

CP1		Active							ECAC+	
FCM04.2		Enhanced Short Term ATFCM Measures								
REG	ASP	MIL	APO	USE	INT	IND	NM	MET	AIS	USP

## Subject matter and scope

ATFCM is coordinated at network level by the Network Manager and at local level by the flow management position to support hot-spot detection, execution of Short-Term ATFCM Measures (STAM), network assessment and continuous monitoring of network activity. STAM is established requiring coordination between Air Traffic Control, Airport, Airspace Users and Network Manager.

Tactical capacity management using STAM shall ensure a close and efficient coordination between ATC and the network management function. Tactical capacity management shall implement STAM using cooperative decision-making to manage flow before flights enter a sector.

Additional tasks relevant to the STAM scope should encompass:

- utilisation of approved STAM concept of operations;
- development of operational guidance documentation;
- development of training package;
- development of harmonized operational procedures.

ANSP, AU and airport will apply harmonized operational procedures, taking into account the STAM prerequisites such as the traffic information and flight predictability.

Airspace Users should at minimum update their flight plans, manage the slot and the mandatory rerouting, but could also provide simple priorities, participate to CDM process, manage rerouting proposal.

System requirements:

NM systems shall implement the STAM functionalities and shall support the coordination of STAM measures implementation, including Network Impact assessment capabilities.

The STAM tool should include occupancy traffic monitoring values (OTMV), hotspot detection and coordination. The enhancements should mainly focus on:

- enhanced monitoring techniques (including hotspot management and complexity indicators);
- coordination systems (including interfaces with local tools);
- what-if function (local measures, flight-based, flow-based and multiple measure alternative);
- network impact assessment.

ANSP and AU shall use either the NM-provided STAM application or may deploy local tools, which shall interact with the NM systems using SWIM services, when and where available, at the latest by December 2025.

**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>	All EU SES States		
<b>Applicability Area 2</b>	Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia, Türkiye, United Kingdom		
<b>Timescales:</b>	<b>From:</b>	<b>By:</b>	<b>Applicable to:</b>
Initial operational capability	01/11/2017		Applicability Area 1 + Applicability Area 2
Full Operational Capability / Target Date		31/12/2022	Applicability Area 1 + Applicability Area 2

## References

### European ATM Master Plan

OI step -	<a href="#">[DCB-0308]-Advanced Short Term ATFCM</a>								
Enablers -	NIMS-13b	NIMS-27	PRO-022	PRO-247	SWIM-APS-03a	SWIM-APS-04a	SWIM-INFR-05a	SWIM-NET-01a	
OI step -	<a href="#">- No OI Link -</a>								
Enablers -	ER APP ATC 17								

<b>FCM04.2</b>	<b>Enhanced Short Term ATFCM Measures</b>
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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
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**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**

#17 - Advanced Short-Term ATFCM Measures (STAM)
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**ICAO GANP - ASBUs**

NOPS-B1/1	Short Term ATFM measures
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**Deployment Programme**

4.1.1	Enhanced Short Term ATFCM Measures
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**European Plan for Aviation Safety**

- none -
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**Operating Environments**

En-Route Network
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**Stakeholder Lines of Action (SLoAs)**

SLoA ref.	Title	From	By
FCM04.2-ASP01	Develop STAM procedure	01/11/2017	31/12/2022
FCM04.2-ASP02	Upgrade and use the local systems	01/11/2017	31/12/2022
FCM04.2-ASP03	Use of NM STAM application	01/11/2017	31/12/2022
FCM04.2-ASP04	Safety assessment	01/11/2017	31/12/2022
FCM04.2-ASP05	Training	01/11/2017	31/12/2022
FCM04.2-ASP06	Operational use	01/11/2017	31/12/2022
FCM04.2-USE01	Follow the validity of the flight plan and ATFM slot vs STAM measure	01/11/2017	31/12/2022
FCM04.2-NM01	Develop STAM procedures and upgrade the local systems	01/11/2017	31/12/2022
FCM04.2-NM02	Provide interface between NM and local tool	01/11/2017	31/12/2022
FCM04.2-NM03	Safety assessment	01/11/2017	31/12/2022
FCM04.2-NM04	Training	01/11/2017	31/12/2022
FCM04.2-NM05	Operational use	01/11/2017	31/12/2022

