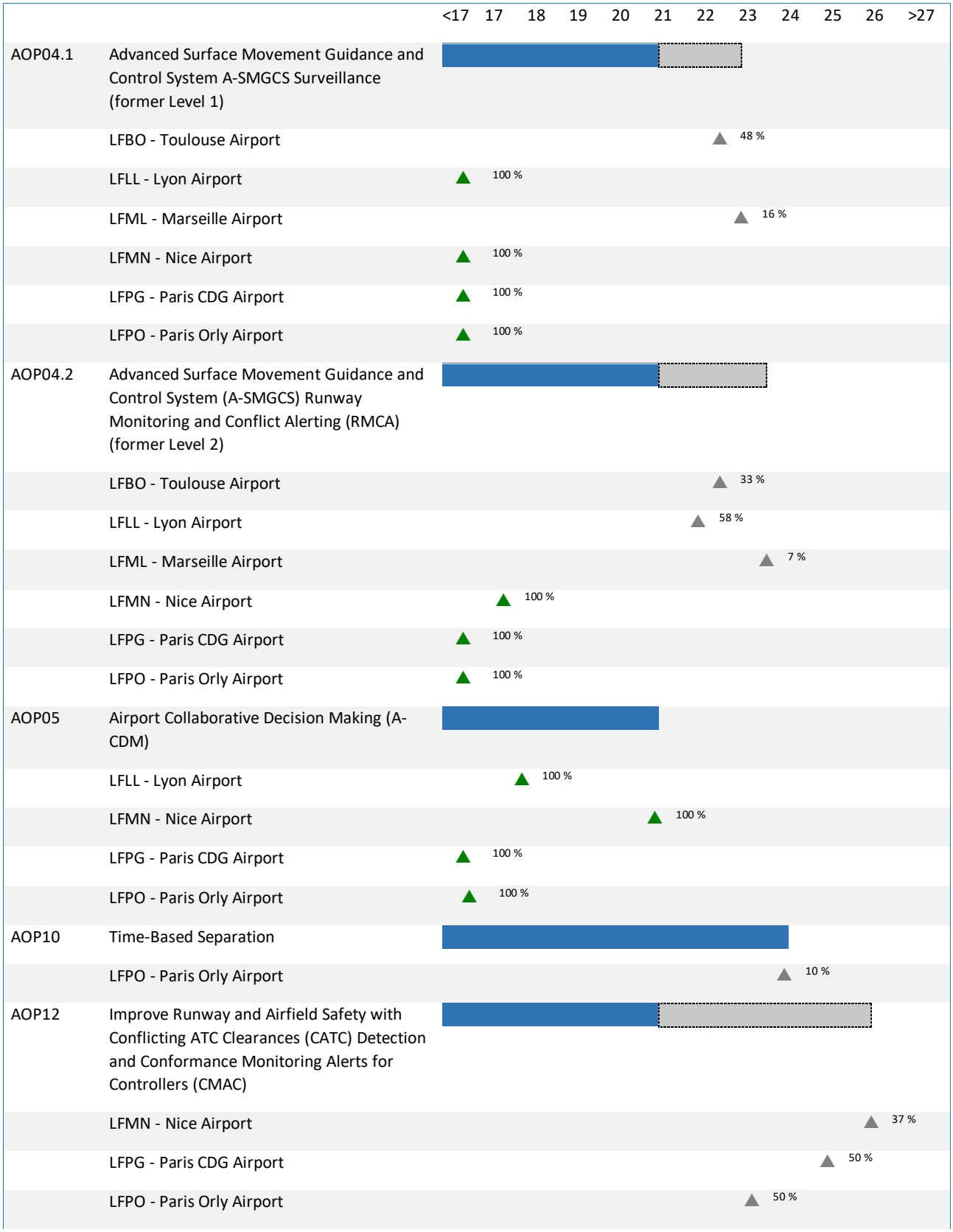
>27
AOM13.1
Harmonise Operational Air Traffic (OAT) and General Air Traffic (GAT) Handling
100 %
AOP11
Initial Airport Operations Plan
LFBO - Toulouse Airport
0 %
LFLL - Lyon Airport
100 %
LFML - Marseille Airport
0 %
LFMN - Nice Airport
36 %
LFPG - Paris CDG Airport
36 %
LFPO - Paris Orly Airport
36 %
AOP17
Provision/integration of departure planning information to NMOC
LFBO - Toulouse Airport
80 %
LFML - Marseille Airport
80 %
COM12
New Pan-European Network Service (NewPENS)
100 %
FCM03
Collaborative Flight Planning
79 %
FCM04.2
Short Term ATFCM Measures (STAM) - Phase 2
100 %
FCM05
Interactive Rolling NOP
69 %
FCM06
Traffic Complexity Assessment
80 %
INF08.1
Information Exchanges using the SWIM Yellow TI Profile
36 %


dS
Digital
AIM and MET
services


<17 17 18 19 20 21 22 23 24 25 26 >27
INF07
Electronic Terrain and Obstacle Data (eTOD)
100 %
ITY-ADQ
Ensure Quality of Aeronautical Data and Aeronautical Information
55 %


vS
Virtualisation
of service
provision


<17 17 18 19 20 21 22 23 24 25 26 >27
AOP14
Remote Tower Services
LFBP - PAU-PYRENEES
5 %
LFMD - CANNES-MANDELIEU
75 %
LFOT - TOURS VAL DE LOIRE
20 %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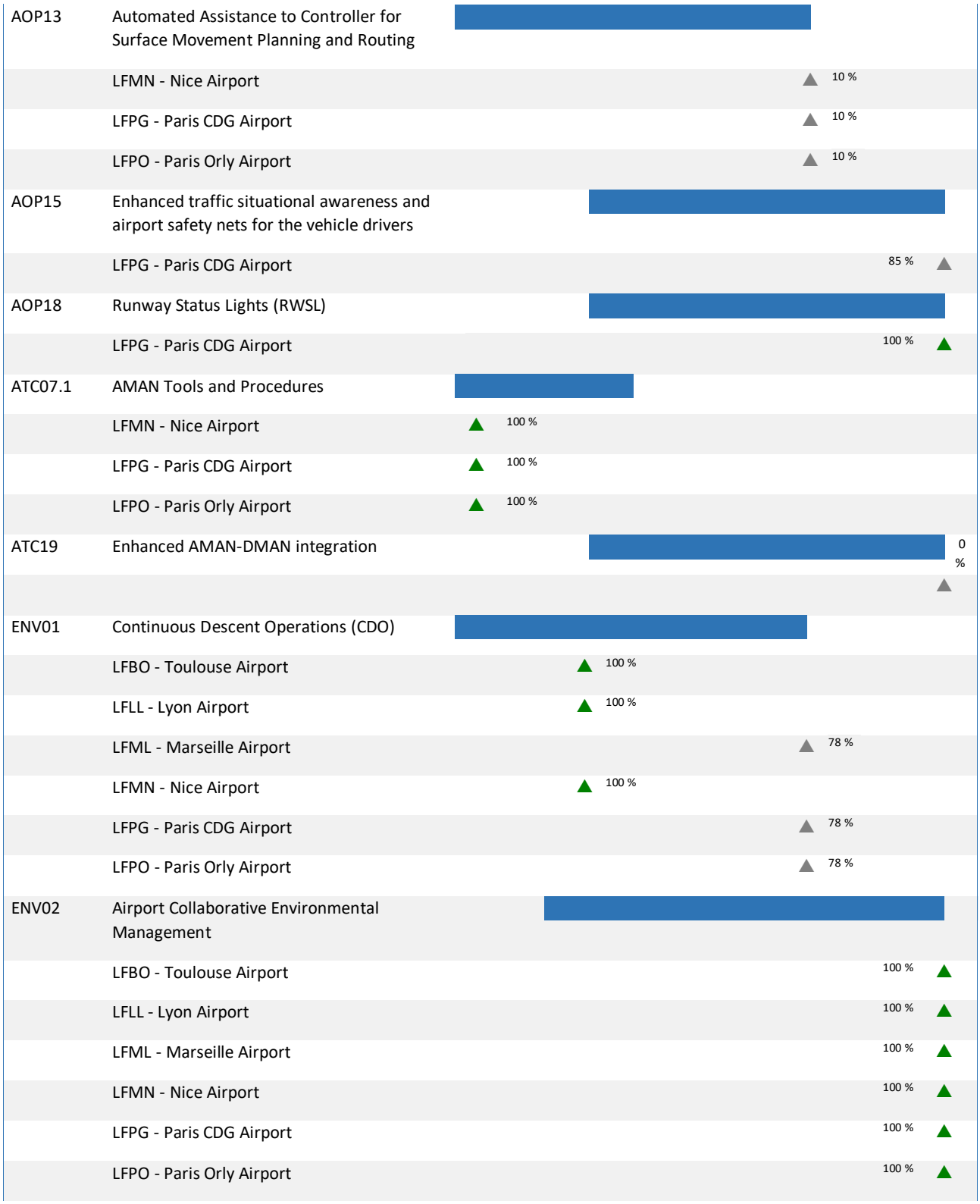
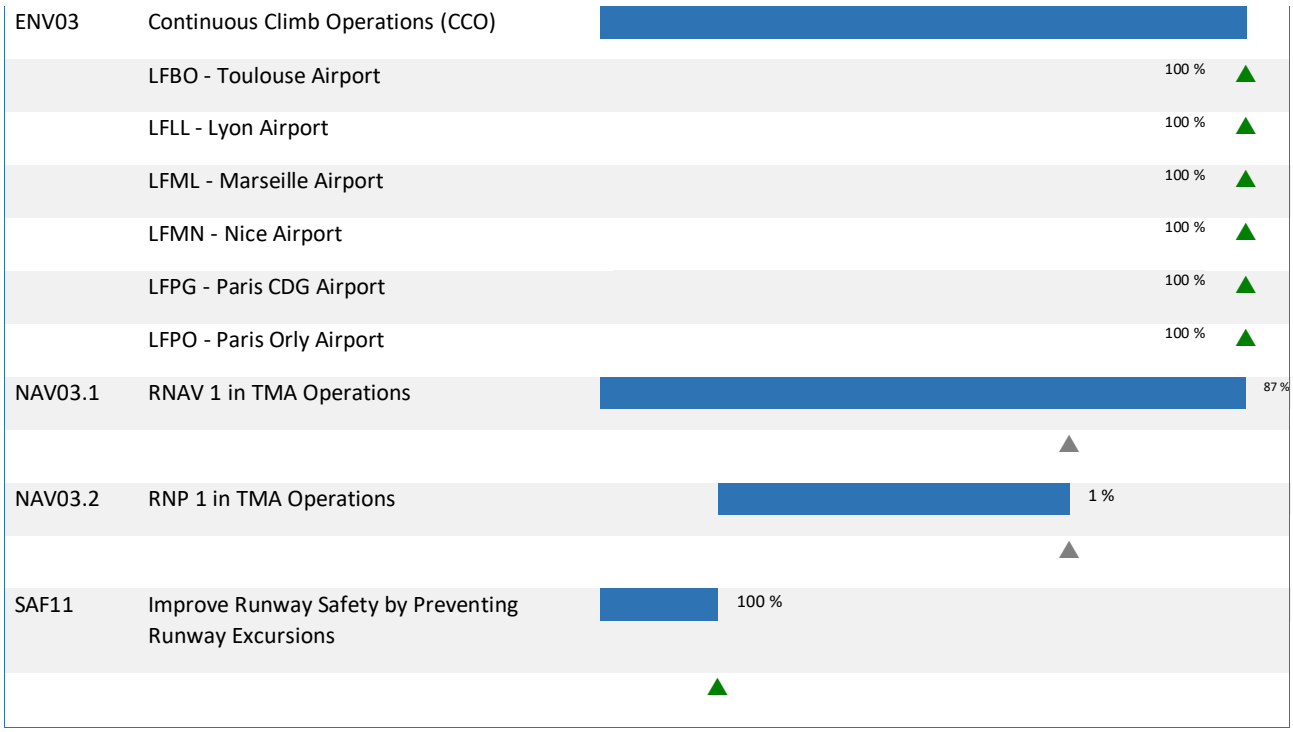
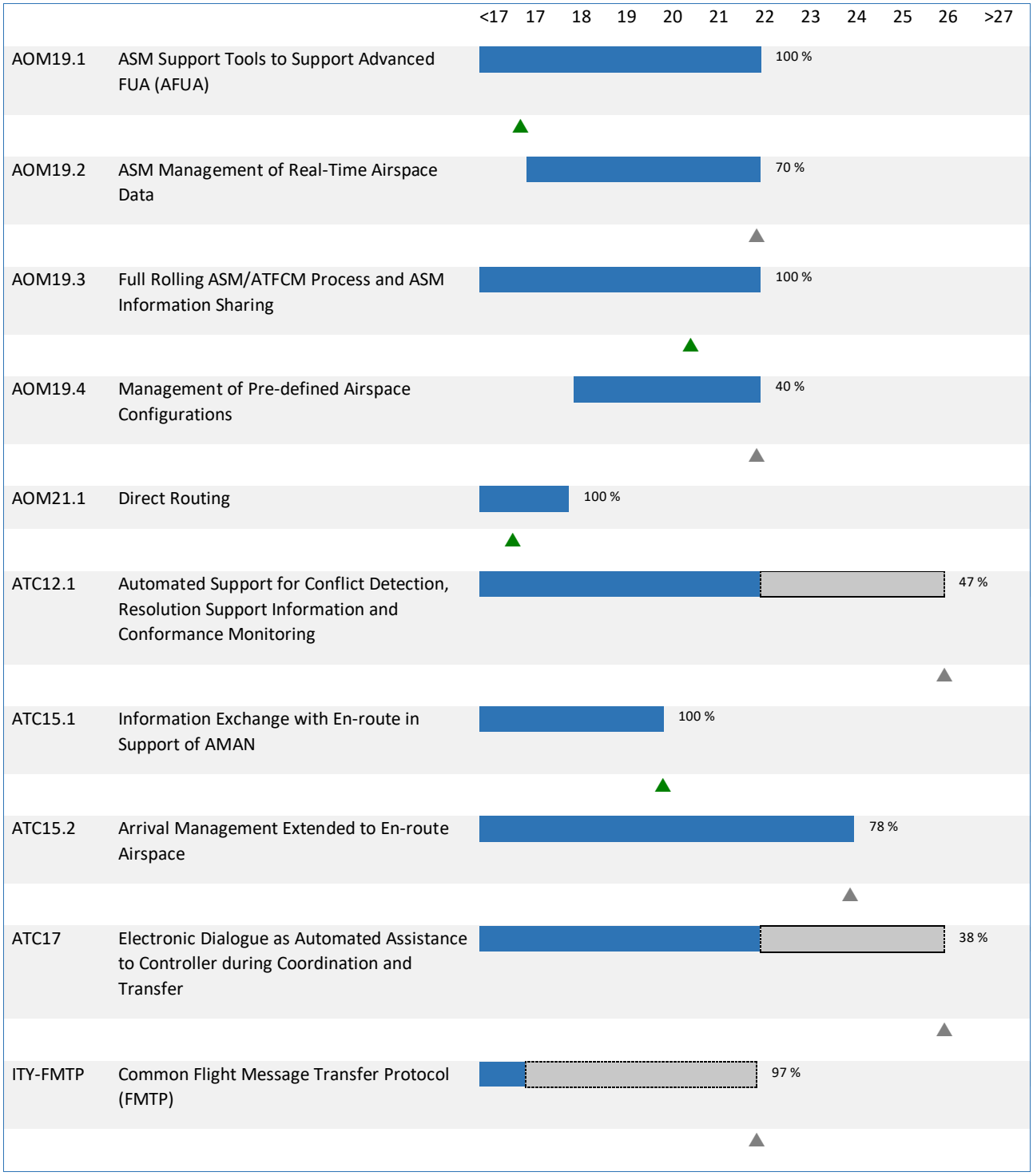
AOP04.1
Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)
LFBO - Toulouse Airport
48 %
LFLL - Lyon Airport
100 %
LFML - Marseille Airport
16 %
LFMN - Nice Airport
100 %
LFPG - Paris CDG Airport
100 %
LFPO - Paris Orly Airport
100 %
AOP04.2
Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)
LFBO - Toulouse Airport
33 %
LFLL - Lyon Airport
58 %
LFML - Marseille Airport
7 %
LFMN - Nice Airport
100 %
LFPG - Paris CDG Airport
100 %
LFPO - Paris Orly Airport
100 %
AOP05
Airport Collaborative Decision Making (A-CDM)
LFLL - Lyon Airport
100 %
LFMN - Nice Airport
100 %
LFPG - Paris CDG Airport
100 %
LFPO - Paris Orly Airport
100 %
AOP10
Time-Based Separation
LFPO - Paris Orly Airport
10 %
AOP12
Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC)
LFMN - Nice Airport
37 %
LFPG - Paris CDG Airport
50 %
LFPO - Paris Orly Airport
50 %


AOP13
Automated Assistance to Controller for Surface Movement Planning and Routing
LFMN - Nice Airport
10 %
LFPG - Paris CDG Airport
10 %
LFPO - Paris Orly Airport
10 %
AOP15
Enhanced traffic situational awareness and airport safety nets for the vehicle drivers
LFPG - Paris CDG Airport
85 %
AOP18
Runway Status Lights (RWSL)
LFPG - Paris CDG Airport
100 %
ATC07.1
AMAN Tools and Procedures
LFMN - Nice Airport
100 %
LFPG - Paris CDG Airport
100 %
LFPO - Paris Orly Airport
100 %
ATC19
Enhanced AMAN-DMAN integration
0 %
ENV01
Continuous Descent Operations (CDO)
LFBO - Toulouse Airport
100 %
LFLL - Lyon Airport
100 %
LFML - Marseille Airport
78 %
LFMN - Nice Airport
100 %
LFPG - Paris CDG Airport
78 %
LFPO - Paris Orly Airport
78 %
ENV02
Airport Collaborative Environmental Management
LFBO - Toulouse Airport
100 %
LFLL - Lyon Airport
100 %
LFML - Marseille Airport
100 %
LFMN - Nice Airport
100 %
LFPG - Paris CDG Airport
100 %
LFPO - Paris Orly Airport
100 %


ENV03
Continuous Climb Operations (CCO)
LFBO - Toulouse Airport
100 %
LFLL - Lyon Airport
100 %
LFML - Marseille Airport
100 %
LFMN - Nice Airport
100 %
LFPG - Paris CDG Airport
100 %
LFPO - Paris Orly Airport
100 %
NAV03.1
RNAV 1 in TMA Operations
87 %
NAV03.2
RNP 1 in TMA Operations
1 %
SAF11
Improve Runway Safety by Preventing Runway Excursions
100 %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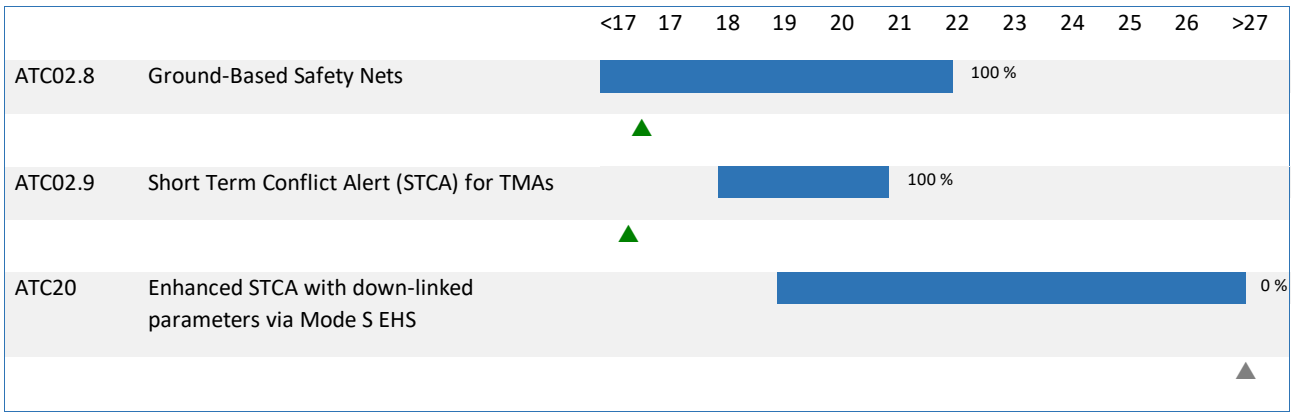
AOM19.1
ASM Support Tools to Support Advanced FUA (AFUA)
100 %
AOM19.2
ASM Management of Real-Time Airspace Data
70 %
AOM19.3
Full Rolling ASM/ATFCM Process and ASM Information Sharing
100 %
AOM19.4
Management of Pre-defined Airspace Configurations
40 %
AOM21.1
Direct Routing
100 %
ATC12.1
Automated Support for Conflict Detection, Resolution Support Information and Conformance Monitoring
47 %
ATC15.1
Information Exchange with En-route in Support of AMAN
100 %
ATC15.2
Arrival Management Extended to En-route Airspace
78 %
ATC17
Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer
38 %
ITY-FMTP
Common Flight Message Transfer Protocol (FMTP)
97 %



This EOC Chart is not applicable for France since the Objective NAV12 is declared as “not applicable”.

5.3. ICAO ASBU Implementation Progress

The following tables show, for each of the ASBU Elements belonging to a particular ASBU Thread and Block, the overall status, the final date foreseen for completion and the percentage of progress achieved in the current cycle.

These results were determined using the LSSIP Year 2020 declared statuses and progress of the relevant implementation objectives in accordance with the initial mapping between ATM Master Plan Level 3 and new ICAO GANP 6th Edition (2019), as reflected in the Implementation Plan 2020. A comprehensive analysis performed as part of the ongoing ICAO EURGANT Project Team activity may result in updating the mapping following EASPG approval.

Legend:

ACAS

		<17	17	18	19	20	21	22	23	24	25	26	>27
ACAS-B1/1	ACAS Improvements					100 %							

ACDM

		<17	17	18	19	20	21	22	23	24	25	26	>27
ACDM-B0/2	Integration with ATM Network function					100 %							

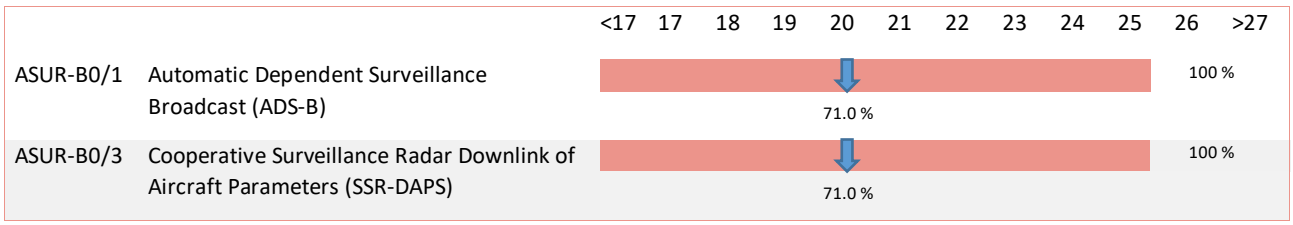
AMET

		<17	17	18	19	20	21	22	23	24	25	26	>27
AMET-B2/4	Meteorological information service in SWIM					36.0 %							100 %

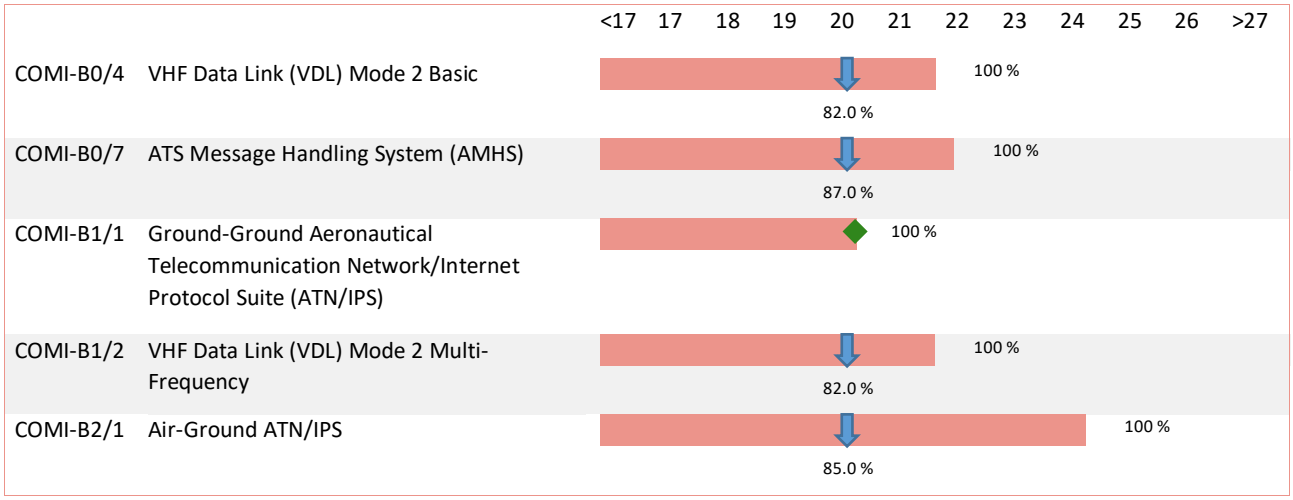
APTA

		<17	17	18	19	20	21	22	23	24	25	26	>27
APTA-B0/1	PBN Approaches (with basic capabilities)					99.0 %							100 %
APTA-B0/2	PBN SID and STAR procedures (with basic capabilities)					87.0 %							100 %
APTA-B0/4	CDO (Basic)					89.0 %							100 %
APTA-B0/5	CCO (Basic)					100 %							
APTA-B1/1	PBN Approaches (with advanced capabilities)					99.0 %							100 %
APTA-B1/2	PBN SID and STAR procedures (with advanced capabilities)					No Plan							

