

CP1		Active							APT	
FCM11.2		AOP/NOP integration								
REG	ASP	MIL	APO	USE	INT	IND	NM	MET	AIS	USP

## Subject matter and scope

As part of the evolution of processes and procedures, new data elements will be shared and also negotiated between AOP and NOP. These will have to be integrated in addition to the information that is shared in the iAOP-NOP exchange. The processes, procedures and underlying concepts for the creation and integration will have to be agreed upon and/or adapted.

This will apply to arrival planning information (e.g. TTO/TTA via API), as well as departure information (e.g. P-DPI based on airport capacity information), and also enhanced management of capacities (e.g. diversion capabilities).

System requirements:

The Network Manager shall implement an increased integration of NOP and Airport Operations Plan (AOP) relevant information (for example, TTAs) resulting from a Cooperative Decision-Making Process (ref. Article 2.14 of the EC Regulation of the Network Function).

The AOP shall make available in real time to the NOP data that is appropriate and relevant to inform actions by Network Manager to adjust capacity in the network where appropriate. Such data shall be mutually agreed by the Network Manager and the Airport.

For airports with AOP, the NM shall share with the AOP the arrival demand and establish a collaborative decision-making process at local ATFM level to allow amendments to the TTAs based on the AOP.

AOP system requirements:

- The AOP systems must consume and process the flight updates published by NM via the NM B2B Services;
- The AOP systems must provide to NM the Extended Departure Planning Information via the NM B2B Services;
- The AOP systems must provide to NM the Arrival Planning Information via the NM B2B Services;
- If bilaterally agreed between NM and concerned airports and defined in respective ICD, the AOP systems should be capable of providing additional airport information (runway configurations, airport performance measurement) to NM.

NM system requirements:

- The NM system must be upgraded to process the information provided by the AOP system concerning the Extended DPI and API;
- The NM system must provide the flight updates information necessary to the AOP systems;
- If bilaterally agreed between NM and concerned airports and defined in respective ICD, the NM systems must be capable of integrating additional airport information (runway configurations, airport performance measurement).

**NOTE FOR MILITARY AUTHORITIES:** It is the responsibility of each military authority to review this Objective IN ITS ENTIRETY and address each of the SLoAs that the military authority considers RELEVANT for itself. This has to be done on top and above of the review of "MIL" SLoAs which identify actions EXCLUSIVE to military authorities.

## Applicability Area(s) & Timescale(s)

<b>Applicability Area 1</b> (CP1 Airports)	See list of airports in MP Level 3 Implementation Plan - Annexes		
<b>Applicability Area 2 (non-CP1 Airports)</b> (Non-CP1 Airports)	See list of airports in MP Level 3 Implementation Plan - Annexes		
<b>Timescales:</b>	<b>From:</b>	<b>By:</b>	<b>Applicable to:</b>
Initial Operational Capability	01/01/2021		Applicability Area 1 + Applicability Area 2 (non-CP1 Airports)
Full Operational Capability / Target Date		31/12/2027	Applicability Area 1 + Applicability Area 2 (non-CP1 Airports)

## References

### European ATM Master Plan

Ol step -	<a href="#">[AO-0801-A]-Collaborative Airport Planning Interface</a>								
Enablers -	AIRPORT-03 AOP11.1, AOP11.2	AIRPORT-31 AOP05	AIRPORT-38	AOC-ATM-13	HUM-007	PRO-028	SWIM-APS-03a	SWIM-APS-04a	