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 of the European network.
<b>Capacity:</b>	Better use of airspace capacity in terminal and enroute airspace.
<b>Operational Efficiency:</b>	-
<b>Cost Efficiency:</b>	Increased cost efficiency.
<b>Environment:</b>	Better use of airspace capacity in terminal and enroute airspace.
<b>Security:</b>	-

**Detailed SLoA Descriptions**

FCM04.2-ASP01	Develop STAM procedure	From:	By:
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FCM04.2	Enhanced Short Term ATFCM Measures		
		01/11/2017	31/12/2022
<b>Action by:</b>	<b>ANS Providers</b>		
<b>Description &amp; purpose:</b>	Decide, based on specific operational needs, if a local STAM system is required or use of tools provided by NM is sufficient. Develop the associated procedures to ensure that the ATFCM planning at local level allows the STAM coordination process.		
	Note :This SLoA needs to be synchronised between ANSPs 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="#">[PRO-247]-FCM Procedures for hotspots information sharing and for CDM process to support STAM coordination and implementation..</a>		
<b>Finalisation criteria:</b>	1 - The local procedures for STAM have been developed, either with local tool or NM tool.		
<b>FCM04.2-ASP02</b>	<b>Upgrade and use the local systems</b>	From: 01/11/2017	By: 31/12/2022
<b>Action by:</b>	<b>ANS Providers</b>		
<b>Description &amp; purpose:</b>	Ensure that the ATFCM planning at local level allows the STAM coordination process (system-based), involving all actors and Procure/ Upgrade the local STAM systems, if required and justified with specific operational needs, and develop the connectivity with NM by using the NM B2B Services that support the STAM processes (INAP function).		
	Note :FCM04.2-ASP02 and FCM04.2-ASP03 can be implemented in parallel.		
	This SLoA needs to be synchronised between ANSPs, AUs 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="#">[NIMS-13b]-Enhanced short term ATFM measures ( STAM)</a> <a href="#">[PRO-247]-FCM Procedures for hotspots information sharing and for CDM process to support STAM coordination and implementation..</a>		
<b>Finalisation criteria:</b>	1 - Local STAM tool has been used and connected to NM tool.		
<b>FCM04.2-ASP03</b>	<b>Use of NM STAM application</b>	From: 01/11/2017	By: 31/12/2022
<b>Action by:</b>	<b>ANS Providers</b>		
<b>Description &amp; purpose:</b>	Use of STAM application and services provided by NM HMI. Additional STAM features as the enhanced monitoring techniques, what-if functionality for local measures and system-based coordination are required.		
	Note :FCM04.2-ASP02 and FCM04.2-ASP03 can be implemented in parallel.		
	This SLoA needs to be synchronised between ANSPs 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="#">[NIMS-13b]-Enhanced short term ATFM measures ( STAM)</a> <a href="#">[PRO-247]-FCM Procedures for hotspots information sharing and for CDM process to support STAM coordination and implementation..</a>		
<b>Finalisation criteria:</b>	1 - NM STAM tool has been used		
<b>FCM04.2-ASP04</b>	<b>Safety assessment</b>	From: 01/11/2017	By: 31/12/2022
<b>Action by:</b>	<b>ANS Providers</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>FCM04.2-ASP05</b>	<b>Training</b>	From: 01/11/2017	By: 31/12/2022
<b>Action by:</b>	<b>ANS Providers 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>FCM04.2-ASP06</b>	<b>Operational use</b>	From: 01/11/2017	By: 31/12/2022