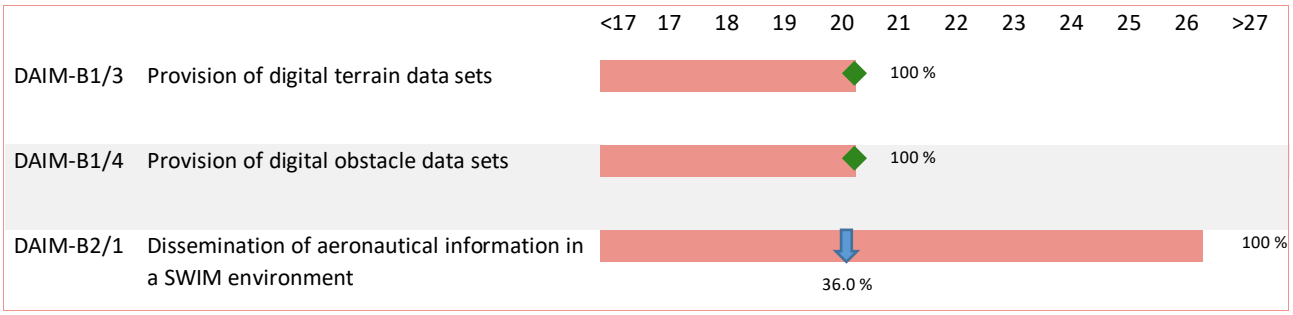
ASUR



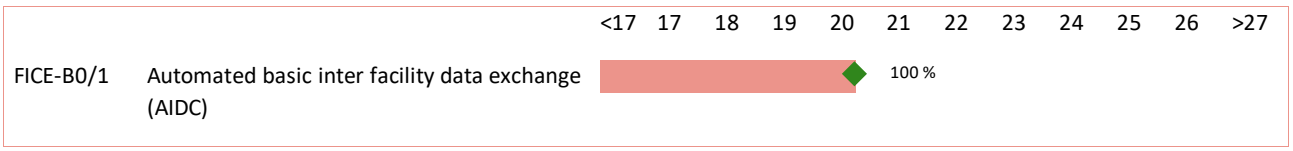
COMI



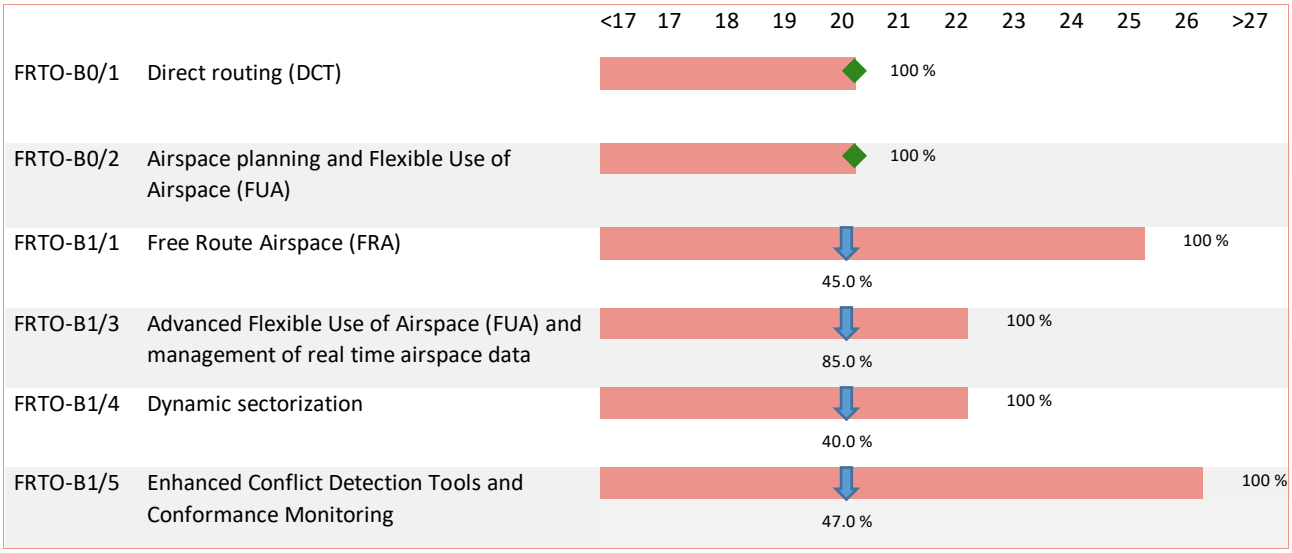
DAIM



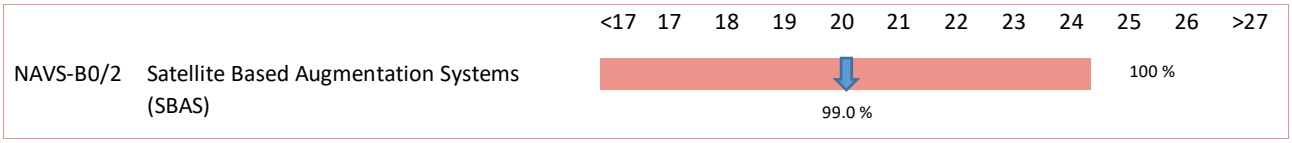
FICE



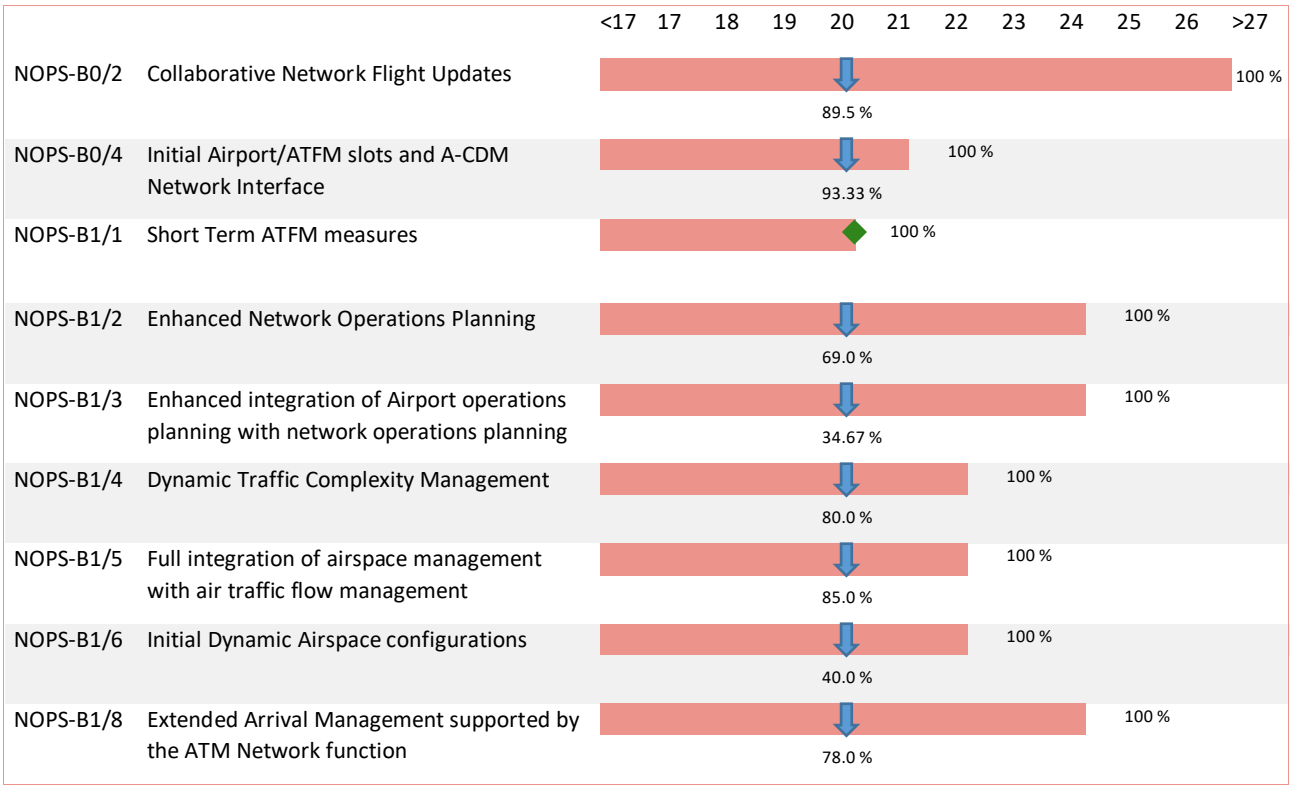
FRTO



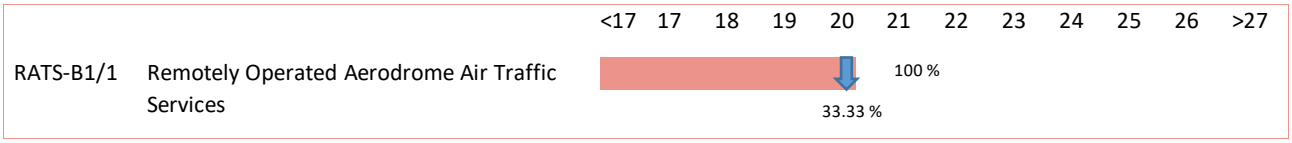
NAVS



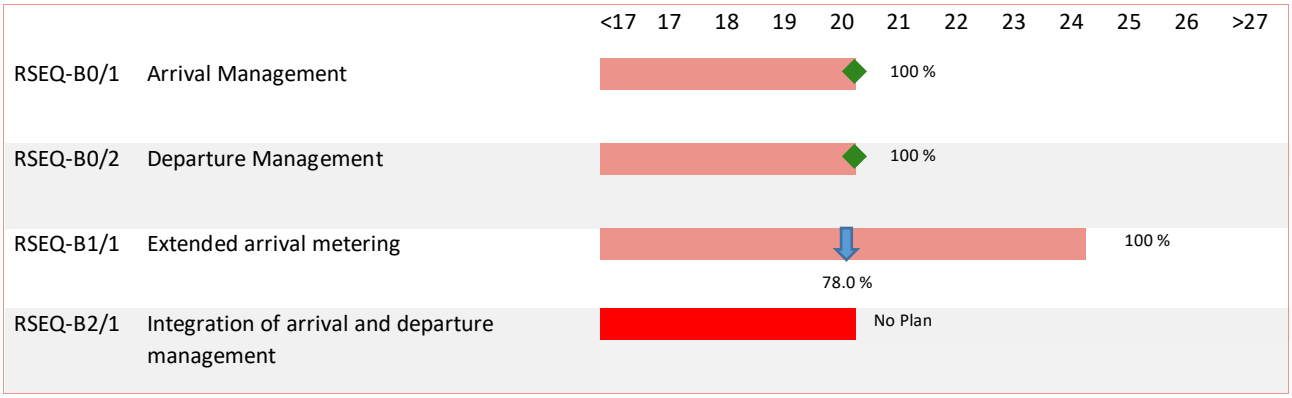
NOPS



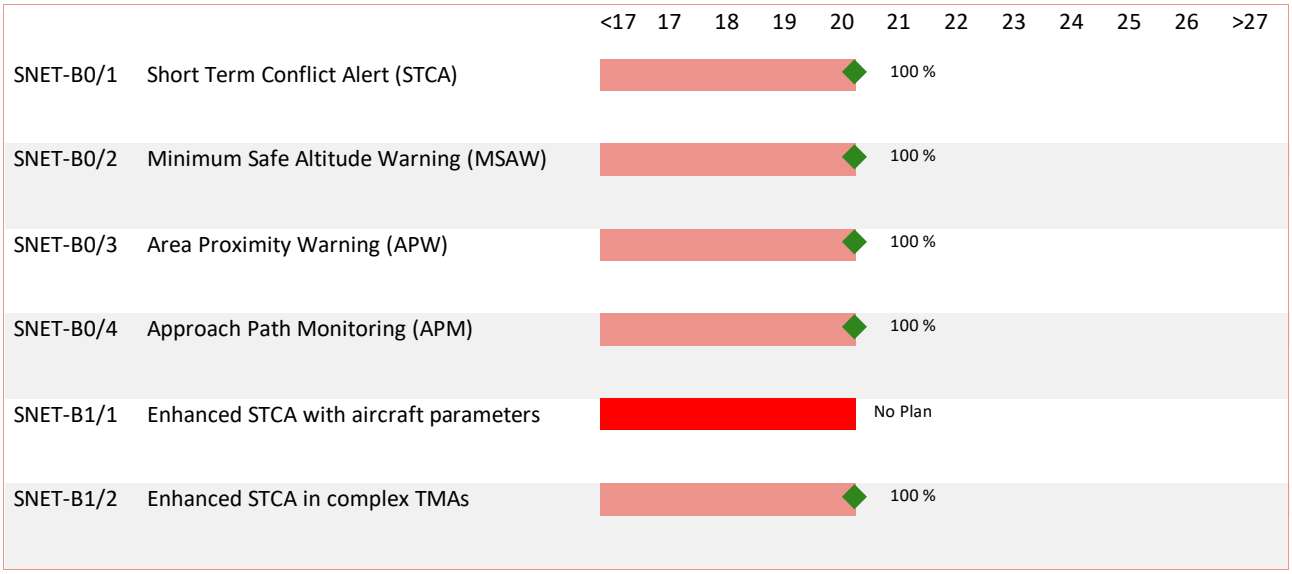
RATS



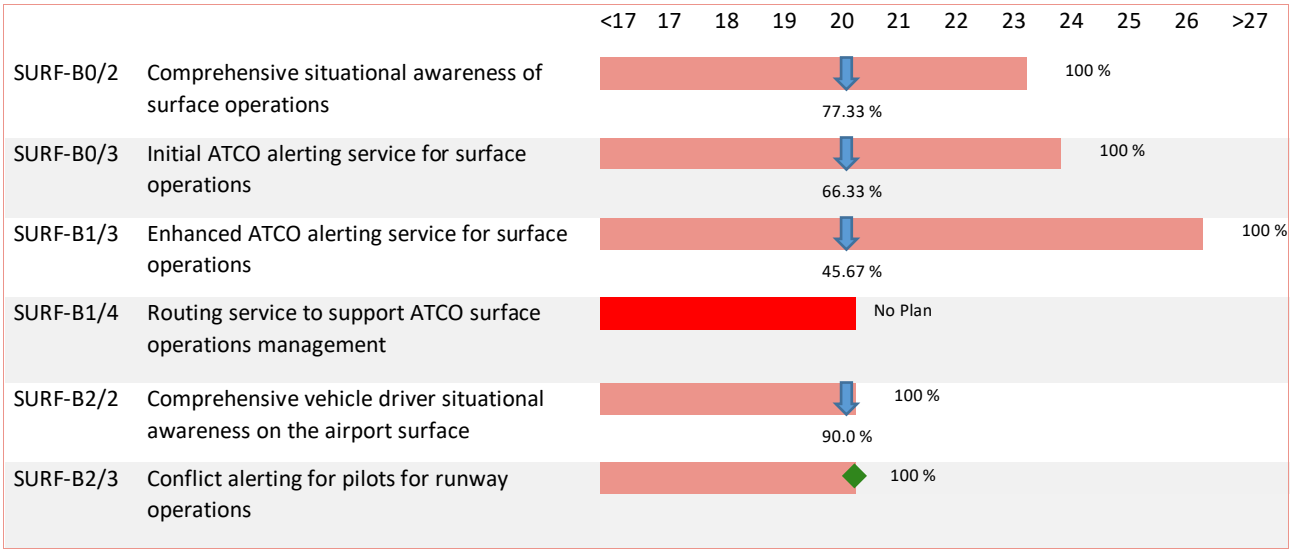
RSEQ



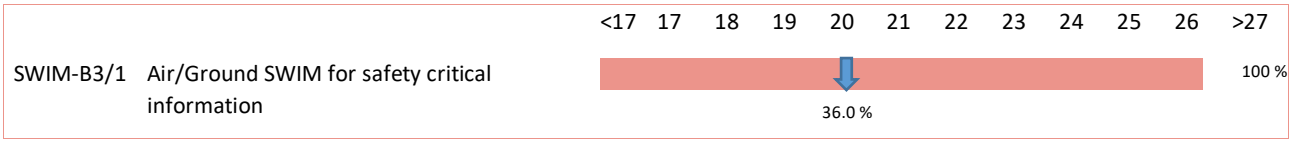
SNET



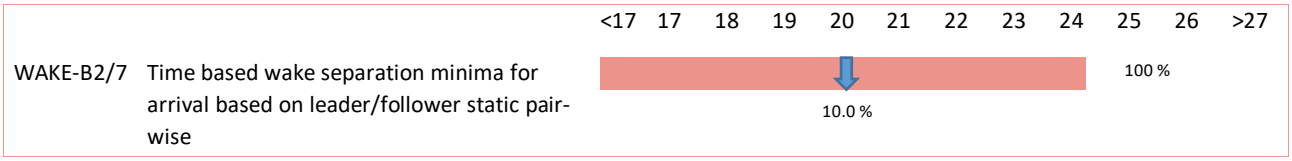
SURF



SWIM



WAKE



5.4. Detailed Objectives Implementation progress

Objective/Stakeholder Progress Code:			
Completed		Not yet planned	
Ongoing		Not Applicable	
Planned		Missing Data	
Late			

Main Objectives

AOM13.1	**Harmonise Operational Air Traffic (OAT) and General Air Traffic (GAT) Handling** ***Timescales:*** Initial operational capability: 01/01/2012 Full operational capability: 31/12/2018		**100%**	**Completed**
	-			
Current harmonisation OAT/GAT rules is completed through close civil-military cooperation at strategic and tactical levels. New release of RCAM was published 1st November 2016. Any further update of EUROAT will be analysed and implemented when relevant. French regulation includes RCA4 Decree aiming at defining rules ensuring compatibility between GAT and OAT.				**31/12/2016**
REG (By:12/2018)				
DGAC	The global harmonisation process is well advanced, due to permanent dialogue between State aviation and Civil aviation authorities, in order to apply as far as possible common principles. It is formalized inside OAT rules (RCAM) and OAT/GAT compatibility rules (RCA/4). RCAM was published 1st November 2016.	-	100%	Completed 01/11/2016
Mil. Authority	Global harmonisation OAT/GAT process is well advanced with close civil-military cooperation.	-	100%	Completed 31/12/2011
ASP (By:12/2018)				
DSNA	The trials conducted in Reims ACC in 2013 were successful, and a "type II CMCC" has been implemented.	-	100%	Completed 31/12/2016
Mil. Authority	The trials conducted in Reims ACC in 2013 were successful, and a "type II CMCC" has been implemented.	-	100%	Completed 31/12/2012
MIL (By:12/2018)				
Mil. Authority	The global harmonisation process is well advanced, due to permanent dialogue between State aviation and Civil aviation authorities, in order to apply as far as possible common principles. It is formalized inside OAT rules (RCAM) and OAT/GAT compatibility rules (RCA/4). RCAM was published 1st November 2016.	-	100%	Completed 01/09/2016

AOM19.1	**ASM Support Tools to Support Advanced FUA (AFUA)** ***Timescales:*** Initial operational capability: 01/01/2011 Full operational capability: 01/01/2022		**100%**	**Completed**
	-			
French AMC (called CNGE) is using its own appropriate support systems (e.g. COURAGE, ...). Moreover, LARA is used since February 2017 but some major software issues are not solved and significant evolution is needed.				**01/02/2017**
ASP (By:01/2022)				
DSNA	French AMC (called CNGE) is using its own appropriate support systems (e.g. COURAGE). Moreover, LARA is used since February 2017 but some major software issues are not solved and significant evolution is needed.	-	100%	Completed 01/02/2017

AOM19.2	**ASM Management of Real-Time Airspace Data** ***Timescales:*** Initial operational capability: 01/01/2017 Full operational capability: 01/01/2022		**70%**	**Ongoing**
	-			
ATM2 will be used for exchanges in real time via Lara				**31/12/2021**
ASP (By:01/2022)				
DSNA	ATM2 will be used for exchanges in real time via Lara	-	70%	Ongoing 31/12/2021

AOM19.3	**Full Rolling ASM/ATFCM Process and ASM Information Sharing** ***Timescales:*** Initial operational capability: 01/01/2014 Full operational capability: 01/01/2022		**100%**	**Completed**
	-			
LARA supports the ASM/ATFCM process in France. Procedure 3 is used in DSNA since 2018. Operational procedure has been finalized and implemented during summer 2020.				**16/07/2020**
ASP (By:01/2022)				
DSNA	UUP P2 (military activity cancelled) and P3 (New military activity) are sent to NM via Lara on d-day-1 and d-day	-	100%	Completed 16/07/2020

AOM19.4	**Management of Pre-defined Airspace Configurations** ***Timescales:*** Initial operational capability: 01/01/2018 Full operational capability: 01/01/2022		**40%**	**Ongoing**
	-			
Work ongoing: DSNA SALTO tool will support B2B exchanges with NM.				**31/12/2021**
ASP (By:01/2022)				
DSNA	SALTO tool will support B2B exchanges with NM.	-	40%	Ongoing 31/12/2021

AOM21.2	**Free Route Airspace** ***Timescales:*** Initial operational capability: 01/01/2015 Full operational capability: 01/01/2022		**45%**	**Late**
	-			
Free Route Airspace Implementation is addressed within the FABEC framework.				**31/12/2024**
ASP (By:01/2022)				
DSNA	Free Route Implementation is dealt with in the FABEC framework and in collaboration with NM. The project Free Route Airspace is ongoing.	Free Route Airspace	45%	Late 31/12/2024

AOP04.1	**Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2021		**48%**	**Late**
	LFBO - Toulouse Airport			
System planned for operations mid 2022.				**30/06/2022**
REG (By:12/2010)				
DGAC	Local order (arrêté de police) will mandate the carriage of required vehicle equipment. Transponder operating procedures will be published in AIP in due time.	-	10%	Late 30/06/2022
ASP (By:01/2021)				
DSNA	The surface movement radar (SMR) was commissioned in 2007. System with ModeS multilateration was postponed to mid 2022 due to difficulties on safety assessment. Level 2 (safety nets) is foreseen to be commissioned at the same time that Level 1 thanks to the experience acquired in Lyon.	SYSAT	63%	Late 30/06/2022
APO (By:01/2021)				
Aéroport de Toulouse-Blagnac	System planned for operations by mid 2022.	-	70%	Late 30/06/2022

AOP04.1	**Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2021		**100%**	**Completed**
	LFLL - Lyon Airport			
A-SMGCS Level 1 was declared operational in Lyon in September 2014.				**30/09/2014**
REG (By:12/2010)				
DGAC	Local order (arrêté de police) mandates the carriage of required vehicle equipment. Transponder operating procedures published in AIP.	-	100%	Completed 30/09/2014
ASP (By:01/2021)				
DSNA	SMR is already available. A-SMGCS Level 1 using Mode S multilateration has been installed in Lyon. System is in operational use since September 2014.	SYSAT	100%	Completed 30/09/2014
APO (By:01/2021)				
Aéroports de Lyon	A-SMGCS Level 1 done by DSNA September 2014.	-	100%	Completed 30/09/2014

AOP04.1	**Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2021		**16%**	**Late**
LFML - Marseille Airport				
System planned for operations end 2022.				**31/12/2022**
REG (By:12/2010)				
DGAC	Local order (arrêté de police) will mandate the carriage of required vehicle equipment. Transponder operating procedures will be published in AIP in due time.	-	10%	Late 31/12/2022
ASP (By:01/2021)				
DSNA	The surface movement radar (SMR) was commissioned in 2015. System with Mode S multilateration is planned for full operations by end 2022. Level 2 (safety nets) is foreseen to be commissioned very shortly after Level 1.	SYSAT	0%	Late 31/12/2022
APO (By:01/2021)				
Aéroport de Marseille Provence	-	-	50%	Late 30/06/2022

AOP04.1	**Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2021		**100%**	**Completed**
LFMN - Nice Airport				
Completed in 2015				**30/10/2015**
REG (By:12/2010)				
DGAC	Local order (arrêté de police) mandates the carriage of required vehicle equipment. Transponder operating procedures published in AIP.	-	100%	Completed 30/10/2015
ASP (By:01/2021)				
DSNA	The surface movement radar (SMR) and Multilateration Mode S have been installed in 2013 and are in service since April 2015.	SYSAT	100%	Completed 30/04/2015
APO (By:01/2021)				
Aéroports de Nice-Côte d'Azur	Completed in 2015	-	100%	Completed 30/10/2015

AOP04.1	**Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2021		**100%**	**Completed**
LFPG - Paris CDG Airport				
A-SMGCS Level 1 is implemented at CDG. **This activity has been reviewed in order to be aligned with PCP objectives and DP monitoring: reporting regarding new actions on PCP project is reported through SDM/DM reporting.**				**31/12/2009**
REG (By:12/2010)				
DGAC	Local order (arrêté de police) mandates the carriage of required vehicle equipment. Transponder operating procedures published in AIP.	-	100%	Completed 31/12/2009
ASP (By:01/2021)				
DSNA	A-SMGCS Level 1 is implemented at CDG This activity has been reviewed in order to be aligned with PCP objectives and DP monitoring.	SYSAT	100%	Completed 31/12/2002
APO (By:01/2021)				
Groupe ADP	A-SMGCS Level 1 is in operation at CDG airport since 2002. This activity has been reviewed in order to be aligned with PCP objectives and DP monitoring: reporting regarding new actions on PCP project is reported through SDM/DM reporting. A system upgrade is ongoing (migration to Aquarius system). Implementation date 30/11/21.	-	100%	Completed 31/12/2000