FCM11.2	AOP/NOP integration								
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		SWIM-INFR-05a	SWIM-NET-01a						
Ol step -	<a href="#">[AO-0802-A]-A-CDM process enhanced through integration of landside (passenger only) process outputs</a>								
	Enablers -	AERODROME-ATC-57 AOP11.2	AIRPORT-03 AOP11.1, AOP11.2	AIRPORT-31 AOP05	AIRPORT-35a	AIRPORT-38	HUM-007	HUM-014	HUM-015
Ol step -	<a href="#">[AO-0803]-Integration of Airports into ATM through Monitoring of Airport Transit View (Extension of Performance Monitoring building on A-CDM)</a>								
	Enablers -	AERODROME-ATC-57 AOP11.2	AIRPORT-03 AOP11.1, AOP11.2	AIRPORT-31 AOP05	AIRPORT-38	AIRPORT-40 AOP11.2	CTE-C06b COM12	HUM-007	HUM-016
		METEO-03	METEO-04b	SWIM-APS-03a	SWIM-APS-04a	SWIM-INFR-05a	SWIM-NET-01a		
Ol step -	<a href="#">[DCB-0103-A]-Initial collaborative NOP</a>								
	Enablers -	AIRPORT-38	METEO-06b	MIL-0502	NIMS-13b FCM04.2	NIMS-14b	NIMS-25	PRO-028	REG-0518
		SWIM-APS-01a	SWIM-APS-02a	SWIM-APS-03a	SWIM-APS-04a	SWIM-INFR-05a	SWIM-NET-01a		
Ol step -	<a href="#">[DCB-0208]-DCB in a trajectory management context</a>								
	Enablers -	AOC-ATM-11	AOC-ATM-13	AOC-ATM-20	ER APP ATC 17	NIMS-21a FCM10	NIMS-38 FCM10	SWIM-APS-03a	SWIM-APS-04a
		SWIM-INFR-05a	SWIM-NET-01a						
Ol step -	<a href="#">[DCB-0310]-Improved Efficiency in the Management of Airport and ATFCM Planning</a>								
	Enablers -	AERODROME-ATC-57 AOP11.2	AIRPORT-02	AIRPORT-38	NIMS-41	REG-0510			
Legend:	WXYZ-001	Covered by SLoA(s) in this objective		WXYZ-002 zzz	Covered by SLoA(s) in another objective Objective covering the enabler		WXYZ-003	Not covered in the Implementation Plan	

Applicable legislation

Regulation (EU) 2021/116 on the establishment of the Common Project One
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Essential Operational Changes

ATM Interconnected Network
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SESAR Solution

#18 - CTOT and TTA, #20 - Collaborative NOP for Step 1, #21 - Airport Operations Plan and AOP-NOP Seamless Integration
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ICAO GANP - ASBUs

NOPS-B1/3	Enhanced integration of Airport operations planning with network operations planning
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Deployment Programme

4.4.1	AOP/NOP Integration
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European Plan for Aviation Safety

- none -	
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Operating Environments

Airport
Network
Terminal Airspace

Stakeholder Lines of Action (SLoAs)

SloA ref.	Title	From	By
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FCM11.2	AOP/NOP integration		
FCM11.2-ASP01	Define AOP/NOP integration data and procedures	01/01/2021	31/12/2027
FCM11.2-APO01	Define AOP/NOP integration data and procedures	01/01/2021	31/12/2027
FCM11.2-APO02	Prepare AOP for the exchange with NOP	01/01/2021	31/12/2027
FCM11.2-APO03	Safety assessment	01/01/2021	31/12/2027
FCM11.2-APO04	Training	01/01/2021	31/12/2027
FCM11.2-APO05	Operational use	01/01/2021	31/12/2027
FCM11.2-NM01	Define AOP/NOP integration data and procedures	01/01/2021	31/12/2027
FCM11.2-NM02	Prepare NOP for integration with AOPs	01/01/2021	31/12/2027
FCM11.2-NM03	Safety assessment	01/01/2021	31/12/2027
FCM11.2-NM04	Training	01/01/2021	31/12/2027
FCM11.2-NM05	Operational use	01/01/2021	31/12/2027

Description of finalised and deleted SLoAs is available on the eATM Portal @ [https://www.eatmportal.eu/working/depl/essip\\_objectives](https://www.eatmportal.eu/working/depl/essip_objectives)

### Expected Performance Benefits

<b>Safety:</b>	Improved situational awareness.
<b>Capacity:</b>	Increased capacity. Enhanced safety. Improved airport resilience/limiting capacity reduction in degraded situations.
<b>Operational Efficiency:</b>	-
<b>Cost Efficiency:</b>	Improved information sharing. Enhanced predictability.
<b>Environment:</b>	-
<b>Security:</b>	-