<b>FCM04.2</b>	<b>Enhanced Short Term ATFCM Measures</b>
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<b>Action by:</b>	<b>ANS Providers Airspace Users</b>		
<b>Description &amp; purpose:</b>	Enhanced Short Term ATFCM Measures 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 - Enhanced Short Term ATFCM Measures are put into service		
<b>FCM04.2-USE01</b>	<b>Follow the validity of the flight plan and ATFM slot vs STAM measure</b>	<b>From:</b> 01/11/2017	<b>By:</b> 31/12/2022
<b>Action by:</b>	<b>Airspace Users NM</b>		
<b>Description &amp; purpose:</b>	Follow the implementation of STAM measure either automatically or manually by reception of mandatory rerouting and/or modification of slot.  <b>Note :This SLoA needs to be synchronised between ANSPs, AUs and NM.</b>		
<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="#">[NIMS-13b]-Enhanced short term ATFM measures ( STAM)</a>		
<b>Finalisation criteria:</b>	1 - The flight has a valid flight plan and the amended slot if any is transmitted to the crew.		
<b>FCM04.2-NM01</b>	<b>Develop STAM procedures and upgrade the local systems</b>	<b>From:</b> 01/11/2017	<b>By:</b> 31/12/2022
<b>Action by:</b>	<b>NM</b>		
<b>Description &amp; purpose:</b>	Update the NM systems and develop the associated procedures to ensure that the ATFCM planning at network level supports hot-spot detection, what-if function, STAM CDM, execution of STAM, network impact assessment and continuous monitoring of network activity.		
<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="#">[NIMS-13b]-Enhanced short term ATFM measures ( STAM)</a> <a href="#">[NIMS-27]-Network DCB sub-system enhanced with improved accuracy of processing real-time data</a> <a href="#">[PRO-022]-FCM procedures for collaborating on SBT changes with Airspace Users</a> <a href="#">[PRO-247]-FCM Procedures for hotspots information sharing and for CDM process to support STAM coordination and implementation..</a>		
<b>Finalisation criteria:</b>	1 - Tools supporting STAM are available		
<b>FCM04.2-NM02</b>	<b>Provide interface between NM and local tool</b>	<b>From:</b> 01/11/2017	<b>By:</b> 31/12/2022
<b>Action by:</b>	<b>NM</b>		
<b>Description &amp; purpose:</b>	Upgrade the NM system to provide the NM B2B Services interfaces necessary to support the local ANSP tool.  <b>Note :This SLoA needs to be synchronised between ANSPs and NM.</b>		
<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="#">[NIMS-13b]-Enhanced short term ATFM measures ( STAM)</a> <a href="#">[NIMS-27]-Network DCB sub-system enhanced with improved accuracy of processing real-time data</a> <a href="#">[PRO-022]-FCM procedures for collaborating on SBT changes with Airspace Users</a> <a href="#">[PRO-247]-FCM Procedures for hotspots information sharing and for CDM process to support STAM coordination and implementation..</a>		
<b>Finalisation criteria:</b>	1 - NM B2B Services supporting the local STAM ANSP tool are available.		
<b>FCM04.2-NM03</b>	<b>Safety assessment</b>	<b>From:</b> 01/11/2017	<b>By:</b> 31/12/2022
<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>FCM04.2-NM04</b>	<b>Training</b>	<b>From:</b> 01/11/2017	<b>By:</b> 31/12/2022
<b>Action by:</b>	<b>NM</b>		

<b>FCM04.2</b>	<b>Enhanced Short Term ATFCM Measures</b>
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<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>FCM04.2-NM05</b>	<b>Operational use</b>	<b>From:</b> 01/11/2017	<b>By:</b> 31/12/2022
<b>Action by:</b>	<b>NM</b>		
<b>Description &amp; purpose:</b>	Enhanced Short Term ATFCM Measures 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 - Enhanced Short Term ATFCM Measures are put into service.		