AOP04.1	**Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2021		**100%**	**Completed**
LFPO - Paris Orly Airport				
A-SMGCS Level 1 implemented at Orly since 2007. **This activity has been reviewed in order to be aligned with PCP objectives and DP monitoring: reporting regarding new actions on PCP project is reported through SDM/DM reporting.**				**31/12/2007**
REG (By:12/2010)				
DGAC	Local order (arrêté de police) mandates the carriage of required vehicle equipment. Transponder operating procedures published in AIP.	-	100%	Completed 31/12/2007
ASP (By:01/2021)				
DSNA	A-SMGCS Level 1 already in service at Orly since 2007.	SYSAT	100%	Completed 31/12/2007
APO (By:01/2021)				
Groupe ADP	A-SMGCS Level 1 implemented at Orly since 2007. This activity has been reviewed in order to be aligned with PCP objectives and DP monitoring: reporting regarding new actions on PCP project is reported through SDM/DM reporting. A system upgrade is ongoing (migration to Aquarius system). Implementation date 30/11/21.	-	100%	Completed 31/12/2007

AOP04.2	**Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2021		**33%**	**Late**
LFBO - Toulouse Airport				
A-SMGCS Level 2 planned for operations in Toulouse beginning of 2022.				**30/06/2022**
ASP (By:01/2021)				
DSNA	The experience gained thanks to the operational use of SMR makes it possible to plan a direct transition to level 2. Implementation was delayed due to difficulties with the safety assessment.	SYSAT	40%	Late 30/06/2022
APO (By:01/2021)				
Aéroport de Toulouse-Blagnac	A-SMGCS Level 2 planned for operations in Toulouse mid 2022.	-	10%	Late 30/06/2022

AOP04.2	**Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2021		**58%**	**Late**
LFLL - Lyon Airport				
A-SMGCS Level 2 will be put in operation at Lyon end 2021				**31/12/2021**
ASP (By:01/2021)				
DSNA	A-SMGCS Level 2 will be put in operation at Lyon by end 2021 after retrofit of the existing A-SMGCS Level 1 and upgrade of system up to level 2. The deployment was delayed by one year due to difficulties with the safety assessment.	SYSAT	63%	Late 30/12/2021
APO (By:01/2021)				
Aéroports de Lyon	Done by DSNA	-	40%	Late 31/12/2021

AOP04.2	**Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2021		**7%**	**Late**
LFML - Marseille Airport				
A-SMGCS Level 2 planned for operations in Marseille by mid 2023				**01/07/2023**
ASP (By:01/2021)				
DSNA	A-SMGCS Level 2 planned for operations in Marseille by mid 2023, shortly after the commissioning of level 1.	SYSAT	7%	Late 01/07/2023
APO (By:01/2021)				
Aéroport de Marseille Provence	A-SMGCS RMCA function equipment installed by DSNA (see ASP01)	-	0%	Not Applicable -

AOP04.2	**Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2021		**100%**	**Completed**
LFMN - Nice Airport				
A-SMGCS Level 2 in operation.				**30/06/2017**
ASP (By:01/2021)				
DSNA	-	SYSAT	100%	Completed 30/06/2017
APO (By:01/2021)				
Aéroports de Nice-Côte d'Azur	A-SMGCS RMCA function equipment installed by DSNA (see ASP01)	-	0%	Not Applicable -

AOP04.2	**Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2021		**100%**	**Completed**
LFPG - Paris CDG Airport				
A-SMGCS Level 2 implemented at CDG since 2003. **Note that the project has been reviewed in order to be aligned with PCP objectives and DP monitoring: reporting regarding new actions on PCP project is reported through SDM/DM reporting.**				**31/12/2003**
ASP (By:01/2021)				
DSNA	A-SMGCS Level 2 already operational at CDG.	SYSAT	100%	Completed 31/12/2003
APO (By:01/2021)				
Groupe ADP	A-SMGCS RMCA function equipment installed by DSNA (see ASP01)	-	0%	Not Applicable -

AOP04.2	**Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2021		**100%**	**Completed**
LFPO - Paris Orly Airport				
A-SMGCS Level 2 implementation ongoing at ORLY. **This activity has been reviewed in order to be aligned with PCP objectives and DP monitoring: reporting regarding new actions on PCP project is reported through SDM/DM reporting.**				**30/11/2009**
ASP (By:01/2021)				
DSNA	A-SMGCS Level 2 operational at Orly.	SYSAT	100%	Completed 30/11/2009
APO (By:01/2021)				
Groupe ADP	A-SMGCS RMCA function equipment installed by DSNA (see ASP01)	-	0%	Not Applicable -

AOP05	**Airport Collaborative Decision Making (A-CDM)** ***Timescales:*** - not applicable -		**0%**	**Not Applicable**
LFBO - Toulouse Airport **(Outside Applicability Area)**				
Aéroport de Toulouse aims to implement an Advanced ATC Tower. **Ongoing discussion between DSNA and Toulouse Blagnac airport regarding this implementation plan.** **The deployment status and planning of this implementation objective as related to the Pilot Common Project is redundant because it is also provided to the SESAR Deployment Manager and included in the Deployment Program Monitoring View.**				-
ASP (By:01/2021)				
DSNA	Aéroport de Toulouse aims to implement an Advanced ATC Tower. Ongoing discussion between DSNA and Toulouse Blagnac airport regarding this implementation plan.	SYSAT	0%	Not Applicable -
APO (By:01/2021)				
Aéroport de Toulouse-Blagnac	Aéroport de Toulouse aims to implement an Advanced ATC Tower CDM with "local TOBT", FUM & DPI messages and will carry out a call for tender for an assistance of specifications which goal is to develop a CDM web interface with network connection for FUM, DPI and TOBT Ongoing discussion with DSNA regarding the implementation plan. DSNA will carry out DPI messages.	-	0%	Not Applicable -

AOP05	**Airport Collaborative Decision Making (A-CDM)** ***Timescales:*** Initial operational capability: 01/01/2004 Full operational capability: 01/01/2021		**100%**	**Completed**
LFLL - Lyon Airport				
The airport has been certified by the Network Manager.				**14/11/2017**
ASP (By:01/2021)				
DSNA	The airport has been certified by Network Manager on 14/11/2017.	SYSAT	100%	Completed 14/11/2017
APO (By:01/2021)				
Aéroports de Lyon	The project has been launched on the 22nd of March 2011. It has been frozen in 2013 due to budget constraints at DSNA, and the implementation took place place on 07/02/2017.	-	100%	Completed 07/02/2017

AOP05	**Airport Collaborative Decision Making (A-CDM)** ***Timescales:*** - not applicable -		**0%**	**Not Applicable**
LFML - Marseille Airport **(Outside Applicability Area)**				
Marseille Provence airport is willing to implement A-CDM level 1 or Advance Tower. On-going discussion with DSNA regarding the implementation plan.				-
ASP (By:01/2021)				
DSNA	Marseille Provence airport is willing to implement A-CDM level 1 or Advanced ATC Tower. On-going discussion between Marseille Provence airport and DSNA regarding the implementation plan.	SYSAT	0%	Not Applicable -
APO (By:01/2021)				
Aéroport de Marseille Provence	During the AMP AODB modification project (in progress), AMP plans to reach ACDM level 1 (or Advance Tower). Under discussion with DSNA.	-	0%	Not Applicable -

AOP05	**Airport Collaborative Decision Making (A-CDM)** ***Timescales:*** Initial operational capability: 01/01/2004 Full operational capability: 01/01/2021		**100%**	**Completed**
LFMN - Nice Airport				
Implementation of CDM at Nice has been done and certification by NM has been received 11/09/2020.				**31/12/2020**
ASP (By:01/2021)				
DSNA	Implementation of CDM at Nice has been completed in cooperation with Nice Airport and certification by NM has been granted on 11/09/2020.	SYSAT	100%	Completed 11/09/2020
APO (By:01/2021)				
Aéroports de Nice-Côte d'Azur	Full A-CDM implementation at Nice Airport as of 11/09/2020 (certification by NM).	-	100%	Completed 31/12/2020

AOP05	**Airport Collaborative Decision Making (A-CDM)** ***Timescales:*** Initial operational capability: 01/01/2004 Full operational capability: 01/01/2021		**100%**	**Completed**
LFPG - Paris CDG Airport				
CDG airport is labelled as "Airport-CDM" since 16th November 2010; CDM procedures in adverse condition implemented 02/2013; FUM process implemented by end 2013. **However, this activity has been reviewed in order to be aligned with PCP objectives and DP monitoring. DPI activities will be updated accordingly to the conclusions of the 3 task forces launched in 2017: A-CDM HTF, DPI WG & IATA AACG. Reporting regarding new actions on PCP project is done through SDM/DM reporting.**				**30/09/2014**
ASP (By:01/2021)				
DSNA	CDG airport is "Airport-CDM" since 16th November 2010. The predeparture sequencing tool is under the responsibility of the Airport Operator.	SYSAT	100%	Completed 28/02/2013
APO (By:01/2021)				
Groupe ADP	CDG airport is labelled as "Airport-CDM" since 16th November 2010; CDM procedures in adverse conditions implemented 02/2013; FUM process implemented by end 2013. However, this activity has been reviewed in order to be aligned with PCP objectives and DP monitoring. DPI activities will be updated accordingly to the conclusions of the 3 task forces launched in 2017: A-CDM HTF, DPI WG & IATA AACG.	-	100%	Completed 30/09/2014

AOP05	**Airport Collaborative Decision Making (A-CDM)** ***Timescales:*** Initial operational capability: 01/01/2004 Full operational capability: 01/01/2021		**100%**	**Completed**
LFPO - Paris Orly Airport				
Orly airport has been certified as a CDM airport on November 15th, 2016.				**15/11/2016**
ASP (By:01/2021)				
DSNA	Paris-Orly airport is Airport-CDM since November 15th 2016.	SYSAT	100%	Completed 15/11/2016
APO (By:01/2021)				
Groupe ADP	Paris-Orly airport is Airport-CDM since November 15th 2016.	-	100%	Completed 15/11/2016

AOP10	**Time-Based Separation** ***Timescales:*** Initial operational capability: 01/01/2015 Full operational capability: 01/01/2024		**10%**	**Ongoing**
LFPO - Paris Orly Airport				
Because of the higher efficiency it would have, DSNA proposed to deploy TBS in CDG instead of Orly in the PCP revision. No progress has been made in Orly in that perspective. Work is ongoing for the implementation of TBS at CDG in the framework of CEF 2017.				**31/12/2023**
REG (By:01/2024)				
DGAC	Because of the higher efficiency it would have, DSNA proposed to deploy TBS in CDG instead of Orly in the PCP revision. No progress has been made in Orly in that perspective. Work is ongoing for the implementation of TBS at CDG in the framework of CEF 2017.	-	10%	Ongoing 31/12/2023
ASP (By:01/2024)				
DSNA	Because of the higher efficiency it would have, DSNA proposed to deploy TBS in CDG instead of Orly in the PCP revision. No progress has been made in Orly in that perspective. Work is ongoing for the implementation of TBS at CDG in the framework of CEF 2017. Need for AMAN evolution V3 and SYSAT systems to be planned: in the definition phase.	-	10%	Ongoing 31/12/2023

AOP11	**Initial Airport Operations Plan** ***Timescales:*** Initial Operational Capability: 01/01/2015 Full Operational Capability: 01/01/2021		**0%**	**Not yet planned**
LFBO - Toulouse Airport				
Implementation of the objective under study.				**-**
ASP (By:01/2021)				
DSNA	AOP deployment is not yet planned at LFBO: Implementation of the objective under study with the airport to complement the Advanced ATC Tower project.	-	0%	Not yet planned -
APO (By:01/2021)				
Aéroport de Toulouse-Blagnac	Implementation of the objective under study with DSNA.	-	0%	Not yet planned -

AOP11	**Initial Airport Operations Plan** ***Timescales:*** Initial Operational Capability: 01/01/2015 Full Operational Capability: 01/01/2021		**100%**	**Completed**
LFLL - Lyon Airport				
DSNA and Aeroports de Lyon provide AOP information thanks to CDM implementation.				**14/11/2017**
ASP (By:01/2021)				
DSNA	DSNA provides initial AOP information to ADL within CDM deployment project.	-	100%	Completed 14/11/2017
APO (By:01/2021)				
Aéroports de Lyon	Aeroports de Lyon provides AOP information within CDM deployment project	-	100%	Completed 14/11/2017

AOP11	**Initial Airport Operations Plan** ***Timescales:*** Initial Operational Capability: 01/01/2015 Full Operational Capability: 01/01/2021		**0%**	**Not yet planned**
LFML - Marseille Airport				
Implementation of the objective under study				-
ASP (By:01/2021)				
DSNA	Implementation of the objective under study with Aeroport Marseille Provence to complement the Advanced ATC Tower project.	-	0%	Not yet planned -
APO (By:01/2021)				
Aéroport de Marseille Provence	Implementation of the objective under study with DSNA	-	0%	Not yet planned -

AOP11	**Initial Airport Operations Plan** ***Timescales:*** Initial Operational Capability: 01/01/2015 Full Operational Capability: 01/01/2021		**36%**	**Late**
LFMN - Nice Airport				
A part of AOP information is provided with CDM operations. Nice airport plans to integrate the relevant information to AOP by end 2023. APOC V1.0 is operational since 01/12/2020 To be noted: the implementation date is compliant with CP1 requirements.				**31/12/2023**
ASP (By:01/2021)				
DSNA	DSNA provides AOP information to Nice cote d'Azur airport with CDM system.	-	100%	Completed 11/09/2020
APO (By:01/2021)				
Aéroports de Nice-Côte d'Azur	A part of AOP information is provided within CDM deployment. Nice airport plans to integrate the relevant information to AOP by end 2023. APOC V1.0 is operational since 01/12/2020 To be noted: the implementation date is compliant with CP1 requirements.	-	15%	Late 31/12/2023

AOP11	**Initial Airport Operations Plan** ***Timescales:*** Initial Operational Capability: 01/01/2015 Full Operational Capability: 01/01/2021		**36%**	**Late**
LFPG - Paris CDG Airport				
Initial Airport Operations Plan has been launched in 2016. This project is currently under a Call INEA decision. A close coordination will be taken in place with all concerned stakeholders Groupe ADP. The full functionalities should be fully implemented by the end of 2023. To be noted: the implementation date is compliant with CP1 requirements.				**31/12/2023**
ASP (By:01/2021)				
DSNA	DSNA already provides initial AOP information within CDM systems.	-	100%	Completed 28/02/2013
APO (By:01/2021)				
Groupe ADP	To be noted: the implementation date is compliant with CP1 requirements.	-	15%	Late 31/12/2023

AOP11	**Initial Airport Operations Plan** ***Timescales:*** Initial Operational Capability: 01/01/2015 Full Operational Capability: 01/01/2021		**36%**	**Late**
LFPO - Paris Orly Airport				
Initial Airport Operations Plan project has been launched in 2016. The FOC is expected by the end of 2023. **To be noted: the implementation date is compliant with CP1 requirements.**				**31/12/2023**
ASP (By:01/2021)				
DSNA	DSNA already provides initial AOP information within CDM systems.	-	100%	Completed 15/11/2016
APO (By:01/2021)				
Groupe ADP	To be noted: the implementation date is compliant with CP1 requirements.	-	15%	Late 31/12/2023

AOP12	**Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC)** ***Timescales:*** Initial operational capability: 01/01/2015 Full operational capability: 01/01/2021		**37%**	**Late**
LFMN - Nice Airport				
The ATC clearances monitoring will be supported through the upgrade of the current ASMGCS.				**31/12/2025**
ASP (By:01/2021)				
DSNA	The ATC clearances monitoring will be supported through the upgrade of the current ASMGCS. Due to the change in purchasing strategy, the commissioning date for Nice airport has been postponed to the end of 2025.	-	37%	Late 31/12/2025
APO (By:01/2021)				
Aéroports de Nice-Côte d'Azur	Under DSNA responsibility	-	0%	Not Applicable -

AOP12	**Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC)** ***Timescales:*** Initial operational capability: 01/01/2015 Full operational capability: 01/01/2021		**50%**	**Late**
LFPG - Paris CDG Airport				
The ATC clearances monitoring will be supported by the new system SYSAT, which is planned to be implemented end 2021 at Paris CDG airport. **A first version is to be commissioned end 2022.** **CATC and CMAC alerts will be integrated in the second version of the system now planned end 2024.**				**31/12/2024**
ASP (By:01/2021)				
DSNA	The ATC clearances monitoring will be supported by the new system SYSAT, which is planned to be implemented end 2021 in Paris CDG airport.	-	50%	Late 31/12/2024
APO (By:01/2021)				
Groupe ADP	-	-	0%	Not Applicable -

AOP12	**Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC)** ***Timescales:*** Initial operational capability: 01/01/2015 Full operational capability: 01/01/2021		**50%**	**Late**
LFPO - Paris Orly Airport				
The ATC clearances monitoring will be supported by the new system SYSAT, which is planned to be implemented for winter 2022-2023 at Paris Orly Airport.				**31/03/2023**
ASP (By:01/2021)				
DSNA	The ATC clearances monitoring will be supported by the new system SYSAT, which is planned to be implemented for winter 2022 in Paris Orly Airport.	-	50%	Late 31/03/2023
APO (By:01/2021)				
Groupe ADP	-	-	0%	Not Applicable -

AOP13	**Automated Assistance to Controller for Surface Movement Planning and Routing** ***Timescales:*** Initial operational capability: 01/01/2016 Full operational capability: 01/01/2024		**10%**	**Not yet planned**
LFMN - Nice Airport				
Recent European work has highlighted a lack of maturity, and unproven operational benefits of this objective. **This resulted in the removal of this "Automated Assistance to Controller for Surface movement planning and routing" sub-functionality in CP1** **No longer having any regulatory obligation, and the benefit not being obvious, the integration of this type of functionality is no longer relevant for SYSAT.** **This objective therefore changes to "not planned"**				-
REG (By:01/2024)				
DGAC	-	-	10%	Not yet planned -
ASP (By:01/2024)				
DSNA	Recent European work has highlighted a lack of maturity, and unproven operational benefits of this objective. This resulted in the removal of this "Automated Assistance to Controller for Surface movement planning and routing" sub-functionality in CP1 No longer having any regulatory obligation, and the benefit not being obvious, the integration of this type of functionality is no longer relevant for SYSAT. This objective therefore changes to "not planned"	-	10%	Not yet planned -

AOP13	**Automated Assistance to Controller for Surface Movement Planning and Routing** ***Timescales:*** Initial operational capability: 01/01/2016 Full operational capability: 01/01/2024		**10%**	**Not yet planned**
LFPG - Paris CDG Airport				
Recent European work has highlighted a lack of maturity, and unproven operational benefits of this objective. **This resulted in the removal of this "Automated Assistance to Controller for Surface movement planning and routing" sub-functionality in CP1** **No longer having any regulatory obligation, and the benefit not being obvious, the integration of this type of functionality is no longer relevant for SYSAT.** **This objective therefore changes to "not planned"**				-
REG (By:01/2024)				
DGAC	Recent European work has highlighted a lack of maturity, and unproven operational benefits of this objective. This resulted in the removal of this "Automated Assistance to Controller for Surface movement planning and routing" sub-functionality in CP1 No longer having any regulatory obligation, and the benefit not being obvious, the integration of this type of functionality is no longer relevant for SYSAT. This objective therefore changes to "not planned"	-	10%	Not yet planned -
ASP (By:01/2024)				
DSNA	Recent European work has highlighted a lack of maturity, and unproven operational benefits of this objective. This resulted in the removal of this "Automated Assistance to Controller for Surface movement planning and routing" sub-functionality in CP1 No longer having any regulatory obligation, and the benefit not being obvious, the integration of this type of functionality is no longer relevant for SYSAT. This objective therefore changes to "not planned"	-	10%	Not yet planned -

<table>
<tr><td>AOP13</td><td colspan="2">Automated Assistance to Controller for Surface Movement Planning and Routing
Timescales:
Initial operational capability: 01/01/2016
Full operational capability: 01/01/2024</td><td>10%</td><td>Not yet planned</td></tr>
<tr><td colspan="5">LFPO - Paris Orly Airport</td></tr>
<tr><td colspan="4">Recent European work has highlighted a lack of maturity, and unproven operational benefits of this objective.
This resulted in the removal of this "Automated Assistance to Controller for Surface movement planning and routing" sub-functionality in CP1
No longer having any regulatory obligation, and the benefit not being obvious, the integration of this type of functionality is no longer relevant for SYSAT.
This objective therefore changes to "not planned"</td><td>-</td></tr>
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This objective therefore changes to "not planned"</td><td rowspan="2">-</td><td rowspan="2">10%</td><td>Not yet planned</td></tr>
<tr><td>-</td></tr>
</table>

ATC02.8	**Ground-Based Safety Nets** ***Timescales:*** Initial operational capability: 01/01/2009 Full operational capability: 01/01/2022		**100%**	**Completed**
		-		
France has implemented MSAW end 2016, has developed and implemented its own APW on 17 APPs. APM function is imbedded in the French version of MSAW on main French airports.				**31/12/2016**
ASP (By:01/2022)				
DSNA	Together with MSAW, France has developed and implemented its own APW on 17 APPs. APM function is also imbedded in the French version of MSAW system on main French airports.	-	100%	Completed 31/12/2016

ATC02.9	**Short Term Conflict Alert (STCA) for TMAs** ***Timescales:*** Initial operational capability: 01/01/2018 Full operational capability: 31/12/2020		**100%**	**Completed**
		-		
Enhanced STCA were implemented in most relevant TMAs in France end 2011.				**31/12/2011**
ASP (By:12/2020)				
DSNA	DSNA long-standing concerns about safety in terminal areas led to the early development and commissioning of safety nets in the most relevant TMAs.	-	100%	Completed 31/12/2011

ATC07.1	**AMAN Tools and Procedures** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2020		**100%**	**Completed**
		LFMN - Nice Airport		
France has already implemented AMAN tools and procedures in Paris-CDG, Paris-Orly, Lyon and Nice.				**22/06/2015**
ASP (By:01/2020)				
DSNA	France has implemented this tool in Paris-CDG, Paris-Orly and Lyon airports and TMAs. Extra deployment has been achieved at Nice in June 2015.	4-FLIGHT / 4-FLIGHT Defence / AMAN. / COFLIGHT / Extended Arrival Management	100%	Completed 22/06/2015

ATC07.1	**AMAN Tools and Procedures** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2020		**100%**	**Completed**
LFPG - Paris CDG Airport				
France has already implemented AMAN tools and procedures in Paris-CDG, Paris-Orly, Lyon and Nice.				**31/03/2012**
ASP (By:01/2020)				
DSNA	The arrival management tools have been implemented at the CDG Airport.	4-FLIGHT / 4-FLIGHT Defence / AMAN. / COFLIGHT / Extended Arrival Management	100%	Completed 31/03/2012

ATC07.1	**AMAN Tools and Procedures** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 01/01/2020		**100%**	**Completed**
LFPO - Paris Orly Airport				
France has already implemented AMAN tools and procedures in Paris-CDG, Paris-Orly, Lyon and Nice.				**31/03/2012**
ASP (By:01/2020)				
DSNA	Arrival management tools are implemented at Orly Airport.	4-FLIGHT / 4-FLIGHT Defence / AMAN. / COFLIGHT / Extended Arrival Management	100%	Completed 31/03/2012

ATC12.1	**Automated Support for Conflict Detection, Resolution Support Information and Conformance Monitoring** ***Timescales:*** Initial operational capability: 01/01/2015 Full operational capability: 01/01/2022		**47%**	**Late**
	-			
The implementation of this objective relies on the deployments of ERATO (done in 2015 and 2016 in Brest ACC and Bordeaux ACC) and 4-FLIGHT implementation in all ACC.				**31/12/2025**
ASP (By:01/2022)				
DSNA	A first set of tools are implemented in Brest and Bordeaux ACCs with ERATO since 2015 and 2016. Reims, Marseille and Paris ACCs will be provided with these tools from their switch to 4-FLIGHT. Implementation of MTCD/TCT in Brest and Bordeaux ACCs requires complementary developments. They will be provided to these ACCs from their switch to 4-FLIGHT by 31/12/2025.	4-FLIGHT / 4-FLIGHT Defence	47%	Late 31/12/2025

ATC15.1	**Information Exchange with En-route in Support of AMAN** ***Timescales:*** Initial operational capability: 01/01/2012 Full operational capability: 31/12/2019		**100%**	**Completed**
	-			
MAESTRO was already compliant to use in En-Route and was a level1 system, already implemented in the Paris ACC to support AMAN operations of CDG and Orly. Implementation has been carried out in Marseille ACC for Lyon and Nice TMA in 2019.				**31/12/2019**
ASP (By:12/2019)				
DSNA	DSNA has already implemented MAESTRO in Paris ACC to support AMAN operations of CDG and Orly TMA for many years (1999). Implementation has been completed in Marseille ACC for Lyon and Nice TMA.	AMAN. / Extended Arrival Management	100%	Completed 31/12/2019

ATC15.2	**Arrival Management Extended to En-route Airspace** ***Timescales:*** Initial operational capability: 01/01/2015 Full operational capability: 01/01/2024		**78%**	**Ongoing**
	-			
The objective should be fully implemented by the end of 2023.				**31/12/2023**
ASP (By:01/2024)				
DSNA	- Reims UAC: "4Me" system is ready to accommodate any XMAN data provided via web service. It serves XMAN LHR, XMAN ZRH and XMAN EGKK. - Paris ACC: the current situation (Paris CDG/ORY AMAN extended into Paris ACC) is already compliant with the PCP. The extension of AMAN horizon from 180 NM to 300 NM started in 2020, and will continue up to 2022, depending on availability of neighbouring ACCs (Karlsruhe, Zurich, Geneva, and London). - Nice APP: the deployment of AMAN2SE in Marseille ACC guarantees PCP compliance except for the flow coming from North-East via Milan ACC, which is not foreseen before 2022 due to current deployment of AMAN system in Milan ACC. - Marseille ACC: Milano and Roma, Palma de Mallorca and Barcelona: Marseille ACC is a potential candidate. Contact with ENAIRE and ENAV has been established under the umbrella of FABEC XMAN. - Brest ACC: London LHR has been postponed to 2021 due to Covid crise. Technical readiness has been reached end 2020. - Bordeaux ACC: - Palma de Mallorca and Barcelona: Bordeaux ACC is a potential candidate. Contact with ENAIRE has been established under the umbrella of FABEC XMAN. Technical readiness has been reached. Discussions with Barcelona ACC are on-going to refine technical requirements.	-	78%	Ongoing 31/12/2023

