

PCP		Active					ECAC+	
FCM04.2		Short Term ATFCM Measures (STAM) - Phase 2						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

Short term ATFCM measures (STAM), as defined in the STAM Concept of Operations but also in the Pilot Common Project Regulation and in the Deployment Programme is consisting of an approach to smooth sector workloads by reducing traffic peaks through short-term application of minor ground delays, appropriate flight level capping, timing and modalities of ATC re-sectorisation, exiguous re-routings to a limited number of flights and 'what-if' function in order to identify the applicability and gains of potential ATFCM measure. These measures are capable of reducing the traffic complexity for ATC with minimum curtailing for the airspace users. STAM is based on high-quality data for prediction and accurate traffic analysis and will be an important contribution to enhanced demand capacity balancing (DCB) concept.

ANSPs can optimize capacity throughput by adopting and improving the tactical capacity management procedures (with the use of STAM). The tactical capacity management procedures can be supported by a Network Tools (system based STAM with the hot-spot detections in the network view, the "what-if" function and capabilities of promulgation and implementation of STAM measures, including CDM) or by local tools. These tools shall be applicable in the tactical ATFCM timeframe (e.g. up to 2 hours before flights enter a sector).

Tactical capacity management shall implement STAM using cooperative decision-making to manage flows before flights enter a sector.

The deployment shall mainly focus on:

- Enhanced monitoring techniques (including hotspot management and complexity indicators)
- Coordination systems (including B2B with local tools)
- What-if function (local measures, flight based, flow based and multiple measure alternative)
- Network impact assessment

NOTE: the STAM CONOPS mentioned in this document includes both STAM Phase 1 and Phase 2.

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)

Applicability Area 1	All EU SES States. Plus: United Kingdom		
Applicability Area 2	Albania, Azerbaijan, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia, Turkey, Ukraine		
Timescales:	From:	By:	Applicable to:
Initial operational capability	01/11/2017		Applicability Area 1
Full operational capability		31/12/2021	Applicability Area 1 + Applicability Area 2

References

European ATM Master Plan

OI step -	[DCB-0308]-Advanced Short Term ATFCM									
Enablers -	NIMS-13b	NIMS-27	PRO-022	PRO-247	SWIM-APS-03a INF08.1, INF08.2	SWIM-APS-04a INF08.1	SWIM-INFR-05a INF08.1, INF08.2	SWIM-NET-01a INF08.1, INF08.2		
OI step -	- No OI Link -									
Enablers -	ER APP ATC 17									
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) No 716/2014 on the establishment of the Pilot Common Project
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Essential Operational Changes

- none -

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SESAR Solution

#17 - Advanced Short-Term ATFCM Measures (STAM)

ICAO GANP ? ASBUs

- none -

Deployment Programme

- none -

European Plan for Aviation Safety

- none -

Operating Environments

En-Route
Network

Stakeholder Lines of Action (SLoAs)

SloA ref.	Title	From	By
FCM04.2-ASP01	Develop STAM procedures and upgrade the local systems	01/11/2017	31/12/2021
FCM04.2-ASP02	Use of STAM phase 2	01/11/2017	31/12/2021
FCM04.2-ASP03	Train the personnel	01/11/2017	31/12/2021
FCM04.2-USE01	Airspace Users to deploy the appropriate tools and associated procedures	01/11/2017	31/12/2021
FCM04.2-NM01	Update the NM systems and develop the associated procedures	01/11/2017	31/12/2021
FCM04.2-NM02	Train the personnel	01/11/2017	31/12/2021

Description of finalised and deleted SLoAs is available on the eATM Portal @ https://www.eatmportal.eu/working/depl/essip_objectives

Expected Performance Benefits

Safety:	Small enhancement through the resolution of some conflicts through STAM measures.
Capacity:	Effective capacity is globally optimised thanks to replacement of some ATFCM regulations with the STAM measures, hotspot reduction and its more efficient management.
Operational Efficiency:	Improved through the proposition of the most appropriate measures according with the type of flight.
Cost Efficiency:	-
Environment:	-
Security:	-

Detailed SLoA Descriptions

FCM04.2-ASP01	Develop STAM procedures and upgrade the local systems	From:	By:
		Applicability Area 1: 01/11/2017	Applicability Area 1: 31/12/2021
Action by:	ANS Providers		
Description & purpose:	Develop the associated procedures so as to 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 B2B interfaces with NM STAM(INAP function).		
	<i>Note :It is expected that in the majority of cases, the NM STAM application will be sufficient for the implementation of STAM P2 and no other system updates will be needed. However in the case of specific, complex environments, development or upgrade of local ATM systems may be needed as indicated above. This SLOA is applicable only for these cases while ANSPs that will solely use NM STAMs, this SLOA should be considered as not applicable.</i>		
Supporting material(s):	SJU - SESAR Solution 17: Data Pack for advanced Short ATFCM Measures (STAM) Url : https://www.sesarju.eu/sesar-solutions/advanced-short-term-atfcmeasures-stams EUROCONTROL - NM STAM CONOPS EUROCONTROL - NM STAM coordination procedures (Common set of ATFCM-STAM procedures including roles & responsibilities allowing for effective STAM measure execution)		