### Detailed SLoA Descriptions

FCM11.2-ASP01	Define AOP/NOP integration data and procedures	From: 01/01/2021	By: 31/12/2027
<b>Action by:</b>	<b>ANS Providers</b>		
<b>Description &amp; purpose:</b>	Coordinate with Airport's community and Network Manager the data that need to be exchanged between AOPs and NOP. That includes precise definition, purpose, responsibility and procedure to use every data element exchanged.		
	<b>Note :</b> This SLoA needs to be synchronised between ANSPs, AOs and NM		
<b>Supporting material(s):</b>	SDM - Standardisation and Regulation support to CP1 deployment 2021, Deliverable D1.1.1 07/2021 Url : <a href="https://www.sesardeploymentmanager.eu/publications/deployment-programme">https://www.sesardeploymentmanager.eu/publications/deployment-programme</a>		
<b>ATM Master Plan relationship:</b>	<a href="#">[AIRPORT-38]-Airport/ATFCM Extended data interface</a> <a href="#">[HUM-007]-New communication and interaction patterns between stakeholders of airport operations linked to collaborative rolling AOP/NOP management.</a> <a href="#">[PRO-028]-Procedures to support AOP-NOP collaborative process</a>		
<b>Finalisation criteria:</b>	1 - A Handbook is published with all the format, definition, purpose and procedure for all the exchanged data, including the performance requirements		
FCM11.2-APO01	Define AOP/NOP integration data and procedures	From: 01/01/2021	By: 31/12/2027
<b>Action by:</b>	<b>Airport Operators</b>		
<b>Description &amp; purpose:</b>	Define, together with Airport's community and Network Manager the data that need to be exchanged between AOPs and NOP, coordinating with ANSP. That includes precise definition, purpose, responsibility and procedure to use every data element exchanged.		
	<b>Note :</b> This SLoA needs to be synchronised between ANSPs, AOs and NM		
<b>Supporting material(s):</b>	SDM - Standardisation and Regulation support to CP1 deployment 2021, Deliverable D1.1.1 07/2021 Url : <a href="https://www.sesardeploymentmanager.eu/publications/deployment-programme">https://www.sesardeploymentmanager.eu/publications/deployment-programme</a>		
<b>ATM Master Plan relationship:</b>	<a href="#">[AIRPORT-38]-Airport/ATFCM Extended data interface</a> <a href="#">[HUM-007]-New communication and interaction patterns between stakeholders of airport operations linked to collaborative rolling AOP/NOP management.</a> <a href="#">[PRO-028]-Procedures to support AOP-NOP collaborative process</a>		
<b>Finalisation criteria:</b>	1 - A Handbook is published with all the format, definition, purpose and procedure for all the exchanged data, including the performance requirements.		
FCM11.2-APO02	Prepare AOP for the exchange with NOP	From: 01/01/2021	By: 31/12/2027
<b>Action by:</b>	<b>Airport Operators</b>		
<b>Description &amp; purpose:</b>	Ensure that AOP contains all the required data. Ensure all necessary data is received from NM. Perform data validation and system testing for new NM B2B services.		

FCM11.2		AOP/NOP integration	
	Note :This SLoA needs to be synchronised between ANSPs, AOs and NM		
Supporting material(s):	SDM - Standardisation and Regulation support to CP1 deployment 2021, Deliverable D1.1.1 07/2021 Url : <a href="https://www.sesardeploymentmanager.eu/publications/deployment-programme">https://www.sesardeploymentmanager.eu/publications/deployment-programme</a>		
ATM Master Plan relationship:	<a href="#">[AIRPORT-38]-Airport/ATFCM Extended data interface</a> <a href="#">[HUM-007]-New communication and interaction patterns between stakeholders of airport operations linked to collaborative rolling AOP/NOP management.</a> <a href="#">[PRO-028]-Procedures to support AOP-NOP collaborative process</a>		
Finalisation criteria:	1 - AOP is ready for information exchange.		
FCM11.2-APO03	Safety assessment	From: 01/01/2021	By: 31/12/2027
Action by:	Airport Operators		
Description & purpose:	The safety assessment of the changes must be developed and delivered to the competent authority.		
Supporting material(s):	SDM - Standardisation and Regulation support to CP1 deployment 2021, Deliverable D1.1.1 07/2021 Url : <a href="https://www.sesardeploymentmanager.eu/publications/deployment-programme">https://www.sesardeploymentmanager.eu/publications/deployment-programme</a>		
Finalisation criteria:	1 - Safety assessment has been developed and delivered to the competent authority.		
FCM11.2-APO04	Training	From: 01/01/2021	By: 31/12/2027
Action by:	Airport Operators		
Description & purpose:	All relevant staff must be duly trained.		
Supporting material(s):	SDM - Standardisation and Regulation support to CP1 deployment 2021, Deliverable D1.1.1 07/2021 Url : <a href="https://www.sesardeploymentmanager.eu/publications/deployment-programme">https://www.sesardeploymentmanager.eu/publications/deployment-programme</a>		
Finalisation criteria:	1 - Training has been completed.		
FCM11.2-APO05	Operational use	From: Applicability Area 1: 01/01/2021	By: 31/12/2027
Action by:	Airport Operators		
Description & purpose:	AOP/NOP Integration is ready for operational use once the procedures are in place, the systems have been upgraded, the safety assessment has been delivered and approved, and the training has been completed.		
Supporting material(s):	SDM - Standardisation and Regulation support to CP1 deployment 2021, Deliverable D1.1.1 07/2021 Url : <a href="https://www.sesardeploymentmanager.eu/publications/deployment-programme">https://www.sesardeploymentmanager.eu/publications/deployment-programme</a>		
Finalisation criteria:	1 - AOP/NOP Integration is put into service.		
FCM11.2-NM01	Define AOP/NOP integration data and procedures	From: 01/01/2021	By: 31/12/2027
Action by:	NM		
Description & purpose:	Define, together with Airport's community and Network Manager the data that need to be exchanged between AOPs and NOP. That includes precise definition, purpose, responsibility and procedure to use every data element exchanged.  Note :This SLoA needs to be synchronised between ANSPs, AOs and NM		
Supporting material(s):	SDM - Standardisation and Regulation support to CP1 deployment 2021, Deliverable D1.1.1 07/2021 Url : <a href="https://www.sesardeploymentmanager.eu/publications/deployment-programme">https://www.sesardeploymentmanager.eu/publications/deployment-programme</a>		
ATM Master Plan relationship:	<a href="#">[HUM-007]-New communication and interaction patterns between stakeholders of airport operations linked to collaborative rolling AOP/NOP management.</a> <a href="#">[PRO-028]-Procedures to support AOP-NOP collaborative process</a>		
Finalisation criteria:	1 - A Handbook is published with all the format, definition, purpose and procedure for all the exchanged data, including the performance requirements.		
FCM11.2-NM02	Prepare NOP for integration with AOPs	From: 01/01/2021	By: 31/12/2027
Action by:	NM		
Description & purpose:	Ensure integration into NOP of new data received from exchange with AOPs. Perform system testing and data validation.		
Supporting material(s):	SDM - Standardisation and Regulation support to CP1 deployment 2021, Deliverable D1.1.1 07/2021 Url : <a href="https://www.sesardeploymentmanager.eu/publications/deployment-programme">https://www.sesardeploymentmanager.eu/publications/deployment-programme</a>		
ATM Master Plan relationship:	<a href="#">[HUM-007]-New communication and interaction patterns between stakeholders of airport operations linked to collaborative rolling AOP/NOP management.</a> <a href="#">[PRO-028]-Procedures to support AOP-NOP collaborative process</a>		
Finalisation criteria:	1 - First AOP is integrated with NOP.		