ATC17	**Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer** ***Timescales:*** Initial operational capability: 01/01/2013 Full operational capability: 01/01/2022		**38%**	**Late**
	-			
Based on implementation of ERATO, Coflight and 4-FLIGHT systems to be fully implemented end 2025 in all French ACCs.				**31/12/2025**
ASP (By:01/2022)				
DSNA	A set of messages (PAC, ROF, MAS, COF) is already usable in the legacy FDPS environment (CAUTRA) for all centres. The other messages are dependent on 4-Flight and Coflight systems implementation	-	38%	Late 31/12/2025

COM10	**Migrate from AFTN to AMHS** ***Timescales:*** Initial operational capability: 01/12/2011 Full operational capability: 31/12/2018		**87%**	**Late**
	-			
French ANSP: Migration from AFTN to extended AMHS has been achieved through MESANGE system commissioned end 2016. Implementation for the military is planned September 2021.				**30/09/2021**
ASP (By:12/2018)				
DSNA	Basic and extended ATSMHS capability are available in MESANGE system procured jointly with Skyguide. Gateways implemented with European stakeholders.	-	100%	Completed 31/12/2017
Mil. Authority	-	-	55%	Late 30/09/2021

COM11.1	**Voice over Internet Protocol (VoIP) in En-Route** ***Timescales:*** Initial operational capability: 01/01/2013 Full operational capability: 01/01/2022		**70%**	**Late**
	-			
VoIP has been Implemented by DSNA end 2016. For the military, full deployment is planned end 2023 with implementation of Descartes Network and the Radio/telephone communications equipment.				**31/12/2023**
ASP (By:01/2022)				
Mil. Authority	For the military, deployment is planned with implementation of Descartes Network and the Radio/telephone communications equipment.	-	40%	Late 31/12/2023
DSNA	VoIP implemented by DSNA in main ATS units end 2016.	-	100%	Completed 31/12/2016

COM11.2	**Voice over Internet Protocol (VoIP) in Airport/Terminal** ***Timescales:*** Initial operational capability: 01/01/2013 Full operational capability: 31/12/2023		**100%**	**Completed**
	-			
VoIP has been implemented by DSNA in main ATS units end 2016.				**31/12/2016**
ASP (By:12/2023)				
DSNA	VoIP implemented by DSNA in main ATS units end 2016.	-	100%	Completed 31/12/2016

COM12	**New Pan-European Network Service (NewPENS)** ***Timescales:*** Initial operational capability: 01/01/2018 Full operational capability (33 ANSPs): 01/01/2025		**100%**	**Completed**
	-			
DSNA is party to NewPENS contract.				**10/06/2020**
ASP (By:01/2025)				
DSNA	DSNA is party to NewPENS contract.	-	100%	Completed 10/06/2020
APO (By:01/2025)				
Groupe ADP	From an APO perspective, no benefit identified with a potential migration to NewPENS at this stage.	-	0%	Not Applicable -
Aéroports de Nice-Côte d'Azur	From an APO perspective, no benefit identified with a potential migration to NewPENS at this stage.	-	0%	Not Applicable -

ENV01	**Continuous Descent Operations (CDO)** ***Timescales:*** Initial operational capability: 01/07/2007 Full operational capability: 31/12/2023		**100%**	**Completed**
	LFBO - Toulouse Airport			
CDO ASBU Block 0 already implemented and monitored since 31/12/2012. Will be done in due time for ASBU Block 1.				**31/12/2018**
ASP (By:12/2023)				
DSNA	CDA are completed and in force at LFBO ATCC. Statistics available since 12/2012 and radar vectored CDO with DTG completed. Regarding CDO, accordingly with ICAO Doc 9931, DSNA/ATCC have adopted three CDO design option: 1- Close path design with AIP publication 2- Open path design (This is the main reason for which our LSSIP is green - ATCO perform CDO at all airfields with statistics reporting) 3- Path stretching method, Point Merge with AIP publication Option 1 is available when traffic demand is low or upon request during period of time, accordingly with AIP Option 2 is available 24/24 depending of traffic load Option 3 is available 24/24 at ACC Paris sector TP	-	100%	Completed 31/12/2018
APO (By:12/2023)				
Aéroport de Toulouse-Blagnac	DSNA monitors and measures the execution of CDO (see ASP04)	-	0%	Not Applicable -

ENV01	**Continuous Descent Operations (CDO)** ***Timescales:*** Initial operational capability: 01/07/2007 Full operational capability: 31/12/2023		**100%**	**Completed**
LFLL - Lyon Airport				
CDO implemented in Lyon since 2011 as far as ASBU block 0 is concerned, activity regarding ASBU block 1 CDO completed end 2018.				**31/12/2018**
ASP (By:12/2023)				
DSNA	CDO are in force at LFLL ATCC PansOps procedures in AIS Radar vectored CDO with DTG completed. Regarding CDO, accordingly with ICAO Doc 9931, DSNA/ATCC have adopted three CDO design option: 1- Close path design with AIP publication 2- Open path design (This is the main reason for which our LSSIP is green - ATCO perform CDO at all airfields with statistics reporting) 3- Path stretching method, Point Merge with AIP publication Option 1 is available when traffic demand is low or upon request during period of time, accordingly with AIP Option 2 is available 24/24 depending of traffic load Option 3 is available 24/24 at ACC Paris sector TP.	-	100%	Completed 31/12/2018
APO (By:12/2023)				
Aéroports de Lyon	DSNA monitors and measures the execution of CDO (see ASP04)	-	0%	Not Applicable -

ENV01	**Continuous Descent Operations (CDO)** ***Timescales:*** Initial operational capability: 01/07/2007 Full operational capability: 31/12/2023		**78%**	**Ongoing**
LFML - Marseille Airport				
CDO implemented in Marseille since 2011 as far as ASBU block 0 is concerned, ongoing activity regarding ASBU block 1 CDO.				**31/12/2023**
ASP (By:12/2023)				
DSNA	CDA are completed and in force at LFML ATCC Statistics available since 12/2012 and radar vectored CDO with DTG completed. Regarding CDO, accordingly with ICAO Doc 9931, DSNA/ATCC have adopted three CDO design option: 1- Close path design with AIP publication 2- Open path design (This is the main reason for which our LSSIP is green - ATCO perform CDO at all airfields with statistics reporting) 3- Path stretching method, Point Merge with AIP publication Option 1 is available when traffic demand is low or upon request during period of time, accordingly with AIP Option 2 is available 24/24 depending of traffic load Option 3 is available 24/24 at ACC Paris sector TP	-	78%	Ongoing 31/12/2023
APO (By:12/2023)				
Aéroport de Marseille Provence	DSNA monitors and measures the execution of CDO (see ASP04)	-	0%	Not Applicable -

ENV01	**Continuous Descent Operations (CDO)** ***Timescales:*** Initial operational capability: 01/07/2007 Full operational capability: 31/12/2023		**100%**	**Completed**
LFMN - Nice Airport				
CDO implemented in Nice since 2011 as far as ASBU block 0 is concerned, activity regarding ASBU block 1 CDO completed end 2018.				**31/12/2018**
ASP (By:12/2023)				
DSNA	Radar vectored CDO with DTG completed at LFMN ATCC Regarding CDO, accordingly with ICAO Doc 9931, DSNA/ATCC have adopted three CDO design option: 1- Close path design with AIP publication. 2- Open path design (This is the main reason for which our LSSIP is green - ATCO perform CDO at all airfields with statistics reporting). 3- Path stretching method, Point Merge with AIP publication. Option 1 is available when traffic demand is low or upon request during period of time, accordingly with AIP Option 2 is available 24/24 depending of traffic load Option 3 is available 24/24 at ACC Paris sector TP	-	100%	Completed 31/12/2018
APO (By:12/2023)				
Aéroports de Nice-Côte d'Azur	DSNA monitors and measures the execution of CDO (see ASP04).	-	0%	Not Applicable -

ENV01	**Continuous Descent Operations (CDO)** ***Timescales:*** Initial operational capability: 01/07/2007 Full operational capability: 31/12/2023		**78%**	**Ongoing**
LFPG - Paris CDG Airport				
As far as ASBU block 0 CDA are concerned, CDA implemented AT CDG since 2011. Regarding ASBU block 1 CDO, ongoing activity.				**31/12/2023**
ASP (By:12/2023)				
DSNA	3 Pans-Ops CDA under development STAR Lorni in AIS Radar vectored CDA with DTG completed at LFPG ATCC- Performance indicators reported Regarding CDO, accordingly with ICAO Doc 9931, DSNA/ATCC have adopted three CDO design option: 1- Close path design with AIP publication 2- Open path design (This is the main reason for which our LSSIP is green - ATCO perform CDO at all airfields with statistics reporting) 3- Path stretching method, Point Merge with AIP publication Option 1 is available when traffic demand is low or upon request during period of time, accordingly with AIP Option 2 is available 24/24 depending of traffic load Option 3 is available 24/24 at ACC Paris sector TP	-	78%	Ongoing 31/12/2023
APO (By:12/2023)				
Groupe ADP	DSNA monitors and measures the execution of CDO (see ASP04).	-	0%	Not Applicable -

ENV01	**Continuous Descent Operations (CDO)** ***Timescales:*** Initial operational capability: 01/07/2007 Full operational capability: 31/12/2023		**78%**	**Ongoing**
LFPO - Paris Orly Airport				
As far as ASBU block 0 CDA are concerned, CDA implemented at Orly since 2010. Regarding ASBU block 1 CDO, ongoing activity.				**31/12/2023**
ASP (By:12/2023)				
DSNA	Pans-Ops CDO under development for RWY 26 CDO ODRAN ILS 06 in AIS - Radar vectored CDO with DTG completed at LFPO ATCC Performance indicators reported Regarding CDO, accordingly with ICAO Doc 9931, DSNA/ATCC have adopted three CDO design option: 1- Close path design with AIP publication 2- Open path design (This is the main reason for which our LSSIP is green - ATCO perform CDO at all airfields with statistics reporting) 3- Path stretching method, Point Merge with AIP publication Option 1 is available when traffic demand is low or upon request during period of time, accordingly with AIP Option 2 is available 24/24 depending of traffic load Option 3 is available 24/24 at ACC Paris sector TP	-	78%	Ongoing 31/12/2023
APO (By:12/2023)				
Groupe ADP	DSNA monitors and measures the execution of CDO (see ASP04).	-	0%	Not Applicable -

FCM03	**Collaborative Flight Planning** ***Timescales:*** Initial operational capability: 01/01/2000 Full operational capability: 01/01/2022		**79%**	**Late**
-				
Processing of FPLs derived from RPLs, of APL and ACH messages is already implemented. The first step of AFP functionalities is implemented in 2 phases, the 1st one for missing flight plans and for diversion, the 2nd one for a change of route, aircraft type and equipment. Both phases have been implemented, tests run in 12/2019 with NM were unsuccessful and require corrections. New version of software will be provided late 2021. Full capability will be reached with Coflight system.				**30/06/2026**
ASP (By:01/2022)				
DSNA	Processing of FPLs derived from RPLs, of APL and ACH messages is already implemented. The first step of AFP functionalities is implemented in 2 phases, the 1st one for missing flight plans and for diversion, the 2nd one for a change of route, aircraft type and equipment. Both phases have been implemented, tests run in 12/2019 with NM were unsuccessful and require corrections. New version of software will be provided late 2021. Full capability will be reached with coflight system.	SYSAT	79%	Late 30/06/2026

FCM04.2	**Short Term ATFCM Measures (STAM) - Phase 2** ***Timescales:*** Initial operational capability: 01/11/2017 Full operational capability: 01/01/2022		**100%**	**Completed**
	-			
DSNA SALTO program already operationally provides STAM directly to airspace users through CAP system.				**30/09/2020**
ASP (By:01/2022)				
DSNA	DSNA has launched a program named SALTO ; SALTO V5 already operationally provides STAM directly to airspace users through CAP system.	-	100%	Completed 30/09/2020

FCM05	**Interactive Rolling NOP** ***Timescales:*** Initial operational capability: 01/09/2013 Full operational capability: 01/01/2022		**69%**	**Late**
	-			
Practical implementation of this ESSIP objective by all concerned stakeholders is ongoing and will be implemented according to CP1 planning.				**31/12/2023**
ASP (By:01/2022)				
Mil. Authority	-	-	0%	Not Applicable -
DSNA	DSNA adjusts the backbone when needed according to NM forecast. So far, the interaction relies on Excel sheets and NEST files.	-	100%	Completed 30/04/2020
APO (By:01/2022)				
Aéroports de Nice-Côte d'Azur	Aéroports de la Côte d'azur is advanced ATC Tower since 2016. Nice is CDM labeled by NM since 11/09/2020. Moreover, at this stage AOP/NOP integration is planned for end 2023. A kick off meeting took place in February 2020 with NMOC.	-	55%	Late 31/12/2023
Aéroports de Lyon	-	-	0%	Planned 31/12/2021
Groupe ADP	-	-	55%	Late 31/12/2023
Aéroport de Toulouse-Blagnac	Within the CDM study project framework (see AOP05).	-	0%	Not Applicable -
Aéroport de Marseille Provence	-	-	0%	Not Applicable -

FCM06	**Traffic Complexity Assessment** ***Timescales:*** Initial operational capability: 01/01/2015 Full operational capability: 01/01/2022		**80%**	**Ongoing**
	-			
Objective to be implemented within the framework of DSNA SALTO project.				**31/12/2021**
ASP (By:01/2022)				
DSNA	To be implemented through the framework of SALTO project.	-	80%	Ongoing 31/12/2021

INF07	**Electronic Terrain and Obstacle Data (eTOD)** ***Timescales:*** Initial operational capability: 01/11/2014 Full operational capability: 01/01/2019		**100%**	**Completed**
	-			
The French regulator has established a national TOD policy published in a national regulation. **The tools for the provision of collected TOD to third-parties in compliance with data exchange regulatory requirements has been implemented from January 2019.**				**31/12/2020**
REG (By:01/2019)				
DGAC	The French TOD regulatory framework is embedded in two orders of 23 March 2015 relating to aeronautical information.	-	100%	Completed 31/12/2020
ASP (By:01/2019)				
DSNA	DSNA defined years ago a roadmap related to current national TOD policy requirements.	-	100%	Completed 31/12/2019
APO (By:01/2019)				
Groupe ADP	Agreements between airports and DSNA have been signed and are being regularly updated.	-	100%	Completed 31/12/2019
Aéroports de Lyon	The French TOD regulatory framework is embedded in two orders relating to aeronautical information, which were published on the 23rd of March 2015. Agreements between airports and DSNA are being regularly updated accordingly.	-	100%	Completed 31/12/2019
Aéroport de Toulouse-Blagnac	The French TOD regulatory framework is embedded in two orders relating to aeronautical information, which were published on the 23rd of March 2015. Agreements between airports and DSNA are being regularly updated accordingly.	-	100%	Completed 31/12/2018
Aéroports de Nice-Côte d'Azur	The French TOD regulatory framework is embedded in two orders relating to aeronautical information, which were published on the 23rd of March 2015. Agreements between airports and DSNA are being regularly updated accordingly.	-	100%	Completed 31/12/2019
Aéroport de Marseille Provence	Letters of Agreements between SNA-SSE and AMP has been signed during December 2017 and are regularly updated.	-	100%	Completed 31/12/2019

INF08.1	**Information Exchanges using the SWIM Yellow TI Profile** ***Timescales:*** Initial operational capability: 01/01/2018 Full operational capability: 01/01/2025		**36%**	**Late**
	-			
DSNA and ADP have started consuming various NM services offered on B2B concerning Flight and Network information, a first step towards full implementation. Regarding the Military, yellow SWIM capabilities implementation is planned by end 2025.				**31/12/2025**
ASP (By:01/2025)				
DSNA	DSNA has started consuming various NM services offered on B2B concerning Flight and Network information, a first step towards full implementation.	-	71%	Ongoing 31/12/2024
MIL (By:01/2025)				
Mil. Authority	It is planned to implement yellow SWIM capabilities by end 2025	-	14%	Late 31/12/2025
APO (By:01/2025)				
Aéroports de Nice-Côte d'Azur	Aéroport de Nice côte d'Azur implemented a B2B with NMOC to send and receive flight data in the scope of A-CDM. (FUM and DPIs messages). This B2B is SWIM compliant. Independently from A-CDM exchanges with NMOC, Aéroports de la Côte d'Azur has not implemented SWIM and it is not yet planned. SWIM is part of the new CP1. It will have to be implemented by 31/12/2025.	-	10%	Late 31/12/2025
Groupe ADP	Activity is ongoing.	-	34%	Ongoing 31/12/2024

ITY-ACID	**Aircraft Identification** ***Timescales:*** Entry into force of the Regulation: 13/12/2011 System capability: 02/01/2020		**90%**	**Late**
	-			
Civil implementation completed mid 2017. Regarding the Military, deferred compliance will be achieved in 2026.				**31/01/2026**
ASP (By:01/2020)				
Mil. Authority	Deferred compliance will be achieved in 2026	-	70%	Late 31/01/2026
DSNA	Downlinked aircraft identification is in operational use in the 5 ACCs.	-	100%	Completed 01/06/2017

ITY-ADQ	**Ensure Quality of Aeronautical Data and Aeronautical Information** ***Timescales:*** Entry into force of the regulation: 16/02/2010 Article 5(4)(a), Article 5(4)(b) and Article 6 to 13 to be implemented by: 30/06/2013 Article 4, Article5(1) and Article 5(2), Article 5(3) and Article 5(4)(c) to be implemented by: 30/06/2014 All data requirements implemented by: 30/06/2017		**55%**	**Late**
	-			
The French regulator (DTA) closely coordinated an ADQ-IR roadmap issued on the 16th of June 2015 with the French NSA (DSAC). Initially focusing on a framework allocating responsibilities to all parties involved (including some not subject to oversight) prior to ensuring the establishment of formal arrangements, it ultimately assesses their actual implementation in an incremental process.				**31/12/2024**
REG (By:06/2017)				
Mil. Authority	Partially compliant with the requirements of July 2013.	-	100%	Completed 01/04/2019
DGAC	The French regulator (DTA) closely coordinated with the French NSA (DSAC) an ADQ-IR roadmap issued on the 16th of June 2015. Initially focusing on a framework allocating responsibilities to all parties involved (including some not subject to oversight) prior to ensuring the establishment of formal arrangements, it ultimately assesses their actual implementation in an incremental process. ADQ oversight is currently mainly addressed through AIS oversight but also via aerodrome oversight. In addition, DSAC initiated a reflexion to redefine the oversight methodology and calendar for interoperability implementing rules. When available, specific ADQ oversight activities may be identified.	-	70%	Late 31/12/2024

ASP (By:06/2017)				
Mil. Authority	The French regulatory framework complementing IR ADQ related to the implementation or revision of the requirements required a national consultation of the concerned parties run during 2014. The complexity of the regulation has led to multiple lecture, more harmonised understanding is expected, and meanwhile EASA is addressing the subject. The system supporting the ADQ requirement must be upgraded or changed with a significant financial, human and technical impacts. The two previous points show that the planning aiming at the full compliance was note achieved in July 2017 as scheduled. More delay seems to be needed. No deadline at the moment.	-	47%	Late 31/12/2022
DSNA	DSNA has launched in May 2017 the SEPIA project which aims at full compliance with ITY-ADQ by 2022.	FABEC AIM Task Force / Geographic Data Base (including NODB (National Obstacle Data Base) for DSNA) / SEPIA / SOFIA	61%	Late 31/12/2022
APO (By:06/2017)				
Aéroport de Toulouse-Blagnac	APO's conformity with ADQ-IR depends closely on the conformity of French AISP.	-	64%	Late 31/12/2022
Groupe ADP	APO's conformity with ADQ-IR depends closely on the conformity of French AISP. Aerodrome manuals include the provision of aeronautical data and a letter of agreement with DSNA describes the process for AI provision. Both airports have ISO9001 certification SGS request that all personnel susceptible to request a modification of aeronautical information has been trained However a process update is ongoing under CP project (related to Geographic DB)	-	64%	Late 31/12/2022
DSNA	DSNA has launched in May 2017 the SEPIA project which aims at full compliance with ITY-ADQ by 2022	FABEC AIM Task Force / Geographic Data Base (including NODB (National Obstacle Data Base) for DSNA) / SEPIA / SOFIA	10%	Late 31/12/2022
Aéroport de Marseille Provence	APO's conformity with ADQ-IR depends closely on the conformity of French AISP.	-	64%	Late 31/12/2022

Aéroports de Lyon	APO's conformity with ADQ-IR depends closely on the conformity of French AISP.	-	10%	Late 31/12/2022
Aéroports de Nice-Côte d'Azur	APO's conformity with ADQ-IR depends closely on the conformity of French AISP.	-	64%	Late 31/12/2022

ITY-AGDL	**Initial ATC Air-Ground Data Link Services** ***Timescales:*** Entry into force: 06/02/2009 ATS unit operational capability: 05/02/2018 Aircraft capability: 05/02/2020		**88%**	**Late**
	-			
A revised scenario for phased deployment of the DLS in DSNA airspace has been constructed jointly with the European Commission, Eurocontrol and DSNA Clients (airlines). Final implementation in 5 French ACC is planned in spring 2021.				**30/05/2021**
REG (By:02/2018)				
DGAC	The change related to the introduction of DLS is reviewed by DSAC and takes into account the last DSNA corrective action plan regarding AGDL implementation France.	-	70%	Late 30/05/2021
ASP (By:02/2018)				
DSNA	The initial set of Data Link Services (DLIC, AMC, ACM) in French airspace is provided from FL195 and above for all SITA or ARINC equipped aircrafts since 10/08/2017. The ACL service has been provided since April 2019 for the two western ACCs and is planned for spring 2021 for the three remaining ACCs.	4-FLIGHT / 4-FLIGHT Defence / COFLIGHT	97%	Late 30/05/2021
MIL (By:01/2019)				
Mil. Authority	According to IR EC 29/2009, DLS equipage is not mandatory for State aircraft. Next aircraft equipped with a DLS will be compliant VDL2	4-FLIGHT Defence	0%	Not Applicable -

ITY-AGVCS2	**8,33 kHz Air-Ground Voice Channel Spacing below FL195** ***Timescales:*** Entry into force: 07/12/2012 New and upgraded radio equipment: 17/11/2013 New or upgraded radios on State aircraft: 01/01/2014 Interim target for freq. conversions: 31/12/2014 All radio equipment: 31/12/2017 All frequencies converted: 31/12/2018 State aircraft equipped, except those notified to EC: 31/12/2018 State aircraft equipped, except those exempted [Art 9(11)]: 31/12/2020		**56%**	**Late**
	-			
Compliance with the requirements on 8,33 kHz frequency conversions is scheduled.				**31/12/2026**
REG (By:12/2018)				
Mil. Authority	Final implementation scheduled between 2023 and 2025.	-	38%	Late 31/12/2025
DGAC	Ongoing 8,33 kHz frequency conversion ... All assignments not subject to derogations / exceptions are converted. Remaining exceptions will be addressed in a phased approach, most safety related exemptions by the end of 2021 and most state aircraft accommodation exemptions by the end of 2026.	-	70%	Late 31/12/2026
ASP (By:12/2018)				
DSNA	Upgrading of radio stations is scheduled. When needed some 25 kHZ frequencies are maintained until all stakeholders have 8,33 kHz channel spacing capability (Military, scheduled end 2025 but could be anticipated end 2023, under study).	-	72%	Late 31/12/2025
Mil. Authority	Final implementation scheduled between 2023 and 2025.	-	0%	Late 31/12/2025
MIL (By:12/2020)				
Mil. Authority	In accordance with IR EC 1079/2012, some State aircraft and equipment will be upgraded. Some military frequencies will remain on 25kHz according on art 6 paragraph10b.	-	48%	Late 31/12/2021
APO (By:12/2018)				
Aéroports de Lyon	-	-	40%	Late 31/12/2023
Aéroport de Toulouse-Blagnac	-	-	100%	Completed 31/12/2019
Groupe ADP	-	-	100%	Completed 07/07/2017
Aéroports de Nice-Côte d'Azur	-	-	100%	Completed 31/01/2019
Mil. Authority	The process is ongoing	-	32%	Late 31/12/2025
Aéroport de Marseille Provence	-	-	100%	Completed 31/12/2020

ITY-FMTP	**Common Flight Message Transfer Protocol (FMTP)** ***Timescales:*** Entry into force of regulation: 28/06/2007 All EATMN systems put into service after 01/01/09: 01/01/2009 All EATMN systems in operation by 20/04/11: 20/04/2011 Transitional arrangements: 31/12/2012 Transitional arrangements when bilaterally agreed between ANSPs: 31/12/2014		**97%**	**Late**
	-			
Full compliance to the FMTP is expected by end 2021.				**31/12/2021**
ASP (By:12/2014)				
DSNA	Migration to IPv6 completed within the FABEC area. Next to come as of Q2-2021: FMTP links with NATS, ENAIRE, ENAV, IAA and Jersey.	COFLIGHT	92%	Late 31/12/2021
Mil. Authority	IR FMTP doesn't apply to the Military. Nevertheless, the process has been launched. FMTP capability achieved through PATRUS gateway system.	-	0%	Not Applicable -
MIL (By:12/2014)				
Mil. Authority	IR FMTP doesn't apply to the Military. Nevertheless, the process is launched. FMTP capability will be achieved through PATRUS gateway system.	-	0%	Not Applicable -

ITY-SPI	**Surveillance Performance and Interoperability** ***Timescales:*** Entry into force of regulation: 13/12/2011 ATS unit operational capability: 12/12/2013 EHS and ADS-B Out in transport-type State aircraft : 07/12/2020 ELS in transport-type State aircraft : 07/12/2020 Ensure training of MIL personnel: 07/12/2020 Retrofit aircraft capability: 07/12/2020		**71%**	**Late**
	-			
Surveillance performance and interoperability implementation is completed in France for DSNA and is near to completion for Defense.				**01/01/2025**
REG (By:02/2015)				
DGAC	As far as the oversight of interoperability is concerned, DSAC applies its own ANSP IOP oversight procedure. DSAC has initially requested DSNA for a SPI synthesis file for 04/2013. DSNA addressed SPI synthesis file and its conformity plan in 10/2013. IR SPI conformity has been accordingly reviewed by DSAC and the final result has been transmitted to DSNA 22nd January 2015.	-	100%	Completed 22/01/2015
ASP (By:02/2015)				
DSNA	Ensuring safety of Radar data is one of the highest priorities for DSNA and DIRCAM. Technical agreements have been in force with our partners from a long time ago for the most critical sensors. A standardized document, (Memorandum of Cooperation between ANSPs) merging all technical agreements dealing with data exchanges, studied within AEFMP group, was signed in 2012 between ENAIRE (Ex AENA) and DSNA and updated and signed June 2014 to comply with IR SPI. Thanks to close cooperation with DFS, an improved document was signed end-2015 between DFS and DSNA. Work is in progress to sign such agreements with others neighbours.	-	100%	Completed 31/10/2013
Mil. Authority	FR MOD has started the equipment and retrofit process in the airborne and ground platforms. It is foreseen to finalize it by end of 2025.	-	100%	Completed 31/10/2013
MIL (By:12/2020)				
Mil. Authority	Equipment upgrade is in progress, following the SPI-IR requirements.	-	23%	Late 01/01/2025

NAV03.1	**RNAV 1 in TMA Operations** ***Timescales:*** Initial operational capability: 01/01/2001 One SID and STAR per instrument RWY, where established: 25/01/2024 All SIDs and STARs per instrument RWY, where established: 06/06/2030		**87%**	**Ongoing**
	-			
Arrival and departures procedures based on RNAV have been established on main airports. For relevant aircrafts, implementation of RNAV1 is considered as achieved.				**25/01/2024**
REG (By:06/2030)				
DGAC	The verification of the transition plan has been notified to the ANSP.	-	100%	Completed 03/12/2020
ASP (By:06/2030)				
DSNA	Arrival and departures procedures based on RNAV have been established on major airports. For relevant aircraft, implementation of RNAV1 is considered as achieved.	-	87%	Ongoing 25/01/2024
Mil. Authority	Military aerodromes are not concerned by congestion. Implementation is in progress on some military airbases.	-	92%	Ongoing 25/01/2024

NAV03.2	**RNP 1 in TMA Operations** ***Timescales:*** Start: 07/08/2018 All SIDs and STARs per instrument RWY, at PCP airports: 25/01/2024 One SID and STAR per instrument RWY, where established: 25/01/2024 All SIDs and STARs per instrument RWY, where established: 06/06/2030		**1%**	**Not yet planned**
	-			
The performance of reversion in case of GNSS failure should be studied further before planning the implementation of RNP1 + RF				**-**
REG (By:06/2030)				
DGAC	The performance of reversion in case of GNSS failure should be studied further before planning the implementation of RNP1 + RF.	-	0%	Not yet planned -
ASP (By:06/2030)				
DSNA	The performance of reversion in case of GNSS failure should be studied further before planning the implementation of RNP1 + RF.	-	1%	Not yet planned -

NAV10	**RNP Approach Procedures to instrument RWY** ***Timescales:*** Initial operational capability: 01/06/2011 Instrument RWY ends without precision approach in EU SES States, at Non-PCP airports: 03/12/2020 Instrument RWY ends served by precision approach (including PCP airports): 25/01/2024 Instrument RWY ends without precision approach in EU SES States, at PCP airports: 25/01/2024		**99%**	**Ongoing**
	-			
National deployment plan of APV/SBAS (supported by EGNOS) and APV/Baro has been launched and is ongoing. Consistency with ICAO 3711 has been reached end 2016. This implementation Phase ending 2016 has enabled full consistency with ICAO 3711. **70% of runway ends are equipped with RNPAPCH with LPV minima.** **Full implementation planned by 25/01/2024.**				**25/01/2024**
REG (By:01/2024)				
DGAC	EASA material applied to regulatory activities	-	100%	Completed 03/12/2020
ASP (By:01/2024)				
DSNA	In line with the ICAO 37th assembly resolution, a national deployment plan at all IFR runways has been set up, and is in progress. RNP approach procedures with LPV minima implemented for 98% of all applicable airports/runway ends, where possible. RNP approach procedures with LNAV/VNAV minima implemented for 93% of all applicable airports/runway ends, where possible. RNP approach procedures with LNAV minima implemented for 98% of all applicable airports/runway ends, where possible.	PBN APV	98%	Ongoing 25/01/2024

NAV12	**ATS IFR Routes for Rotorcraft Operations** **(Outside Applicability Area)** ***Timescales:*** - not applicable -		**0%**	**Not Applicable**
	-			
No Optimised Low-Level IFR routes in TMA for Rotorcraft implementation plan to report at this stage.				**-**
REG (By:06/2030)				
DGAC	No Optimised Low-Level IFR routes in TMA for Rotorcraft implementation plan to report at this stage.	-	0%	Not Applicable -
ASP (By:06/2030)				
DSNA	No Optimised Low-Level IFR routes in TMA for Rotorcraft implementation plan to report at this stage.	-	0%	Not Applicable -

SAF11	**Improve Runway Safety by Preventing Runway Excursions** ***Timescales:*** Initial operational capability: 01/09/2013 Full operational capability: 31/01/2018		**100%**	**Completed**
	-			
The applicable recommendations have been disseminated to the concerned parties in the end of 2013 and will be monitored through the regular reviews of the State Safety Plan.				**31/01/2018**
REG (By:01/2018)				
DGAC	Through its State Safety Plan, DGAC analyzed in early 2013 the applicability of the action plan in order to decide the actions to implement, with associated timeframe to monitor. The applicable measures related to ATM/ANS and airport operators domains have been already implemented. The applicable recommendations have been disseminated to the concerned parties in the end of 2013 and will be monitored through the regular reviews of the State Safety Plan. However, no oversight activities are planned for the time being to ensure the implementation of the applicable measures.	-	100%	Completed 31/01/2018
ASP (By:12/2014)				
Mil. Authority	-	-	100%	Completed 31/12/2014
DSNA	EAPPRE was approved in January 2013 by DSNA CEO. For the military, through DGAC's State Safety Plan, as far as relevant, Armed Forces take account EAPPRE only for military airfield with civilian traffic through the regular reviews of DSAC.	-	100%	Completed 31/12/2014
APO (By:12/2014)				
Aéroports de Nice-Côte d'Azur	-	-	100%	Completed 31/12/2013
Aéroport de Toulouse-Blagnac	-	-	100%	Completed 31/12/2014
Groupe ADP	-	-	100%	Completed 31/12/2014
Aéroports de Lyon	-	-	100%	Completed -

Additional Objectives for ICAO ASBU Monitoring

AOM21.1	**Direct Routing** ***Timescales:*** Initial Operational Capability: 01/01/2015 Full Operational Capability: 31/12/2017	**100%**	**Completed**
	-		
Full implementation on the objective is done through the deployment of ERATO in Brest and Bordeaux. Current systems in other French ACCs allows implementation of direct routings. **4-FLIGHT system is expected to be deployed in Marseille, Reims and Paris allowing further application of DRA concept.**			**31/12/2016**
ASP (By:12/2017)			
DSNA	Many DCTs have been published and are operated daily. It's a permanent action to increase their amount and availability.	-	100%	Completed 31/12/2016

ATC02.2	**Implement ground based safety nets - Short Term Conflict Alert (STCA) - level 2 for en-route operations** ***Timescales:*** Initial operational capability: 01/01/2008 Full operational capability: 31/01/2013	**100%**	**Completed**
	-		
STCA implemented in the five ACCs and majors TMAs. Implementation in smaller TMAs is under study.			**31/12/2010**
ASP (By:01/2013)			
DSNA	STCA is implemented in all ACCs and 9 major APPs. Implementation in smaller APPs is under consideration for the next generation of ATM systems.	-	100%	Completed 31/12/2010

ATC16	**Implement ACAS II compliant with TCAS II change 7.1** ***Timescales:*** Initial operational capability: 01/03/2012 Full operational capability: 31/12/2015	**100%**	**Completed**
	-		
Objective has been implemented for DSNA. For the military, equipage is in progress for aircraft that should be still in service after 2020 (older aircraft are not planned to be equipped).			**30/12/2018**
REG (By:12/2015)			
DGAC	Handled through aircraft operators continuous oversight.	-	100%	Completed 31/12/2015
ASP (By:03/2012)			
DSNA	A monitoring system of the performance of ACAS is in place for many years. Each TCAS occurrence is recorded and analysed. If necessary, pilots/companies are informed in case of a non conformity.	-	100%	Completed 30/11/2011
MIL (By:12/2015)			
Mil. Authority	Equipage of ACAS II will be conducted for modern transport-type aircraft. However, aircrews are trained to react, using or not ACAS.	-	100%	Completed 30/12/2018

FCM01	**Implement enhanced tactical flow management services** ***Timescales:*** Initial operational capability: 01/08/2001 Full operational capability: 31/12/2006		**100%**	**Completed**
	-			
France participates to the ETFMS program. Main goals of this objective have been achieved.				**31/12/2006**
ASP (By:07/2014)				
DSNA	Transmission of CPR and FSA messages implemented. FSA messages for route changes is implemented. There is no intention to implement FSA messages for holding and FDPA re-routing updates. DPI messages at LFPG since 2010.	-	100%	Completed 31/12/2006

ITY-COTR	**Implementation of ground-ground automated co-ordination processes** ***Timescales:*** Entry into force of Regulation: 27/07/2006 For putting into service of EATMN systems in respect of notification and initial coordination processes: 27/07/2006 For putting into service of EATMN systems in respect of Revision of Coordination, Abrogation of Coordination, Basic Flight Data and Change to Basic Flight Data: 01/01/2009 To all EATMN systems in operation by 12/2012: 31/12/2012		**100%**	**Completed**
	-			
Compliance to the COTR Implementing Rule is globally achieved (only one minor non-compliance is identified and cannot be done in the legacy system, mainly due to lack of specification), except for compliance regarding 29/2009 which is addressed under ITY - AGDL				**30/06/2016**
ASP (By:12/2012)				
DSNA	Completed for the original set of processes, and planned for LOF and NAN processes. Fully compliant with COTR Implementing Rule (except for compliance regarding 29/2009 which is addressed under ITY-AGDL) with all neighbours when operationally relevant and when their system-capability is achieved.	-	100%	Completed 30/06/2016
MIL (By:12/2012)				
Mil. Authority	Flight data process is done.	-	100%	Completed 31/12/2012

Local Objectives

Note: Local Objectives are addressing solutions that are considered beneficial for specific operating environments, therefore for which a clear widespread commitment has not been expressed yet. They are characterised with no deadline and voluntary applicability area.

AOP14	Remote Tower Services *Applicability and timescale: Local*	5%	Ongoing
LFBP - PAU-PYRENEES			
A digital advanced tower concept will be implemented at Pau-Pyrénées airport (LFBP) in order to facilitate better coordination for approach ATS with departures from Tarbes-Pyrénées (LFBT) airport where a camera network will be implemented. Implementation Date : 31/03/2023			31/03/2023

AOP14	Remote Tower Services *Applicability and timescale: Local*	75%	Ongoing
LFMD - CANNES-MANDELIEU			
In order to better accommodate local helicopters traffic increase at Cannes Héliport Quai du Large (LFTL), a Digital Advanced Tower concept has been developed and the implementation phase has been launched end 2017 at Cannes-Mandelieu airport (LFMD) in order to visualize and manage heliport movements directly from Cannes-Mandelieu (LFMD) tower. Implementation Date : 01/10/2021			01/10/2021

AOP14	Remote Tower Services *Applicability and timescale: Local*	20%	Ongoing
LFOT - TOURS VAL DE LOIRE			
DSNA is implementing a Remote Tower Center from which aerodrome control services will be provided for LFOT from 2023. Aerodrome and Approach control services will be provided by DSNA from 2021. Those services are currently provided by the French Air Force (until July 2021). Implementation Date : 01/10/2024			01/10/2024

AOP15	Enhanced traffic situational awareness and airport safety nets for the vehicle drivers *Applicability and timescale: Local*	85%	Ongoing
LFPG - Paris CDG Airport			
Capricorn system partially gives this service for a long time. A system upgrade is ongoing. The new system (Aquarius) will be implemented by 30/11/2021 in order to complete the objective with Aircraft proximity alert.			30/11/2021

AOP15	Enhanced traffic situational awareness and airport safety nets for the vehicle drivers *Applicability and timescale: Local*	85%	Ongoing
LFPO - Paris Orly Airport			
Capricorn system partially gives this service for a long time. A system upgrade is ongoing. The new system (Aquarius) will be implemented by 30/11/2021 in order to complete the objective with Aircraft proximity alert.			30/11/2021

AOP16	Guidance assistance through airfield ground lighting *Applicability and timescale: Local*	-	Not Applicable
LFPG - Paris CDG Airport			
No implementation foreseen.			-

AOP17	Provision/integration of departure planning information to NMOC *Applicability and timescale: Local*	0%	Planned
LFBD - Bordeaux Airport			
This implementation is planned after and built on the experience of Toulouse and Marseille airports. Due to COVID crisis, further assessment required prior to amending the implementation date.			31/12/2023

AOP17	Provision/integration of departure planning information to NMOC *Applicability and timescale: Local*	80%	Ongoing
LFBO - Toulouse Airport			
DPI messages provision is under implementation in Toulouse. Delay due to COVID. Validation process in progress with NM Implementation Date : 21/03/2021			31/03/2021

AOP17	Provision/integration of departure planning information to NMOC *Applicability and timescale: Local*	80%	Ongoing
LFML - Marseille Airport			
DPI messages provision is under implementation in Marseille. Delay due to COVID. Validation process in progress with NM Implementation Date : 31/03/2021			31/03/2021

AOP17	Provision/integration of departure planning information to NMOC *Applicability and timescale: Local*	0%	Planned
LFRS - Nantes Airport			
This implementation is planned after and built on the experience of Toulouse and Marseille airports. Due to COVID crisis, further assessment required prior to amending the implementation date.			31/12/2023

AOP17	Provision/integration of departure planning information to NMOC *Applicability and timescale: Local*	0%	Planned
LFSB - Bale-Mulhouse Airport			
This implementation is planned after and built on the experience of Toulouse and Marseille airports. Due to COVID crisis, further assessment required prior to amending the implementation date.			31/12/2023

AOP18	Runway Status Lights (RWSL) *Applicability and timescale: Local*	100%	Completed
LFPG - Paris CDG Airport			
System implemented at LFPG since 2017.			03/03/2017

ATC18	Multi-Sector Planning En-route - 1P2T *Applicability and timescale: Local*	-	Not Applicable
-			
No MSP implementation planned.			-

ATC19	Enhanced AMAN-DMAN integration *Applicability and timescale: Local*	0%	Not yet planned
-			
			-

ATC20	Enhanced STCA with down-linked parameters via Mode S EHS *Applicability and timescale: Local*	0%	Not yet planned
-			
			-

ENV02	Airport Collaborative Environmental Management *Applicability and timescale: Local*	100%	Completed
LFBO - Toulouse Airport			
Objective achieved through formally established "Commission Consultative de l'Environnement".			31/12/2012

ENV02	Airport Collaborative Environmental Management *Applicability and timescale: Local*	100%	Completed
LFLL - Lyon Airport			
Objective achieved through formally established "Commission Consultative de l'Environnement".			31/12/2012

ENV02	Airport Collaborative Environmental Management *Applicability and timescale: Local*	100%	Completed
LFML - Marseille Airport			
Objective achieved through formally established "Commission Consultative de l'Environnement".			31/12/2009

ENV02	Airport Collaborative Environmental Management *Applicability and timescale: Local*	100%	Completed
LFMN - Nice Airport			
Objective achieved through formally established "Commission Consultative de l'Environnement".			31/12/2009

ENV02	Airport Collaborative Environmental Management *Applicability and timescale: Local*	100%	Completed
LFPG - Paris CDG Airport			
Objective achieved through formally established "Commission Consultative de l'Environnement".			31/12/2009

ENV02	Airport Collaborative Environmental Management *Applicability and timescale: Local*	100%	Completed
LFPO - Paris Orly Airport			
Objective mainly achieved through formally established "Commission Consultative de l'Environnement".			31/12/2013

ENV03	Continuous Climb Operations (CCO) *Applicability and timescale: Local*	100%	Completed
LFBO - Toulouse Airport			
CCO is an aircraft operating technique (Doc 9993) enabled by DSNA on a daily basis by tactical ATCo instructions and clearances. Performance assessments are done on a regular basis and reported in performance dashboard.			31/12/2019

ENV03	Continuous Climb Operations (CCO) *Applicability and timescale: Local*	100%	Completed
LFLL - Lyon Airport			
CCO is an aircraft operating technique (Doc 9993) enabled by DSNA on a daily basis by tactical ATCo instructions and clearances. Performance assessments are done on a regular basis and reported in performance dashboard.			31/12/2019

ENV03	Continuous Climb Operations (CCO) *Applicability and timescale: Local*	100%	Completed
LFML - Marseille Airport			
CCO is an aircraft operating technique (Doc 9993) enabled by DSNA on a daily basis by tactical ATCo instructions and clearances. Performance assessments are done on a regular basis and reported in performance dashboard.			31/12/2019

ENV03	Continuous Climb Operations (CCO) *Applicability and timescale: Local*	100%	Completed
LFMN - Nice Airport			
CCO is an aircraft operating technique (Doc 9993) enabled by DSNA on a daily basis by tactical ATCo instructions and clearances. Performance assessments are done on a regular basis and reported in performance dashboard.			31/12/2019

ENV03	Continuous Climb Operations (CCO) *Applicability and timescale: Local*	100%	Completed
LFPG - Paris CDG Airport			
CCO is an aircraft operating technique (Doc 9993) enabled by DSNA on a daily basis by tactical ATCo instructions and clearances. Performance assessments are done on a regular basis and reported in performance dashboard.			31/12/2019

ENV03	Continuous Climb Operations (CCO) *Applicability and timescale: Local*	100%	Completed
LFPO - Paris Orly Airport			
CCO is an aircraft operating technique (Doc 9993) enabled by DSNA on a daily basis by tactical ATCo instructions and clearances. Performance assessments are done on a regular basis and reported in performance dashboard.			31/12/2019

6. Annexes

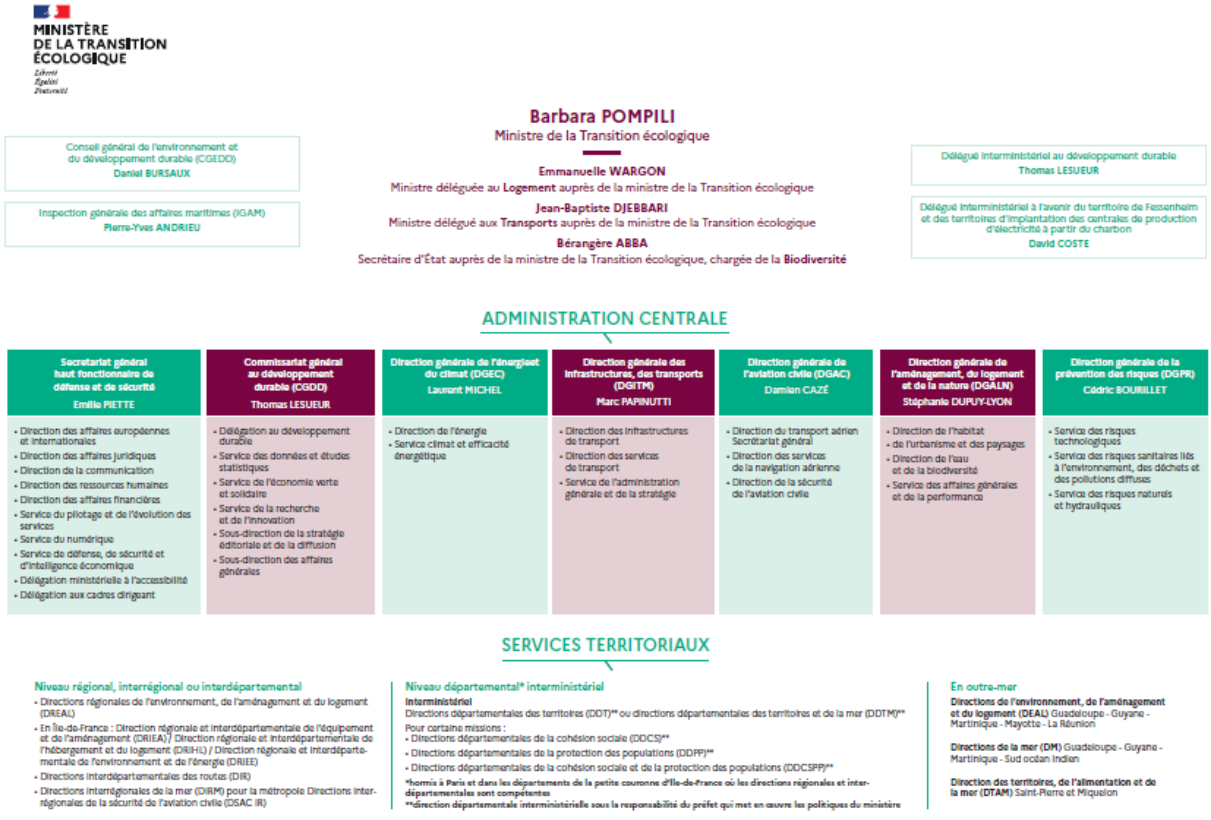
A. Specialists involved in the ATM implementation reporting for France

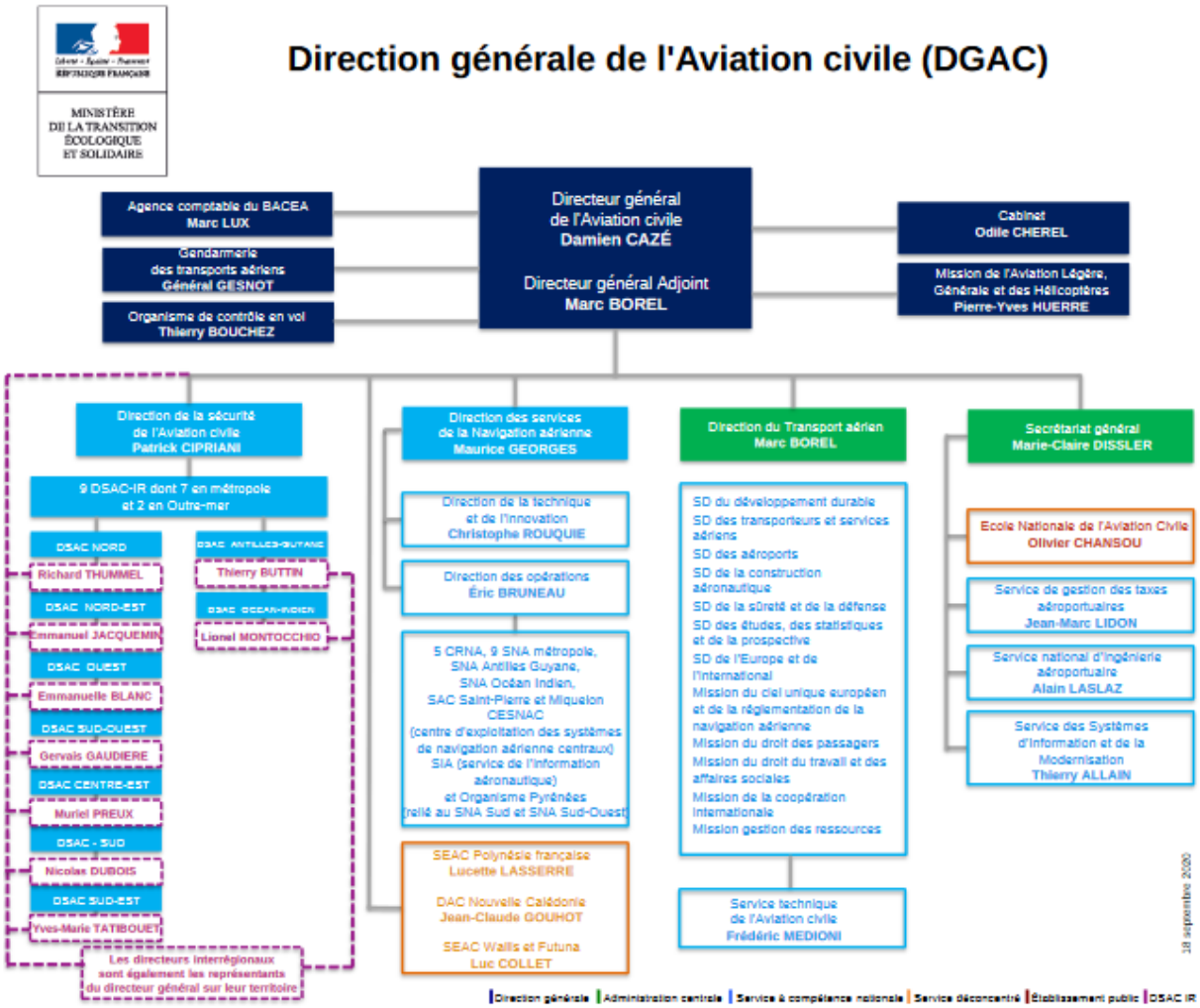
LSSIP Co-ordination

LSSIP Focal Points	Organisation	Name
LSSIP National Focal Point	DTA	Stéphane LAFOURCADE
LSSIP Focal Point for NSA/CAA	DTA	Stéphane LAFOURCADE Eric CHAMBROY
LSSIP Focal Point for NSA/CAA	DSAC	Geoffroy CHEVALIER
LSSIP Focal Point for ANSP	DSNA	Eric LIEUTAUD
LSSIP Focal Point for Military	DSAÉ	Jean-François ROBERT