<b>FCM11.2</b>	<b>AOP/NOP integration</b>
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<b>FCM11.2-NM03</b>	<b>Safety assessment</b>	<b>From:</b> 01/01/2021	<b>By:</b> 31/12/2027
<b>Action by:</b>	<b>NM</b>		
<b>Description &amp; purpose:</b>	The safety assessment of the changes must be developed and delivered to the competent authority.		
<b>Supporting material(s):</b>	SDM - Standardisation and Regulation support to CP1 deployment 2021, Deliverable D1.1.1 07/2021 Url : <a href="https://www.sesardeploymentmanager.eu/publications/deployment-programme">https://www.sesardeploymentmanager.eu/publications/deployment-programme</a>		
<b>Finalisation criteria:</b>	1 - Safety assessment has been developed and delivered to the competent authority.		
<b>FCM11.2-NM04</b>	<b>Training</b>	<b>From:</b> 01/01/2021	<b>By:</b> 31/12/2027
<b>Action by:</b>	<b>NM</b>		
<b>Description &amp; purpose:</b>	All relevant staff must be duly trained.		
<b>Supporting material(s):</b>	SDM - Standardisation and Regulation support to CP1 deployment 2021, Deliverable D1.1.1 07/2021 Url : <a href="https://www.sesardeploymentmanager.eu/publications/deployment-programme">https://www.sesardeploymentmanager.eu/publications/deployment-programme</a>		
<b>Finalisation criteria:</b>	1 - Training has been completed.		
<b>FCM11.2-NM05</b>	<b>Operational use</b>	<b>From:</b> 01/01/2021	<b>By:</b> 31/12/2027
<b>Action by:</b>	<b>NM</b>		
<b>Description &amp; purpose:</b>	AOP/NOP Integration is ready for operational use once the procedures are in place, the systems have been upgraded, the safety assessment has been delivered and approved, and the training has been completed.		
<b>Supporting material(s):</b>	SDM - Standardisation and Regulation support to CP1 deployment 2021, Deliverable D1.1.1 07/2021 Url : <a href="https://www.sesardeploymentmanager.eu/publications/deployment-programme">https://www.sesardeploymentmanager.eu/publications/deployment-programme</a>		
<b>Finalisation criteria:</b>	1 - AOP/NOP Integration is put into service.		