Other Focal Points	Organisation	Name
Focal Point for NETSYS	DSNA	Bruno SPYCKERELLE Didier PAVET
Focal Point for SUR	DSNA	Katia KERGOURLAY Bruno COLLARD

B. National stakeholders organisation charts




Direction générale de l'Aviation civile (DGAC)
MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE ET SOLIDAIRE
Agence comptable du BACEA
Marc LUX
Gendarmerie des transports aériens
Général GESNOT
Organisme de contrôle en vol
Thierry BOUCHEZ
Directeur général de l'Aviation civile
Damien CAZÉ
Directeur général Adjoint
Marc BOREL
Cabinet
Odile CHEREL
Mission de l'Aviation Légère, Générale et des Hélicoptères
Pierre-Yves HUERRE
Direction de la sécurité de l'Aviation civile
Patrick CIPRIANI
9 DSAC-IR dont 7 en métropole et 2 en Outre-mer
DSAC NORD
Richard THUMMEL
DSAC NORD-EST
Emmanuel JACQUEMIN
DSAC OUEST
Emmanuelle BLANC
DSAC SUD-OUEST
Gervais GAUDIERE
DSAC CENTRE-EST
Muriel PREUX
DSAC - SUD
Nicolas DUBOIS
DSAC SUD-EST
Yves-Marie TATIBOUET
DSAC ANTILLES-GUYANE
Thierry BUTTIN
DSAC OCEAN-INDIEN
Lionel MONTOCCHIO
Les directeurs interrégionaux sont également les représentants du directeur général sur leur territoire
Direction des services de la Navigation aérienne
Maurice GEORGES
Direction de la technique et de l'innovation
Christophe ROUQUIE
Direction des opérations
Éric BRUNEAU
5 CRNA, 9 SNA métropole, SNA Antilles Guyane, SNA Océan Indien, SAC Saint-Pierre et Miquelon
CESNAC
(centre d'exploitation des systèmes de navigation aérienne centraux)
SIA (service de l'information aéronautique)
et Organisme Pyrénées
(relié au SNA Sud et SNA Sud-Ouest)
SEAC Polynésie française
Lucette LASSERRE
DAC Nouvelle Calédonie
Jean-Claude GOUHOT
SEAC Wallis et Futuna
Luc COLLET
Direction du Transport aérien
Marc BOREL
SD du développement durable
SD des transporteurs et services aériens
SD des aéroports
SD de la construction aéronautique
SD de la sûreté et de la défense
SD des études, des statistiques et de la prospective
SD de l'Europe et de l'international
Mission du ciel unique européen et de la réglementation de la navigation aérienne
Mission du droit des passagers
Mission du droit du travail et des affaires sociales
Mission de la coopération internationale
Mission gestion des ressources
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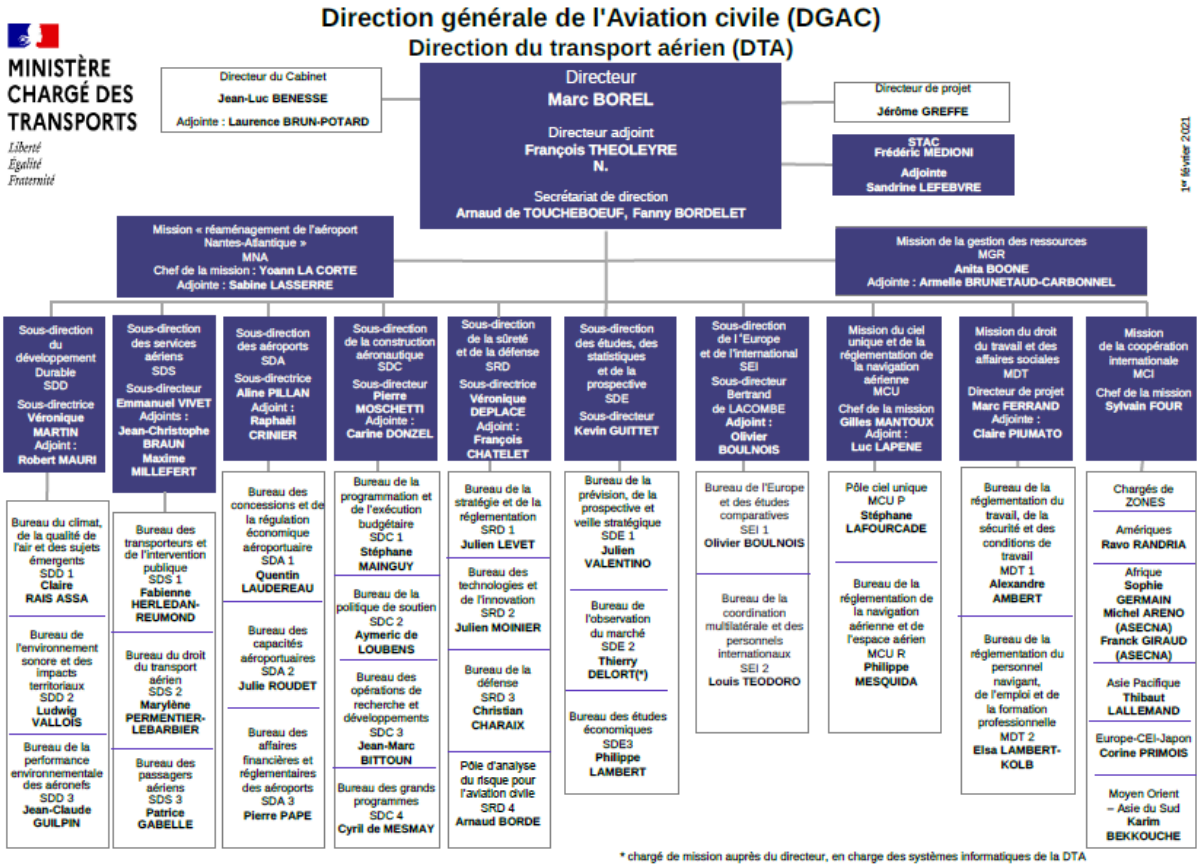
Olivier CHANSOU
Service de gestion des taxes aéroportuaires
Jean-Marc LIDON
Service national d'ingénierie aéroportuaire
Alain LASLAZ
Service des Systèmes d'Information et de la Modernisation
Thierry ALLAIN
18 septembre 2020
Direction générale
Administration centrale
Service à compétence nationale
Service déconcentré
Établissement public
DSAC IR


Direction générale de l'Aviation civile (DGAC)
Direction du transport aérien (DTA)
MINISTÈRE CHARGÉ DES TRANSPORTS
Liberté
Égalité
Fraternité
Directeur du Cabinet
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Directeur
Marc BOREL
Directeur adjoint
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Secrétariat de direction
Arnaud de TOUCHEBOEUF, Fanny BORDELET
Directeur de projet
Jérôme GREFFE
STAC
Frédéric MEDIONI
Adjointe
Sandrine LEFEBVRE
1er février 2021
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MNA
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Adjointe : Sabine LASSERRE
Mission de la gestion des ressources
MGR
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Adjointe : Armelle BRUNETAUD-CARBONNEL
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SDD
Sous-directrice
Véronique MARTIN
Adjoint :
Robert MAURI
Sous-direction des services aériens
SDS
Sous-directeur
Emmanuel VIVET
Adjoints :
Jean-Christophe BRAUN
Maxime MILLEFERT
Sous-direction des aéroports
SDA
Sous-directrice
Aline PILLAN
Adjoint :
Raphaël CRINIER
Sous-direction de la construction aéronautique
SDC
Sous-directeur
Pierre MOSCHETTI
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SRD
Sous-directrice
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SDD 3
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SDS 2
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Bureau des passagers aériens
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SDA 3
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Stéphane MAINGUY
Bureau de la politique de soutien
SDC 2
Aymeric de LOUBENS
Bureau des opérations de recherche et développements
SDC 3
Jean-Marc BITTOUN
Bureau des grands programmes
SDC 4
Cyril de MESMAY
Bureau de la stratégie et de la réglementation
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Julien LEVET
Bureau des technologies et de l'innovation
SRD 2
Julien MOINIER
Bureau de la défense
SRD 3
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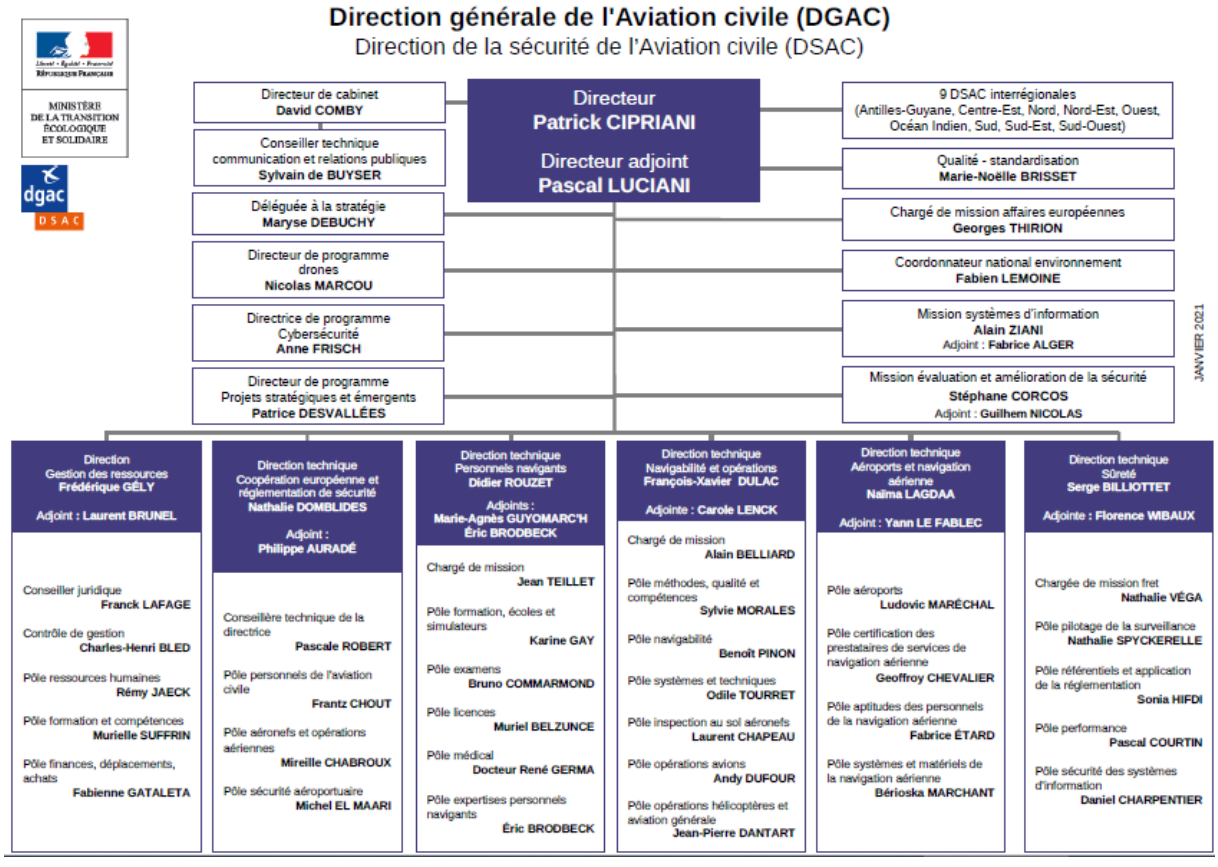
Karim BEKKOUCHE
* chargé de mission auprès du directeur, en charge des systèmes informatiques de la DTA


Direction générale de l'Aviation civile (DGAC)
Direction de la sécurité de l'Aviation civile (DSAC)
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Directeur
Patrick CIPRIANI
Directeur adjoint
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Chargé de mission affaires européennes
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Coordonnateur national environnement
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Pôle médical
Docteur René GERMA
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Geoffroy CHEVALIER
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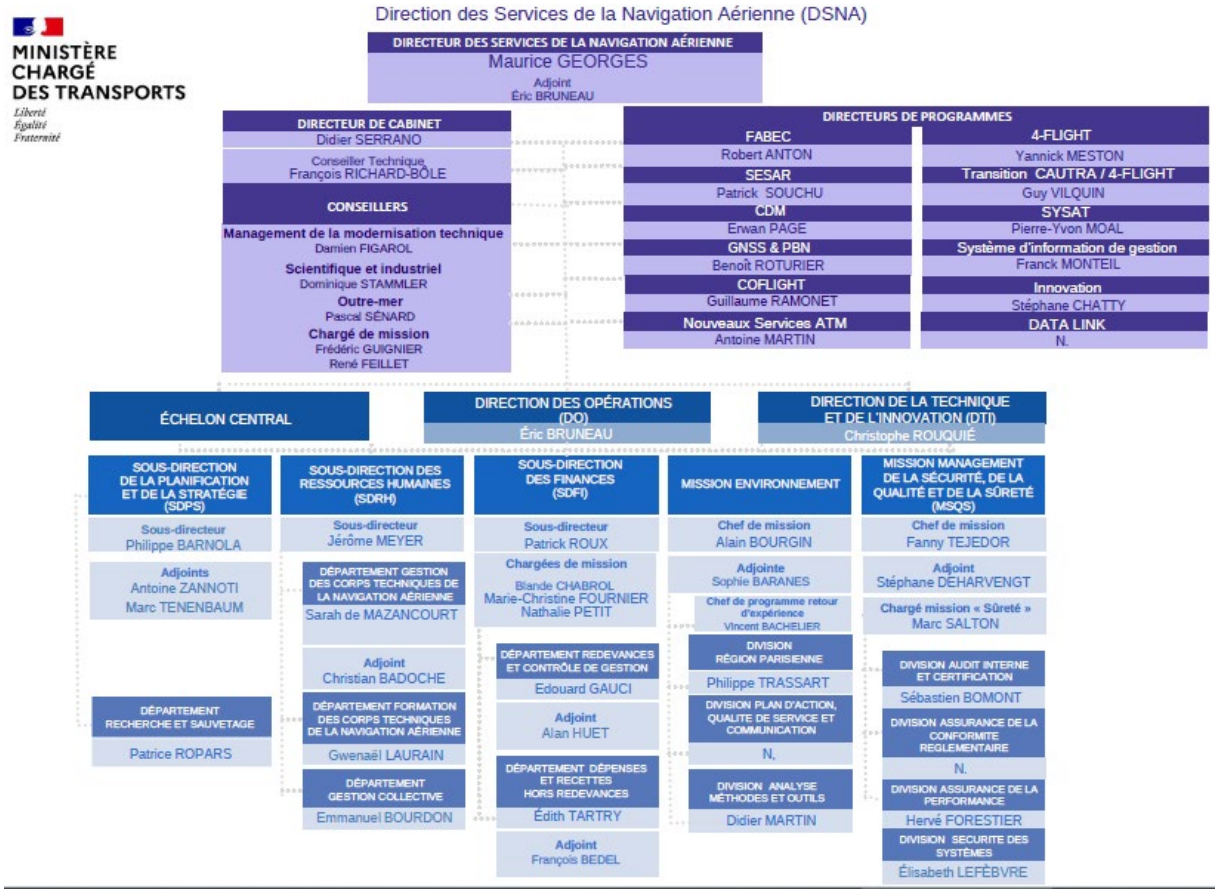
Pôle référentiels et application de la réglementation
Sonia HIFDI
Pôle performance
Pascal COURTIN
Pôle sécurité des systèmes d'information
Daniel CHARPENTIER



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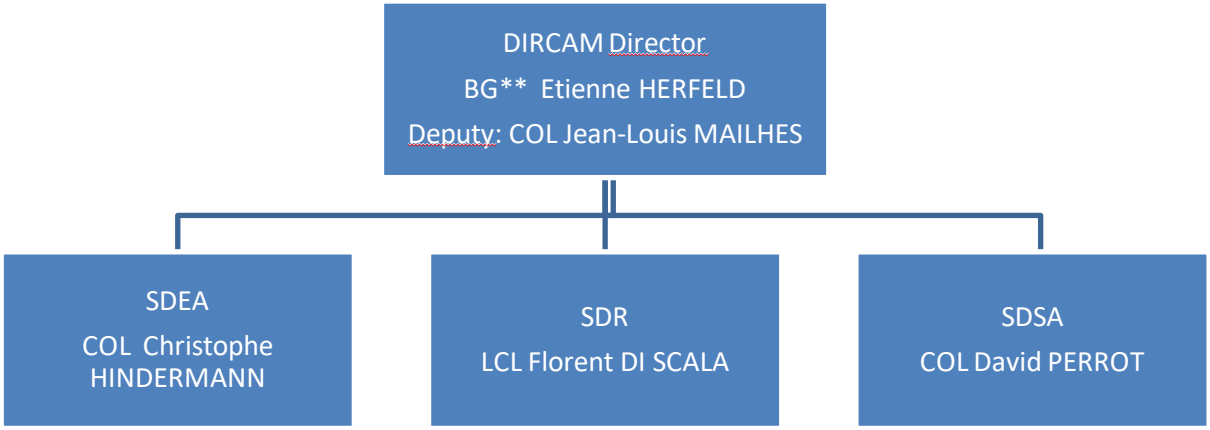

C. Implementation Objectives' links with other plans

The table below (extracted from the MPL3 Progress Plan 2020) shows for each implementation objective, the mapping of the L3 implementation Objectives to the corresponding SESAR Essential Operational Changes, the SESAR Solutions, the Deployment Program families, the ICAO ASBU, the EASA EPAS, the Network Strategy Plan, the Airspace Architecture Study Transition Plan (AAS TP) Milestones and the SESAR Key Features.

EOC	Level 3 Implementation Objectives	SESAR Sol.	DP family	ICAO ASBUs	EPAS	NSP	AAS TP	KF
CNS	ATC21-Composite surveillance ADS-B/WAM	#114	-	ASUR-B0/1 ASUR-B0/2	RMT.0679 RMT.0519	SO8/3 SO8/4	-	EAI
	COM10 - Migration from AFTN to AMHS	-	-	COMI B0/7	-	-	-	EAI
	COM11.1 - Voice over Internet Protocol (VoIP) in En-Route	-	3.1.4 3.2.1	COMI B2/1	-	SO8/4	AM-1.3	EAI
	COM11.2 - Voice over Internet Protocol (VoIP) in Airport/Terminal	-	-	COMI B2/1	-	SO8/4	-	EAI
	ITY-ACID - Aircraft identification	-	-	-	-	SO8/2	-	EAI
	ITY-AGDL - Initial ATC air-ground data link services	-	6.1.1 6.1.3 6.1.4	COMI B0/4 COMI B1/2	RMT.0524	SO4/1 SO8/3	AM-1.1	EAI
	ITY-AGVCS2 – 8.33 kHz Air-Ground Voice Channel Spacing below FL195	-	-	-	-	SO8/1	-	EAI
	ITY-SPI - Surveillance performance and interoperability	-	-	ASUR B0/1 ASUR B0/3	RMT.0679 RMT.0519	SO8/3 SO8/4	-	EAI
	NAV10 - RNP Approach Procedures to instrument RWY	#103	1.2.1 1.2.2	APTA B0/1 APTA B1/1 NAVS B0/2	RMT.0639 RMT.0445	SO6/5	-	AATS
	NAV11 - Precision Approach using GBAS CAT II/III based on GPS L1	#55	-	NAVS B1/1	-	-	-	HPO
iN	AOM13.1 - Harmonise OAT and GAT handling	-	-	-	-	SO6/2	-	OANS
	AOP11 - Initial Airport Operations Plan	#21	2.1.4	NOPS B1/3	-	SO6/2	-	HPAO

	AOP17 – Provision/integration of DPI to NMOC	#61	-	NOPS B0/4	-	-	-	HPAO
	COM12 - NewPENS	-	5.1.2 5.2.1	COMI B1/1	-	SO2/3 SO2/4 SO8/3 SO8/4	-	EAI
	FCM03 - Collaborative flight planning	-	4.2.3	NOPS B0/2	-	SO4/2 SO5/1 SO5/6	AM-1.14	OANS
	FCM04.2 - STAM phase 2	#17	4.1.2	NOPS B1/1	-	SO4/3 SO5/4	AM-1.11	OANS
	FCM05 - Interactive rolling NOP	#20, #21	4.2.2 4.2.4	NOPS B1/2	-	SO2/1 SO2/2 SO2/3 SO2/4	AM-1.12	OANS
	FCM06 - Traffic Complexity Assessment	#19	4.4.2	NOPS B1/4	-	SO4/3 SO5/4	AM-1.13	OANS
	FCM09 - Enhanced ATFM Slot swapping	#56	-	NOPS B1/7	-	SO6/1	-	OANS
	INF08.1 - Information Exchanges using the SWIM Yellow TI Profile	#35, #46	5.1.3, 5.1.4, 5.2.1, 5.2.2, 5.2.3, 5.3.1, 5.4.1, 5.5.1, 5.6.1	AMET B2/4 DAIM B2/1 SWIM B3/1	-	SO2/4 SO2/5 SO5/2 SO5/5	AM-1.5	EAI
	INF08.2 - Information Exchanges using the SWIM Blue TI Profile	#28, #46	5.1.3, 5.1.4, 5.2.1, 5.2.2, 5.2.3, 5.6.2	SWIM B3/1, TBO B3/1	-	SO5/2SO5/5	AM-9.1	EAI
dS	INF07 - Electronic Terrain and Obstacle Data (e-TOD)	-	1.2.2	DAIM B1/4 DAIM B1/4	RMT.0703 RMT.0722	SO2/5	-	EAI
	INF09 - Digital Integrated Briefing	#34		DAIM B1/7, AMET B1/4	-	SO2/5	-	EAI
	ITY-ADQ - Ensure quality of aeronautical data and aeronautical information	-	1.2.2	-	RMT.0722 RMT.0477	SO2/5	-	EAI
U-S	-	-	-	-	-	-	-	-

VS	AOP14 – Remote Tower Services	#12, #71, #52, #13	-	RATS B1/1	RMT.0624	-	-	HPAO
ATp	AOP04.1 - A-SMGCS Surveillance (former Level 1)	#70	2.2.1	SURF B0/2	MST.029	SO6/6	-	HPAO
	AOP04.2 - A-SMGCS RMCA (former Level 2)	-	2.2.1	SURF B0/3	MST.029	SO6/6	-	HPAO
	AOP05 - Airport CDM	#106	2.1.1 2.1.3	ACDM B0/2 NOPS B0/4 RSEQ B0/2	-	SO6/4	-	HPAO
	AOP10 - Time Based Separation	#64	2.3.1	WAKE B2/7	-	SO6/5	-	HPAO
	AOP12 - Improve RWY and Airfield safety with CATC detection and CMAC	#02	2.1.2 2.5.1	SURF B1/3	MST.029	SP6/6	-	HPAO
	AOP13 - Automated assistance to Controller for Surface Movement planning and routing	#22 #53	2.4.1	SURF B1/4	MST.029	SO6/6	-	HPAO
	AOP15 - Safety Nets for vehicle drivers	#04	-	SURF B2/2	MST.029	-	-	HPAO
	AOP16 - Guidance assistance through airfield lighting	#47	-	SURF B1/1	MST.029	-	-	HPAO
	AOP18 - Runway Status Lights	#01	-	SURF B2/2	MST.029	-	-	HPAO
	ATC07.1 - Arrival management tools	-	1.1.1	RSEQ B0/1	-	SO4/1	-	AATS
	ATC19 - Enhanced AMAN-DMAN integration	#54	-	RSEQ B2/1	-	SO6/5 SO4/1	-	AATS
	ENV01 – Continuous Descent Operations	-	-	APTA B0/4	-	SO6/5	-	AATS
	ENV02 – Airport Collaborative Environmental Management	-	-	-	-	-	-	HPAO
	ENV03 – Continuous Climb Operations	-	-	APTA B0/5	-	SO6/5	-	AATS
	NAV03.1 – RNAV1 in TMA Operations	#62	-	APTA B0/2	RMT.0639 RMT.0445	SO6/5	-	AATS

	NAV03.2 – RNP1 in TMA Operations	#09, #51	1.2.3 1.2.4	APTA B1/2	RMT.0639 RMT.0445	SO6/5	-	AATS
	SAF11 - Improve runway safety by preventing runway excursions	-	-	-	MST.007 RMT.0570 RMT.0703	-	-	HPAO
dA	AOM19.1 - ASM tools to support A-FUA	#31	3.1.1	FRTO B0/2	-	SO3/2 SO3/3	AM-1.8	OANS
	AOM19.2 - ASM management of real-time airspace data	#31	3.1.2	FRTO B1/3 NOPS B1/5	-	SO3/2 SO3/3	AM-1.8	OANS
	AOM19.3 - Full rolling ASM/ATFCM process and ASM information sharing	#31	3.1.3	NOPS B1/5 FRTO B1/3	-	SO3/2 SO3/3	AM-1.8	OANS
	AOM19.4 – Management of Pre-defined Airspace Configurations	#31	3.1.4	NOPS B1/6 FRTO B1/4	-	SO3/2 SO3/3	-	OANS
	AOM21.2 - Free Route Airspace	#33, #66	3.2.1 3.2.4	FRTO B1/1	-	SO3/1 SO3/4	AM-1.6 AM-1.10 AM-5.1	AATS
	ATC12.1 - MONA, TCT and MTCD	#27, #104	3.2.1	FRTO B1/5	-	SO3/1 SO4/1	AM-1.15 AM-5.1	AATS
	ATC15.1 - Initial extension of AMAN to En-route	-	1.1.2	-	-	SO4/1	-	AATS
	ATC15.2 - Extension of AMAN to En-route	#05	1.1.2	RSEQ B1/1 NOPS B1/8	-	SO4/1	AM-1.3	AATS
	ATC17 - Electronic Dialog supporting COTR	-	3.2.1	-	-	SO3/1 SO4/1	AM-1.3	AATS
	ATC18 - Multi Sector Planning En-route – 1P2T	#63	-	FRTO B1/6	-	SO4/1	AM-4.3 AM-5.1	AATS
	ITY-FMTP - Apply a common flight message transfer protocol (FMTP)	-	-	-	-	SO8/3	AM-1.3	EAI
TBO	ATC02.8 - Ground based safety nets	-	3.2.1	SNET B0/1 SNET B0/2 SNET B0/3 SNET B0/4	-	SO4/1	-	AATS
	ATC02.9 - Enhanced STCA for TMAs	#60	-	SNET B1/2	MST.030	SO4/1	-	AATS

	ATC20 – Enhanced STCA with DAP via Mode S EHS	#60	-	SNET B1/1	-	SO7/2	-	AATS
M3	NAV12 – ATS IFR Routes for Rotorcraft Operations	#113	-	APTA B0/6	MST.031	SO6/5	-	AATS

D. SESAR Solutions implemented in a voluntary way[3]

These SESAR Solutions are not included yet in the ATM MP L3 Plan.

EUROCONTROL is tasked by the SJU to identify the implementation progress of functionalities corresponding to validated SESAR Solutions published in the SJU Solutions Catalogue (https://www.sesarju.eu/newsroom/brochures-publications/sesar-solutions-catalogue), for which there is no implementation Objective (yet) in the ATM MP L3 Plan. This will allow to identify early movers and to gauge the interest generated by some of these functionalities, with the view of potentially addressing them with new Implementation Objectives in the ATM MPL3 Plan.

The specific description of the new 34 SESAR Solutions implemented in a voluntary way introduced in 2020 are hosted on the LSSIP SharePoint : New SESAR Solutions non-committed - Description

A facilitated questionnaire using the existing ATM MP L3 / LSSIP methodology is added to capture information on non-committed SESAR solutions. For practical reasons, since the LSSIP 2017 cycle the questionnaire is included in the LSSIP Annex.

SESAR Solution Code	SESAR Solution Title	Solution Description	Has the SESAR Solution been implemented in your State? (Y-N) - if "Yes" please report where	Are there implementation plans in your State for the SESAR Solution? (Y-N-N/A) - If "Yes" please report when and where it is planned - If "N/A" please justify
CNS CNS infrastructure and services				
#55	Precision approach using GBAS Category II/III	GBAS has limited (GBAS Local Object Consideration Areas) or no protection areas, usually located outside aircraft movement areas. This allows the reduction of runway occupancy times in LVP, reducing spacing between arrival aircraft. Use of GBAS Cat II/III eliminates ILS critical zones, enables flexible approaches, offers PA where ILS cannot due to geography and signal stability (immune to signal bends inherent in ILS), complements ILS at airports with multiple RWYs during LVP, the rationalization of some ILS thus reducing operation and maintenance costs and optimizing spectrum; offers PA at aerodromes without SBAS coverage or where PA performances cannot be achieved with SBAS. GBAS CATII/II improves resilience of airport capacity with fewer flight cancellations due to LVP in force. GBAS CATII/III will enable runway ends that are not ILS CATII/III equipped to be used for CATII/III operations as long as the runway is CATII/III qualified.	N	Y Paris CDG planned date not yet defined

[3] Referred as 'Non-committed' SESAR solutions in the MP L3 Report.

SESAR Solution Code	SESAR Solution Title	Solution Description	Has the SESAR Solution been implemented in your State? (Y-N) - if "Yes" please report where	Are there implementation plans in your State for the SESAR Solution? (Y-N-N/A) - If "Yes" please report when and where it is planned - If "N/A" please justify
#102	Aeronautical mobile airport communi-cation system (AeroMACS)	The aeronautical mobile airport communication system (AeroMACS) offers a solution to offload the saturated VHF datalink communications in the airport environment and support new services. The technical solution AeroMACS is based on commercial 4G technology and uses the IEEE 802.16 (WiMAX) standard. Designed to operate in reserved (aeronautical) frequency bands, AeroMACS can be used for ANSPs, airspace users and airport authority communications, in compliance with SESAR's future communication infrastructure (FCI) concept. AeroMACS is an international standard and supports globally harmonised and available capabilities according to ICAO Global Air Navigation Plan (GANP).	N	N
#109	Air traffic services (ATS) datalink using Iris Precursor	The Iris Precursor offers a viable option for ATS datalink using existing satellite technology systems to support initial four-dimensional (i4D) datalink capability. The technology can be used to provide end-to-end air–ground communications for i4D operations, connecting aircraft and air traffic management ground systems.	N	Y, dates to be defined according to aircraft equipage and commercial arrangement, possibly 2022,
#110	ADS-B surveillance of aircraft in flight and on the surface	The SESAR solution consists of the ADS-B ground station and the surveillance data processing and distribution (SDPD) functionality. The solution also offers mitigation techniques against deliberate spoofing of the ground system by outside agents. These techniques can also be used to cope with malfunctioning of avionics equipment. SESAR has contributed to the relevant standards, such as EUROCAE technical specifications, incorporating new functionalities developed for the ADS-B ground station, ASTERIX interface specifications as well as to the SDPD specifications.	Y, Ajaccio and overseas territories	Planned in 2021 for Bastia and Bordeaux
#114	Composite Surveillance ADS-B / WAM	By allowing the use of ADS-B data that has been validated against data derived in parallel by a WAM system, the system can help to reduce the number of interrogations and number of replies and therefore reduce the 1030/1090 MHz RF load and improve spectrum efficiency. It achieves this through the integration of validated data items into the WAM channel, thereby preventing a need to re-interrogate the data item. Since the two surveillance layers share hardware components, the system offers improved cost efficiency. Furthermore, the use of the system contributes to an improved security by successfully mitigating associated ADS-B threats.	N	Yes Planned Chambery 2023, in cooperation with skyguide

SESAR Solution Code	SESAR Solution Title	Solution Description	Has the SESAR Solution been implemented in your State? (Y-N) - if "Yes" please report where	Are there implementation plans in your State for the SESAR Solution? (Y-N-N/A) - If "Yes" please report when and where it is planned - If "N/A" please justify
		SESAR has contributed to the relevant standards, such as EUROCAE technical specifications for WAM and ADS-B that are implementing this "composite" concept.		
PJ.14-02-06	AeroMACs integrated with ATN, Digital Voice and Multilink	The SESAR Solution PJ14.02.06 ("AeroMACS integrated with ATN, Digital Voice and Multilink") builds upon Solution #102 (AeroMACS) published in the SESAR 1 catalogue. AeroMACS is part of the Future Communication Infrastructure supporting the Airport Surface Component and is reflected within the ICAO Global Air Navigation Plan (GANP) and the ICAO Communication Roadmap in the GANP.	N	N
PJ.14-03-04	RNP1 reversion based on DME-DME	Alternative-Position, Navigation and Timing (A-PNT) is the technological enabler related with the need to introduce ground and airborne systems that can support currently defined and standardized PBN and other CNS-based operations and provide a backup with the required level of performance in case of degradation and absence/loss of GNSS. According to the existing regulations, RNP1 navigation integrity requires the use of GNSS positioning. Therefore, the GNSS loss may become a critical issue for the design of TMA airspace complying with PBN-IR.	N	Depends on DME-DME for RNP1 standards

#18	Calculated take-off time (CTOT) and target time of arrival (TTA)	Target times (TT) shall be applied to selected flights for ATFCM purposes to manage ATFCM at the point of congestion rather than only at departure. Where available, the target times of arrival (TTA) shall be derived from the airport operations plan (AOP). TTAs shall be used to support airport arrival sequencing processes in the en-route phase. NM's systems shall be able to adjust CTOTs based on refined and agreed TTAs at the destination airport; TTAs shall be integrated into the AOP for subsequent refinement of the NOP. Flight data processing systems may need to be adapted in order to process downlinked trajectory data (ADS-C EPP). In a first step, NM system will transmit calculated target times (TT) at the most penalising regulation reference point in addition to CTOT to all concerned users. Those users should manage this new feature so potential system upgrades should be foreseen.	N	Y Paris ACC, CDG, ORY
#57	User-driven prioritisation process (UDPP) departure	Airspace Users are allowed to change among themselves (via the pre-departure management process in CDM airports) the priority order of flights in the pre-departure sequence. The departure time will be automatically communicated/coordinated with the Network Management Function (NMF) via the DPI message as described in the A-CDM concept.	Y, Paris CDG	-
#67	AOC data increasing trajectory prediction accuracy	Europe's vision to achieve high-performing aviation by 2035 builds on the idea of trajectory-based operations – meaning that aircraft can fly their preferred trajectory while minimising constraints due to airspace and service configurations. SESAR has introduced an early version, which makes use of flight planning data sourced from airline operational control (AOC) to help controllers optimise aircraft flight paths. This solution represents an initial step towards the extended flight plan solution and flight and flow information for a collaborative environment (FF-ICE).	N	Y, date and location to be defined
PJ.09-03-02	Collaborative network management functions	Some elements of AOP/NOP information are important to consider in AU flight planning in order to better align AU and NM trajectories, improve AU fuel prediction and support target times management. These elements are: • The departure taxi time • The planned departure runways • The planned SID. With the implementation of airport CDM procedures, NM receives from most of the major airports up-to-date and reliable information in DPI messages and updates much more dynamically than the FOC this information in its planned trajectory thanks to live information received from airports.		Yes Date to be defined, Lyon Saint-Exupéry Nice Côte d'Azur Paris CDG Paris Orly

		Therefore, this solution defines new information flows for AUs to consider same information as NM related to the departure phase of the flight.		
PJ.15-01	Sub-regional Demand Capacity Balancing Service	The purpose of the Sub-regional Demand Capacity Balancing (DCB) Service (Supporting the DCB capability within the ICAO Global Concept) is to facilitate an improved usage of the airspace at the sub-regional level, through enhanced planning and consequently more appropriate tactical intervention in support of AU and AO operations.		Not yet assessed
PJ.17-01	SWIM TI purple profile for airground advisory information sharing	The SWIM-TI Purple Profile (PP) consists of open standards based on reliable and secure SWIM technical infrastructure enabling the integration of the aircraft into the SWIM network, thus giving it access to air/ground SWIM services (e.g. uplink and downlink of meteorological and aeronautical information). It will enable operational applications to uplink meteorological and aeronautical information using SWIM, as well as downlink (e.g. aircraft provided meteorological observations) of information using SWIM.	N	
		dS Digital AIM and MET services		
#34	Digital integrated briefing	This objective provides digital AIS data, in particular Digital NOTAM (encoded as “events” in AIXM format), and digital MET data (METAR, TAF, SIGMET in the ICAO iWXXM format) to pilots and dispatchers in the form of digital briefing products and services, which are merged (joint) with the geographical and planned flight trajectory information, and presented (visualised) in a graphical way. The digital integrated briefing is currently targeted for ground use (FOC/WOC, pre-flight briefing rooms and ARO offices). Some enablers (Digital NOTAM and digital MET data) support the use in the cockpit, in all phases of flight, while enablers for transmission into the cockpit are not yet mature (see IS-0206 Digital Integrated Briefing during flight execution phase).	N	N
PJ.15-10	Static aeronautical data service	The Common Service for Aeronautical Information Management significantly reduces the overall cost of providing AIM services by using a common, managed service instead of operating numerous individual national systems. Instead of duplicating aeronautical information and manually updating the aeronautical information in different Ground Systems, the Common Service for Aeronautical Information Management offers a means of maintaining and validating the aeronautical information once and centrally. The ground systems will have to replace their legacy data storage by an interface based on SWIM allowing direct access to quality assured and consistent aeronautical information.	N	Y es Ongoing within the “GeoDB” Implementation Project together with Aeroport de Paris

PJ.15-11	Aeronautical digital map service	The Aeronautical Digital Map Common Service (COSER) provides users the capability to retrieve graphical representation of aeronautical data/information. The output is a standardized/harmonised graphic information that can be retrieved by individual requests demanding specific geographical areas. The retrieval can be performed using regular internet protocols or through SWIM services. Instead of having to perform the rendering of aeronautical information as a visualisation in a GIS viewer or aeronautical map over and over again for different systems, generating tremendous development efforts and potentially diverging and unharmonized representations that could potentially lead to safety risks, a harmonized visualisation for different use-cases can be provided centrally.	N	Yes Ongoing within the "GeoDB" Implementation Project together with Aeroport de Paris
PJ.18-04a	Aeronautical information management (AIM) information	The Aeronautical Dataset Service supports the provision of the aeronautical information product digital data set as defined by ICAO Annex 15: AIP data set, Obstacle data set, Terrain data set, Airport mapping data set, Instrument flight procedure data set. Providing dataset in digital format will improve the consistency and quality of the data and enhance the exchange of information. The Aeronautical Dataset Service will also help service providers meet the requirements for the provision of digital dataset information required by ICAO. The service is created fully in line with the requirements and guidelines defined in the EUROCONTROL SWIM Specifications.	N	Yes Ongoing with the "SEPIA" Implementation Project
PJ.18-04b-01	Meteorological (MET) information-GWMS	This solution addresses the provision of local MET information to airports and considers the use of existing sensors and MET capabilities for the measurement and generation of MET data. The Glide Wind Profile has been developed as the provider of glide wind data to the Ground Weather Management System (GWMS) using mature sources like Radar and Lidar sensors. The purpose is to enhance separation procedures based on the collected wind data. The METForTAM is an information service that provides enhanced local MET information (e.g. METEO forecasts and observations) to a specific airport (airport operational centre, APOC). The developed capability and information service aim at enhancing MET data provision capabilities in order to improve the accuracy and timely delivery of expected Meteorological conditions at an airport.		N/A
PJ.18-04b-02	Meteorological information (MET) services-Cb-global	Cb-global capability uses data from geostationary satellites to detect, track, and nowcast thunderstorms in order to provide pilots an overview of the current weather hazard situation beyond the limited view of the on-board radar. It is relevant for the upper airspace en-route and enables a pilot to strategically plan a safe and smart flight route around the thunderstorms well ahead in time instead of flying tactical manoeuvres and searching for gaps between the thunder cells.		N/A

#11	Continuous descent operations (CDO) using point merge	Progressive implementation of procedures for Continuous Descent Operations (CDO) and Continuous Climb Operations (CCO) in higher density traffic or to higher levels, optimised for each airport arrival/departure procedure	Y, Paris CDG North-West Arrivals	-
#23	D-TAXI service for controller-pilot datalink communications (CPDLC) application	Use of data link communications between the Tower Controllers and the flight crew during surface movement. It is based on the D-TAXI service from the CPDLC application, as standardised by RTCA SC214/EUROCAE WG78 (DO-350 & DO-351). It also includes the access to this service for end users, through the Tower CWP for the ATCO and through the aircraft DCDU for the flight crew.	N	N/A, solution not fully mature in SESAR 1
#48	Virtual block control in low visibility procedures (LVPs)	In low visibility conditions, the tower controller working positions are provided with Virtual Stop Bars (VSB) to improve low visibility operations and enhance controllers' situational awareness. Virtual Stop Bars can be used by the controller to reduce block-sizes once procedural control applies. Additional controller safety nets will be available to indicate violations of Stop Bars (including Virtual Stop Bars) and to monitor aircraft for any kind of unauthorised movement (Watch Dog).	N	N
#107	Point merge in complex terminal airspace	This new procedure design builds upon precision navigation technology (P-RNAV concept) for merging traffic into a single entry point, which allows efficient integration and sequencing of inbound traffic together with Continuous Descent Approaches (CDA).	N	N
#108	Arrival Management (AMAN) and Point Merge	Point Merge in high density environment and complex Extended TMA (E-TMA) sectors replaces radar vectoring with a more efficient and simplified traffic synchronisation mechanism that reduces communication workload and increases collective traffic predictability.	Y, Paris CDG North-West Arrivals	-
#116	De-icing management tool	The solution increases the accuracy of information related to when the procedure is going to take place, how long it will take and when the aircraft will be ready to taxi for departure, which is currently calculated by predetermined estimates. The solution means that air traffic controllers no longer need to work without situational awareness of de-icing activities and needing to make their own estimates of when aircraft are ready for departure. The solution envisages that de-icing operations are no longer characterised by the A-CDM concept as 'adverse conditions', i.e. a state that is in need of collaborative recovery procedures, but rather a part of normal operations in the winter period. The DIMT allows for the scheduling and monitoring of de-icing operations. It is an internet browser-based tool that addresses three distinct procedures for de-icing: - Remote de-icing, which occurs at a specific	Y Similar solution deployed in CDG	Solution mainly applicable to Airport operators

		location on the airport away from the parking stand; - On-stand de-icing, which occurs just before the aircraft leaves its stand; and - After-push de-icing, which occurs after the aircraft has pushed back from the stand and is positioned to start taxiing after de-icing.		
#117	Reducing Landing Minima in Low Visibility Conditions using Enhanced Flight Vision Systems (EFVS)	The SESAR Solution "Reducing landing minima in low visibility conditions using enhanced Flight vision systems (EFVS)" is intended for flight crews and corresponds to the use of EFVS visual based technologies displayed in HUD or an equivalent display system. The objective is to provide operational credit in approach as permitted per EASA EU 965/2012 and its coming amendments (NPA 2018-06 AWO) to face to Low visibility conditions. Enabling EFVS operations with operational credits provides a greater availability of suitable destination and alternate aerodromes during periods of reduced visibility. This effectively reduces the number of weather-related delays, cancellations or diversions of flights to CAT II/III aerodromes, permits shorter routings and reduced fuel costs, a faster return to scheduled operations, and less passenger inconveniences. A unique advantage of the EFVS on board solution is that it is mainly supported by the aircraft system instead of airports and the need of complex and costly ground infrastructures as those implemented in CATII/III airports. From a global ATM network standpoint, the EFVS operation allows to retain traffic at most of secondary aerodromes by providing operational credit at most of runway ends with precision or non-precision landing minima (LPV, LNAV/ VNAV, ILS CAT1, etc.). The operational credit provided by EFVS is particularly important regarding secondary aerodromes because they usually have CAT1 or higher than CAT 1 RVR - DA/DH minima and are therefore potentially more frequently impacted by adverse weather conditions. In addition, EFVS capability is a key operational advantage more especially for the business aviation community that is mainly composed of small/ medium operators with limited resources and operating frequently at small/ medium airports. Beyond operational credit, the Vision Systems such as the EFVS improves situational awareness in all weather conditions for all operators at all airports contributing supporting decision-making and increasing safety margin all the time.	Y Le Bourget for validation	Deployment plan to be defined
PJ.02-01-01	Optimised Runway Delivery on Final Approach	Optimised Runway Delivery (ORD) tool is the ATC support tool to enable safe, consistent and efficient delivery of the required separation or spacing between arrival pairs on final approach to the runway-landing threshold. The ORD tool can be used to support the application of Distance Based and Time Based wake separation rules e.g. ICAO, RECAT-EU, PWS-A and WDS-A wake separation schemes, and aims at consistently and efficiently managing the	N	Evaluation at CDG under study

		spacing compression that occurs on short final from the lead aircraft crossing the deceleration fix.		
PJ.02-01-02	Optimised Separation Delivery for Departure	"Optimised Separation Delivery for Departure" (OSD) is the ATC support to enable safe, consistent and efficient delivery of the required separation or spacing between departure pairs from the follower aircraft becoming airborne. Different variants of the tool have been developed in SESAR 2020 Wave 1. These variants include an automatic wake count down timer and a distance indicator displayed on the tower controller's radar screen. The OSD tools can be used to support the tower controllers in the delivery of time or distance separations. This includes the departure wake separations of ICAO, RECAT-EU, PWS-D and WDS-D as well as departure route separations such as the SID separations and MDIs and ADIs. In airports that require support for both TB and DB separation and spacing rules a combined TBS / DBS variant of the OSD tool may be necessary.	N	evaluation at CDG under study
PJ.02-01-03	Weather-Dependent Reductions of Wake Turbulence Separations for Departures	Weather Dependent Separations (WDS) for departures is the conditional reduction or suspension of wake separation minima on path of departures over the straight-out initial departure path, applicable under pre-defined wind conditions, so as, to enable runway throughput increase compared to the applicable standard weather independent wake separation minima. This is on the basis that under the pre-defined wind conditions the wake turbulence generated by the lead aircraft is either wind transported out of the path of the follower aircraft on final approach or has decayed sufficiently to be acceptable to be encountered by the follower aircraft. The solution covers WDS cross wind concept for departures in segregated mode runway operations.	N	evaluation at CDG under study
PJ.02-01-04	Wake Turbulence Separations (for Arrivals) based on Static Aircraft Characteri-stics	Static PairWise Separation for arrivals (S-PWS-A) is the efficient aircraft type pairwise wake separation rules for final approach consisting of both the 96 x 96 aircraft type based wake separation minima (for the most common aircraft in ECAC area) and the twenty wake category (20-CAT) based wake separation minima for arrival pairs involving all the remaining aircraft types. The S-PWS are applied using a separation delivery tool; the pairwise separations will be used as input into the separation delivery tool.	N	Planned at CDG
PJ.02-01-05	Weather-Dependent Reductions of Wake Turbulence Separations for Final Approach	"Weather-Dependent Reductions of Wake Turbulence Separations for Final Approach" aims at the optimisation of the ICAO wake turbulence separation by use of weather-dependent separation minima on arrivals (WDS-A), applicable under given wind conditions. This allows conditional reduction or suspension of separation minima for most aircraft pairs, enabling runway throughput increase compared to ICAO scheme, whilst maintaining acceptable levels of safety. This is on the basis that under the pre-defined wind conditions the wake turbulence generated by	N	evaluation under study at CDG

		the lead aircraft is either wind transported out of the path of the follower aircraft on final approach or has decayed sufficiently to be acceptable to be encountered by the follower aircraft.		
PJ.02-01-06	Wake Turbulence Separations (for Departures) based on Static Aircraft Characteri-stics	The Static PairWise Separation for Departures (S-PWS-D) concept optimises wake separations between departures on the initial departure path by moving from schemes defined by a small number of wake categories (4 to 7 wake categories) to a scheme defined between aircraft type pairs for the 96 aircraft types frequently at European major airports, together with a scheme defined by a larger number of wake categories (20-CAT (6-CAT + 14-CAT)) for other aircraft type combinations. S-PWS for departures are applied using the OSD tool; the pairwise separations will be used as input into the OSD tool.	N	Planned at CDG
PJ.02-01-07	Wake Vortex Decay Enhancing Devices	PJ.02-01-07 is a technological solution reducing the Wake Turbulence Risk via positioning of decay enhancing devices that accelerate the Wake Vortex Decay in Ground Proximity. Wake Vortex Decay Enhancing Devices, so-called plate lines, can be installed at any major European airport in order to increase safety by reducing the risk of low-altitude wake encounters.	N	Not yet assessed
PJ.02-03	Minimum-pair separations based on required surveillance performance (RSP)	This solution has a technical aspect and an operational aspect. On the technical aspect, the solution has validated to V3 that the application of 2NM minimum radar separation (MRS) between two aircraft established on the final approach course to the same runway sufficiently mitigates the risk of collision between them, provided the required surveillance performance (RSP) are complied with. In addition to the MRS, runway occupancy time and wake separation constraints need to be considered when determining the minimum separation or spacing required to be applied between two aircraft (the largest of the constraints will need to be applied). The routine application of the 2NM minimum on final approach may require an increased consistency and accuracy in the separation delivery service on final approach. More specifically, the maximum acceptable rate of under-separated pairs on final approach may be lower if the minimum radar separation that is applied is 2NM than if it were to be 2.5 NM, because the consequences of an under-separation event are potentially more severe. For ATC facilities with a separation monitoring function (SMF) that alerts the supervisor, and also possibly the final approach controller, of a significant separation infringement on final approach, where there is currently a spacing minimum margin of 0.5 NM before the alert is triggered, consideration should be given to reducing this margin, e.g. to 0.2NM.	N	Not yet assessed
PJ.02-08-01	Trajectory based Integrated	Trajectory based Integrated RWY Sequence function establishes an integrated arrival and departure sequence by providing accurate Target Take off Times (TTOTs) and Target	N	Not yet assessed

	Runway Sequence	Landing Times (TLDTs), including dynamic balancing of arrivals and departures while optimising the runway throughput. It supports TWR and APP ATCOs. The look ahead Time Horizon is the time at which flights become eligible for the integrated sequence. The Stable Sequence Time Horizon is the time horizon within which no automatic swapping of flights in the sequence will occur but landing and departure time will still be updated. The value of these time horizons is determined by the local implementation and they are not necessarily the same for arrivals and departures. The Integrated Runway Sequence is planned before Arrival flights top of decent and linked with Airport CDM procedures for departures.		
PJ.02-08-02	Runway Manager	Runway Manager (RMAN), is a support tool for the Tower Supervisor to determine the optimal runway configuration and distribution of demand according to capacity and local constraints. During the Planning Phase, the RMAN checks the intentional demand versus the available capacity and it is capable of forecasting imbalances, raising alarms and alerts based on the indicators provided. In the Execution Phase, the RMAN monitors departure, arrival and overall delay and punctuality, in addition to the capacity shortage proposing changes if necessary. RMAN continuously computes the optimal runway configuration and the associated Forecasted Landing (FLDT) and Take Off (FTOT) Times of arrival and departures flights that maximises the runway throughput. The Forecasted Times calculated by the RMAN are provided to the Integrated Runway Sequence using them to calculate the final Target Times. As a conclusion TLDT and TTOT calculated by the Integrated Sequence, follow the Runway DCB Plan allowing the feedback to the RMAN to monitor the status of the Runway and to detect possible imbalances.	Y	CDG runway manager tool
PJ.02-08-03	Increased Runway Throughput based on local ROT characterization (ROCAT)	The intention is to reduce the in-trail separation on final approach by taking into account the Runway Occupancy Time (ROT). A new separation minimum is computed based on the prediction of the ROT, the MRS and WTC separation. ROCAT defines separation sub-categories based on ROT, wake minima from RECAT and reduced radar separation based on ICAO approved minima. The solution consists on developing the runway occupancy minima through big data analytics to identify a ROT per aircraft type using machine learning techniques and historical data. A change in the separation minima used by ATCO for the aircraft on final approach is supported by decision support tool called LORD (Leading Optimised Runway Delivery). ROCAT can increase runway throughput where the traffic is predominantly medium aircraft,	N	Not yet assessed

		especially where RECAT is inefficient due to the lack of wide-body aircraft types.		
PJ.03a-04	Enhanced visual operations	"Enhanced Visual Operations" are enabled by enhanced vision systems (EVS), synthetic vision systems (SVS), which make more aircraft capable of LVC operations and enable more efficient approach, landing and taxi and operations in LVC. This is applicable to all platforms, even if the main airline platforms have auto land capabilities to facilitate approaches in LVC. The solution consists of 3 activities focusing on: • HMD fitted with taxi routing and traffic information for easing taxi operation in degraded weather conditions. • HMD equipment as an alternative to HUD equipment for EFVS operations using legacy EFVS sensors. • Use of active sensor with improved performance to overcome the observed limitation of EVS legacy sensors. The Vision based System is an on-board alternative solution to heavy and expensive ground infrastructures for approach in LVC.	N	N/A On board solution
PJ.03b-05	Traffic alerts for pilots for airport operations	Although TCAS has been in use since long time ago, there is currently no aircraft system to prevent runway collisions. "Traffic alerts for pilots for airport operations" improves safety during airport operations. The flight crew is provided with alert when the on-board system detects a risk of collision with an aircraft on runway or taxiways. The improvement is further split into 2 implementations: • The mainline aircraft implementation consists of an on-board system, which detects risk of collision with other traffic during runway operations and provides the Flight Crew with aural alerts (mostly 'warning' alert level). • The business aircraft implementation consists of an on-board system, which detects potential and actual risk of collision with other traffic during runway and taxiway operations and provides the Flight Crew with visual and aural alerts (indication, caution and warning alert levels).		N/A On board solution
PJ.15-02	E-AMAN Service	The E-AMAN Common Service provides functions necessary to operate Arrival Management with an extended horizon in an environment where multiple actors are involved e.g. multiple Airports, AMANs, ACCs, UACs and other interested parties, e.g. NM (i.e. Cross Boarder Arrival Management). The capability provided by the E-AMAN Federation Common Service is the capability of harmonising the output of local E-AMAN technical capabilities on different geographic or organisational levels (ECAC, FAB, however any other scaling could be considered in principle). The output of the Common Service is delivered to the end-users (e.g. adjacent ACCs / UACs). By this, relocation of functions between stakeholders is performed.	Y	extended AMAN and AMAN SWIM service for CDG and Orly

#10	Optimised route network using advanced RNP	Based on Advanced-RNP navigation specification, design of optimised routes e.g. spaced parallel routes, Fixed Radius Transition (FRT) and Tactical Parallel Offset (TPO) further enhanced by onboard performance monitoring and alerting and the execution of more predictable aircraft behaviour	N	N
#118	Basic EAP (Extended ATC Planning) function	The basic Extended ATC Planner aims at bridging the gap between Air Traffic Flow and Capacity Management (ATFCM) and Air Traffic Control (ATC) providing real-time and fine-tuning measures to solve ATFCM hotspots, and to perform early measures to alleviate complexity closest to ATC activities. The solution consists of an automated tool and associated procedures supporting the basic communication between the Local DCB position and the Controllers' Work Positions allowing the EAP and the ATC team in identifying, assessing and resolving local complexity situations. The basic EAP relies on a real time integrated process for managing the complexity of the traffic with capability to reduce traffic peaks through early implementation of fine-tuned solutions to solve workload imbalances at the local level, compatible with the short-term timeframe of execution phase of the flights.	Y, Brest, Reims, Bordeaux, Aix, Athis (4Me systems)	
PJ.06-01	Optimised traffic management to enable free routing in high and very high complexity environments	"Optimized traffic management to enable Free Routing in high and very high complexity environment" supports the implementation of FRA across ACC/FIR borders by contributing to the improvement of ATM at local level. More precisely, it focuses on the improvement of Separation Provision to enable Free Routing operations within high and very high complexity cross-border environments in Upper En Route airspace. The Solution is not targeting unrestricted free routing operations but aims at enabling safe and efficient operations in FRA with minimum structural limits to manage airspace and demand complexity. The Solution also relies on the Network Management (NM) function to cope with any Demand and Capacity imbalances created from changes in dominant traffic flows in FRA through the monitoring of the traffic complexity levels together with the level of the traffic demand.		Yes All ACC 2025
PJ.10-01a1	High Productivity Controller Team Organisation in En-Route (including eTMA) (1PC – 2ECs)	"High Productivity Controller Team Organisation in En-Route (including eTMA)" consists of developing new concepts of operation and identifying the nature of system support required for operating in team structures that are not the usual Planner/Executive (1PC – 1EC) two-person ATC sector team. In particular, the Multi-Sector Planner (MSP) where a Planner Controller has responsibility for the airspace under the executive control of two independent Executive Controllers (1PC – 2ECs).		N

		The SESAR Solution "High Productivity Controller Team Organisation in En-Route (including eTMA)" focused on the typical one Planner Controller to 2 Executive Controllers MSP organization and team organisation in eTMA (lower En Route sectors) as well as in En Route.		
				
#06	Controlled time of arrival (CTA) in medium-density/ medium-complexity environments	The CTA (Controlled Time of Arrival) is an ATM imposed time constraint on a defined point associated with an arrival runway, using airborne capabilities to improve arrival management. When a time constraint is needed for a flight, the ground system may calculate a CTA as part of the arrival management process, and then it may be proposed to the flight for achievement by avionics within required accuracy. Airborne information may be used by the ground system in determining the CTA (e.g. ETA min/max) and in monitoring the implementation of the CTA.	N	To be considered for future, depending on fleet equipage and SESAR2020 results.
#08	Arrival management into multiple airports	The system provides support to coordination of traffic flows into multiple airports to enable a smooth delivery to the runways. The 'Center Manager' (CMAN) which accompanies the AMANs of the airports generates a combined planning for several arrival streams into different airports by calculating the sequence of aircraft flying towards an area where their routes intersect. By imposing an adequate spacing of the aircraft in that area, a Time To Lose (TTL) for the appropriate upstream E-TMA sector is calculated to meet this constraint. Both AMAN-TTL for the runway and TTL for the E-TMA sector are superimposed and presented to the upstream en-route sector controllers.	N	N
#100	ACAS Ground Monitoring and Presentation System	The ACAS provides resolution advisories (RAs) to pilots in order to avoid collisions. Controllers rely on pilots to report RAs by radio as they occur in accordance with ICAO regulations. However, these reports can come late, incomplete or are, absent in some instances. This solution consists of a set of monitoring stations and a server system, which enable the continuous monitoring and analysis of ACAS RAs and coordination messages between airborne units from the ground.	N	N
#101	Extended hybrid surveillance	This solution consists of an enhanced TCAS capability, adding passive surveillance methods and reducing the need for active Mode-S interrogations. By making fewer active interrogations, this solution allows the aircraft to significantly reduce the usage of the 1090 MHz frequency.	N	N/A airborne solution
PJ.07-01-01	AU Processes for Trajectory Definition	The Flight Delay Criticality Indicator (FDCI) information, for a flight having an ATFCM delay, is provided by the Airspace User to both NM and FMPs to indicate that the concerned flight is critical for his business and that he requested		Not yet assessed

		that the flight progresses and arrives as much as possible on time. • The resolution of an FDCI request is NMOC driven upon the reception of the FDCI improvement request and when more than one regulation is affecting the flight, alternatively in the case there is only one regulation affecting the flight the local FMP can requests the resolution to NMOC. • The resolution is mostly a regulation exclusion or delay reduction (force slot) by NMOC. In this, the focus is put on reactive FDCI that means the FDC flight has an ATFCM delay and slot issued.		
PJ.10-02a1	Integrated tactical and medium Conflict Detection & Resolution (CD&R) services and Conformance Monitoring tools for En-Route and TMA	Integrated tactical and medium conflict detection & resolution (CD&R) services and conformance monitoring tools for En-Route and TMA aims at improving the separation (tactical layer) in the En-Route and TMA (but not APP) operational environments through improved ground trajectory prediction. This is achieved using existing information on lateral and vertical clearances that are known by the ground system and airborne information such as Mode S data. This solution is built on SESAR 1 Sol. #27. New features and enhancement brought by PJ10.02a1 are : • Extension of TCT to all environments : TMA & ER • Improvement of the MTCD to handle level segments • Enhanced resolution features for MTCD & TCT including what-if and what-else probes. • Conformance monitoring tool based on improved ground trajectory prediction and enriched with additional alerts, such as rate monitoring.		Yes at least partially (TCT, Conformance monitoring tools)
PJ.18-02c	eFPL supporting SBT transition to RBT	This solution addresses the technical enablers supporting the distribution of eFPL information to ATC systems in order to improve the ATC prediction with additional information to better assess the expected sector load and to reduce the number of false conflict detections, as well as to provide the ATCO with better knowledge of airline intentions thanks to a more accurate profile and additional elements such as ToC or ToD. The main actors are the Network Manager that provides the eFPL distribution service, and the ATS service providers that integrate and use the information in the ATC systems.		Yes date to be defined

				
PJ.05-02	Multiple remote tower module	The main driver for MRTM (multiple remote tower module) is increased cost efficiency. The objective is to implement a MRTM that allows the ATCO to maintain situational awareness for 2 or 3 airports simultaneously (including traffic mix of IFR and VFR, as well as aerodrome vehicles). MRTM requires advanced features of the visual reproduction as well as additional voice services. It is assumed that an ATCO can hold endorsements for up to 3 (single) different airports. There is a fixed allocation of airports to a set of MRTMs. However, in case of high workload, due to e.g. emergency, high traffic volumes or degraded mode, the ATCO can split one airport into a spare MRTM if required. The prerequisite for multiple remote tower operations is the single remote tower operations.		Y
PJ.16-03	Enabling rationalisation of infrastructure using virtual centre based technology	This solution enables the separation of the data centre where the data is produced (the ATM Data Service Provider - ADSP) from the ATCOs location (the Virtual Centre ATSU). Virtual Centre is a grouping of Air Traffic Service Units (ATSU), possibly geographically separated, sharing ATC operations amongst themselves using data services provided by one or more ADSPs through interfaces defined in Service Level Agreements, in a safe and secure manner. This decoupling delivers the flexibility and performance aspects of the services to ensure the ability of the virtual centre solution to at least support or to improve the operational performance.		Yes Paris ACC 2025
				
PJ.02-05	Independent rotorcraft operations at the airports	This solution refers to simultaneous and non-interfering operations through SBAS (and GBAS as an optional enabler) approach/departure procedures independent from the main runway and dedicated only to rotorcraft operations. The aim is to move rotorcraft operations from the active runway to facilitate fixed wing aircraft. Specific PBN RNP0.3 IFR procedures to/from an existing VFR FATO shall be deployed to reach a point-in-space (PinS) to access FATO. The solution targets, in particular, relatively large and very large airports and high complexity airspaces.		Not yet assessed

PJ.01-06	Enhanced rotorcraft operations and GA operations in the TMA	"Enhanced Rotorcraft operations in the TMA" integrate pilot support of both EVS (enhanced vision systems) including visual segments and automated flight path following by autopilot system. Advanced Point-In-Space RNP approaches and departures to/from FATO are based on SBAS navigation. The corresponding rotorcraft specific contingency procedures in case of loss of communication are defined. The pilot is supported during these operations by dedicated symbology presented on a Head Mounted Display system.		Not yet assessed

E. Surveillance (SUR)

European ATM Surveillance data are captured to enable Network performance improvements and ensure global interoperability.
This Annex includes Surveillance implementation information related to projects, sensors and data integration.
The objective for the inclusion of this information in LSSIP is to consolidate the data collection process and increase efficiency by avoiding parallel surveys.
The corresponding tables have been prefilled with information already available from recent surveys within the surveillance area.

For practical reasons to harmonise the reporting, since the LSSIP 2020 cycle the questionnaire is included in the LSSIP Annex.

Surveillance Projects

This section includes Surveillance system projects covering the full chain from Sensor to Surveillance data integration into FDPS and CWP.

Activity Description Area / Airspace	System Description	Expected contribution to the Key Performance[4] Areas	Schedule
Area/Name: French Polynesia **Objective:** Coverage **Airspace**: ENR/TMA/CTR **Service**: Tier 3 (Information only **Density**: low **Traffic**: General	**ADS-B** **Sensor/Sites**: 5 **Provider**: Thales **Coverage:**	**Capacity:** No (no separation) **Operational-Efficiency:** **Safety:** Yes (air traffic picture **Security:** **Environment:** No **RF/Spectrum:** **Cost-Efficiency:** Yes - will allow SSR radar decommissioning by 2024 when Tier 1 is allowed and operational. Tier 1 is expected 2021.	**Sensor installation date:** Deployed: 2017 **Operational date:** 2018 **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**
Area/Name: French Guyana **Objective:** Coverage **Airspace**: ENR/TMA/CTR **Service**: Tier 3 (Information only) **Density**: low **Traffic**: General	**ADS-B** **Sensor/Sites**: 5 **Provider**: Thales **Coverage:**	**Capacity:** No (no separation) **Operational-Efficiency:** **Safety:** Yes (air traffic picture) **Security:** **Environment:** No **RF/Spectrum:** **Cost-Efficiency:** No	**Sensor installation date:** ADS-B trials launched in 2015. **Operational date:** 2020. **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**

[4] Check NOP for better KPI and link to performance improvements.

Activity Description Area / Airspace	System Description	Expected contribution to the Key Performance[4] Areas	Schedule
Area/Name: Bordeaux **Objective:** Coverage **Airspace**: CTR/TMA/ENR **Service**: 3 NM separation **Density**: medium **Traffic**: General	**ADS-B** **Sensor/Sites**: 1 **Provider**: **Coverage:**	**Capacity:** Yes in case of outage of Bordeaux Mode S radar **Operational-Efficiency:** **Safety:** Yes (in case of outage of Bordeaux Mode S radar – no overage below 2500 ft.) **Security:** **Environment:** **RF/Spectrum:** **Cost-Efficiency:**	**Sensor installation date:** Project postponed 2021 **Operational date:** **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**
Area/Name: Bastia, Corsica **Objective:** Coverage **Airspace**: CTR, TMA **Service**: information **Density**: low **Traffic**: General	**ADS-B** **Sensor/Sites**: 1 **Provider**: **Coverage:**	**Capacity:** No (no separation) **Operational-Efficiency:** **Safety:** Yes (complement radar coverage below 3000 ft.) **Security:** **Environment:** No **RF/Spectrum:** **Cost-Efficiency:** No	**Sensor installation date:** Project ongoing Commissioning expected 2021 **Operational date:** **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**

Activity Description Area / Airspace	System Description	Expected contribution to the Key Performance[5] Areas	Schedule
Area/Name: Nice TMA NE corner **Objective:** Coverage **Airspace**: ENR/TMA/CTR **Service**: 3 NM separation **Density**: High **Traffic**: General	**Type: WAM with ADS-B capability** **Sensor/Sites**: 5 **Provider**: Thales Expanding MLat to WAM **Coverage:**	**Capacity:** Yes. Airport capacity will be reduced if loss of radar coverage not compensated by WAM. **Operational-Efficiency:** **Safety:** Yes. Mitigate a radar coverage loss due to real estate project. **Security:** **Environment:** No **RF/Spectrum:** **Cost-Efficiency:** No	**Sensor installation date:** Site acceptance completed in 2020 **Operational date:** anticipated in 2021 **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**

[5] Check NOP for better KPI and link to performance improvements.

Activity Description Area / Airspace	System Description	Expected contribution to the Key Performance[5] Areas	Schedule
Area/Name: New Caledonia (Nouvelle Caledonie) **Objective:** Coverage **Airspace**: CTR/TMA **Service**: ATC **Density**: Low **Traffic**: General	**Type: WAM with ADS-B capability** **Sensor/Sites**: 12 **Provider**: **Coverage:**	**Capacity:** No (no separation) **Operational-Efficiency:** **Safety:** Yes (air traffic picture including non-ADS transponder) **Security:** **Environment:** No **RF/Spectrum:** **Cost-Efficiency:** No	**Sensor installation date:** Deployed 2019 **Operational date:** IOC: 2021 **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**
Area/Name: Nantes **Objective:** Coverage **Airspace**: TMA/CTR **Service**: ATC **Density**: medium **Traffic**: General	**Type: WAM with ADS-B capability** **Sensor/Sites**: **Provider**: **Coverage:**	**Capacity:** Yes (no coverage below 5000 ft. when La Roche/Yon radar in maintenance) **Operational-Efficiency:** **Safety:** Yes (no coverage below 5000 ft.) **Security:** **Environment:** No **RF/Spectrum:** **Cost-Efficiency:** No	**Sensor installation date:** Project Launched **Operational date:** **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**
Area/Name: Chambery **Objective:** **Airspace**: TMA/CTR **Service**: ATC, separation 3NM TMA and 5NM ENR **Density**: medium/high during winter week ends **Traffic**: General	**Type: WAM with ADS-B capability** **Sensor/Sites**: **Provider**: **Coverage:**	**Capacity:** Yes (no coverage below 5000 ft.) **Operational-Efficiency:** **Safety:** Yes (no coverage below 5000 ft.) **Security:** **Environment:** No **RF/Spectrum:** **Cost-Efficiency:** Yes (shared with Skyguide)	**Sensor installation date:** Project launched **Operational date:** **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**

Activity Description Area / Airspace	System Description	Expected contribution to the Key Performance[6] Areas	Schedule
Area/Name: Figari, Corsica **Objective:** Coverage **Airspace**: En Route **Service**: ATC **Density**: low **Traffic**: General	**Type: SSR radar: Upgrade to Mode S** **Sensor/Sites**: 1 **Provider**: Thales **Coverage:**	**Capacity:** yes **Operational-Efficiency:** **Safety:** Yes **Security:** **Environment:** No **RF/Spectrum:** **Cost-Efficiency:** No	**Sensor installation date:** Project launched Commissioning expected 2021 **Operational date:** **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**

[6] Check NOP for better KPI and link to performance improvements.

Activity Description Area / Airspace	System Description	Expected contribution to the Key Performance[7] Areas	Schedule
Area/Name: Toulouse Airport **Objective:** **Airspace**: Ground and Approach **Service**: Airport Surveillance **Density**: High **Traffic**: General	**Type: MLAT with ADS-B capability** **Sensor/Sites**: 16 **Provider**: Thales 15 GS, MLAT for A-SMGCS up to 5NM Approach, ADS-B **Coverage:**	**Capacity:** Yes (airport capacity reduced in case of MLAT outage) **Operational-Efficiency:** **Safety:** Yes (cf. SMGCS level + prerequisite for SMGCS level 2) **Security:** **Environment:** No **RF/Spectrum:** **Cost-Efficiency:** Yes for airlines	**Sensor installation date:** Site acceptance completed in 2020 **Operational date:** anticipated in 2021 **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**
Area/Name: Bâle Mulhouse Airport **Objective:** **Airspace**: Ground and Approach **Service**: Airport Surveillance **Density**: High **Traffic**: General	**Type: MLAT with ADS-B capability** **Sensor/Sites**: 18 **Provider**: Thales MLAT for A-SMGCS up to 5NM Approach, ADS-B **Coverage:**	**Capacity:** Yes (airport capacity reduced during LVP periods **Operational-Efficiency:** **Safety:** Yes (prerequisite for SMGCS level 2) **Security:** **Environment:** No **RF/Spectrum:** **Cost-Efficiency:** Yes for airlines	**Sensor installation date:** Project ongoing Commissioning expected 2021 **Operational date:** anticipated in 2022 **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**
Area/Name: Marseille Airport **Objective:** **Airspace**: Ground and Approach **Service**: Airport Surveillance **Density**: High **Traffic**: General	**Type: MLAT with ADS-B capability** **Sensor/Sites**: **Provider**: Thales MLAT for A-SMGCS up to 5NM Approach, ADS-B **Coverage:**	**Capacity:** No **Operational-Efficiency:** **Safety:** Yes (prerequisite for SMGCS level 2) **Security:** **Environment:** No **RF/Spectrum:** **Cost-Efficiency:** Yes for airlines	**Sensor installation date:** Project postponed 2021 **Operational date:** **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**

[7] Check NOP for better KPI and link to performance improvements.

Surveillance sensors

This section summarises the number of Surveillance sensors per state. This covers all current and planned sensors intended for operational use.

Sensor Type	2020	2021	2022	2023	2024	2025
Mode A/C	4	3				
CMB PSR Mode A/C	0	0				
Mode S	19	20				
CMB PSR Mode S	5	5				
PSR stand alone	4	4				
WAM Sensors	16	17				
ADS-B stand alone	14	16				
Space-based ADS-B	0	0				
Surface Movement Radar (SMR)	10	10				
Airport MLAT Sensors	84	102				
ADS-B equipped Vehicles	120	160				

Surveillance Data Use

This section provides and overview of the use of Surveillance data per state. This includes usage of Downlinked Aircraft derived Parameters (DAP) / Aircraft Derived Data (ADD) and ADS-B data.

ADD/DAP data usage

ATCO, System, Tools (which tool)

ADD/DAP data usage	Operational or planned ops date	Usage (ATCO, system, tools, etc.)
Selected Altitude	Used	ATCO, alert system
Barometric pressure setting	Not used	
Roll angle	Not used	
True track angle	Used	Noise monitoring+Flight path assesment
Ground speed	Used	Noise monitoring+Flight path assesment
Track angle rate	Used	Noise monitoring+Flight path assesment
Magnetic heading	Used	ATCO
Indicated airspeed	Used	ATCO
Mach No	Used	ATCO
Vertical rate (Baro, Inertial)	Used	ATCO

ADS-B integration

ADS-B use case and integration date	Operational or planned ops date	Sites
ACC ATC integration ENR	2022	Bordeaux
ACC ATC integration TMA	2022	Bordeaux
ATC integration TWR CTR/TMA	2022	Bordeaux
Flight Information Service	Operational	Corsica, Outside Europe.
ATCO Traffic Awareness	2022	Bastia Corsica
Traffic planning e.g. Arrival Manager		
Conflict Alerting, e.g. STCA		
Airport surveillance e.g. Traffic awareness, Target identification support	tbc	CDG, Orly
Other:		

F. Glossary of abbreviations

This Annex mainly shows the abbreviations that are specific to the LSSIP Document for France.

Other general abbreviations are in the Acronyms and Abbreviations document in:

https://www.eurocontrol.int/airial/

Term	Description
ADP	Aéroports de Paris
AF	ATM Functionality
AEFMP	Algeria-Spain-France-Morocco-Portugal
AENA	(Aeropuertos Españoles y Navegación Aérea) Former name of ENAIRE as from 05/07/2014
ALAVIA	Etat-major de l'Aviation Navale
ANA	Personnel Office
BEA	Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile
CAUTRA	Coordonnateur AUtomatique du TRafic Aérien (automatic air traffic coordination system)
CEV	Centre d'Essai en Vol
CFA / BACE	Commandement des Forces Aériennes / Brigade Aérienne de Contrôle de l'Espace
CNA	Certification of ANSP Office
COHOR	Association pour la COordination des HORaires
COMALAT	Commandement de l'Aviation Légère de l'Armée de Terre
CRNA	Centre en Route de la Navigation Aérienne
CSSIP	Communications Sol-Sol Internet protocole
DGAC	Direction Générale de l'Aviation Civile
DIA	Division Information Aéronautique
DIRCAM	Direction de la Circulation Aérienne Militaire
DIRISI	Direction Interarmées des Réseaux d'Infrastructure et des Systèmes d'Information
DSAC	Direction de la Sécurité de l'Aviation Civile
DSAÉ	Direction de la Sécurité Aéronautique d'État
DSNA	Direction des Services de la Navigation Aérienne
DTA	Direction du Transport Aérien
ERATO	En Route Air Traffic Organizer
FAP	Future ATM Profile
FT	Fast Track
CDG	Aéroport de Paris Roissy - Charles De Gaulle
MAESTRO	Moyen d'Aide à l'Ecoulement Séquencé du Trafic avec Recherche d'Optimisation
MCU	Mission Ciel unique
MoD	Ministry for the Armed Forces
MoT	Ministry for the Ecological Transition
MOR	Mandatory Occurrence Reporting

Term	Description
DP	Deployment Programme
NAS	National Airspace System
S-AF	Sub ATM Functionality
SDEA	Airspace sub-directorate
SDSA	Surveillance and Audit sub-directorate
SDR	Regulatory sub-directorate
SETINET	Skyguide ENAV International Network
SOCRATE	(Inter-army voice and data network)
UAF	Union des Aéroports Français