FCM04.2	Short Term ATFCM Measures (STAM) - Phase 2		
ATM Master Plan relationship:	[ER APP ATC 17]-Enhance Traffic and Flow Management sub-systems to support dynamic flow management in co-ordination with local, regional, and European levels. [PRO-247]-FCM Procedures for hotspots information sharing and for CDM process to support STAM coordination and implementation..		
Finalisation criteria:	1 - The local procedures for STAM phase 2 have been developed 2 - NM STAM tool has been used.		
FCM04.2-ASP02	Use of STAM phase 2	From: Applicability Area 1: 01/11/2017	By: Applicability Area 1: 31/12/2021
Action by:	ANS Providers		
Description & purpose:	Use of STAM Phase 2 application and services provided by NM and develop the associated local procedures. In addition to STAM p1 system features, STAM p2 includes additional features as the enhanced monitoring techniques, what-if functionality for local measures and system based coordination. The use and the effectiveness of the STAM P2 measures are to be monitored (off-line) by the NM.		
	Note :This SLOA is applicable for ANSP that opted to use NM STAM p2, while the ANSPs that want to develop their own tools and integrate with NM STAM should refer to ASP-01.		
Supporting material(s):	SJU - SESAR Solution 17: Data Pack for advanced Short ATFCM Measures (STAM) Url : https://www.sesarju.eu/sesar-solutions/advanced-short-term-atfcm-measures-stams EUROCONTROL - NM STAM CONOPS EUROCONTROL - NM STAM coordination procedures (Common set of ATFCM-STAM procedures including roles & responsibilities allowing for effective STAM measure execution)		
ATM Master Plan relationship:	[NIMS-13b]-Enhanced short term ATFM measures (STAM) [PRO-247]-FCM Procedures for hotspots information sharing and for CDM process to support STAM coordination and implementation..		
Finalisation criteria:	1 - Local STAM procedures based on NM STAM tools have been developed 2 - NM STAM tool has been used.		
FCM04.2-ASP03	Train the personnel	From: Applicability Area 1: 01/11/2017	By: Applicability Area 1: 31/12/2021
Action by:	ANS Providers		
Description & purpose:	Ensure that all operational personnel concerned is adequately trained for their job functions in relation to the implementation of STAM Phase 2		
Supporting material(s):	SJU - SESAR Solution 17: Data Pack for advanced Short ATFCM Measures (STAM) Url : https://www.sesarju.eu/sesar-solutions/advanced-short-term-atfcm-measures-stams		
Finalisation criteria:	1 - Training plans covering STAM P2 have been developed and implemented		
FCM04.2-USE01	Airspace Users to deploy the appropriate tools and associated procedures	From: Applicability Area 1: 01/11/2017	By: Applicability Area 1: 31/12/2021
Action by:	Airspace Users		
Description & purpose:	Airspace Users, in particular Flight Planning Services, to deploy the appropriate tools (STAM application and services provided by NM) and associated procedures so as to be capable to support Enhanced Short Term ATFCM Measures. The procedures mentioned above shall include the communication of the STAM measures to the crews, as appropriate.		
Supporting material(s):	SJU - SESAR Solution 17: Data Pack for advanced Short ATFCM Measures (STAM) Url : https://www.sesarju.eu/sesar-solutions/advanced-short-term-atfcm-measures-stams EUROCONTROL - NM STAM CONOPS EUROCONTROL - NM STAM coordination procedures (Common set of ATFCM-STAM procedures including roles & responsibilities allowing for effective STAM measure execution)		
ATM Master Plan relationship:	[NIMS-13b]-Enhanced short term ATFM measures (STAM) [PRO-022]-FCM procedures for collaborating on SBT changes with Airspace Users		
Finalisation criteria:	1 - Tool supporting STAM Phase 2 is available 2 - Procedures are in place		
FCM04.2-NM01	Update the NM systems and develop the associated procedures	From: Applicability Area 1: 01/11/2017	By: Applicability Area 1: 31/12/2021
Action by:	NM		
Description & purpose:	Update the NM systems and develop the associated procedures so as to ensure that the ATFCM planning at network level supports hot-spot detection, what-if function, STAM CDM, execution of STAM, network assessment and continuous monitoring of network activity.		

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Supporting material(s):	SJU - SESAR Solution 17: Data Pack for advanced Short ATFCM Measures (STAM) Url : https://www.sesarju.eu/sesar-solutions/advanced-short-term-atfcm-measures-stams EUROCONTROL - NM STAM CONOPS EUROCONTROL - NM STAM coordination procedures (Common set of ATFCM-STAM procedures including roles & responsibilities allowing for effective STAM measure execution)		
ATM Master Plan relationship:	[NIMS-13b]-Enhanced short term ATFM measures (STAM) [NIMS-27]-Network DCB sub-system enhanced with improved accuracy of processing real-time data [PRO-022]-FCM procedures for collaborating on SBT changes with Airspace Users [PRO-247]-FCM Procedures for hotspots information sharing and for CDM process to support STAM coordination and implementation..		
Finalisation criteria:	1 - Tools supporting STAM Phase 2 are available.		
FCM04.2-NM02	Train the personnel	From: Applicability Area 1: 01/11/2017	By: Applicability Area 1: 31/12/2021
Action by:	NM		
Description & purpose:	Ensure that all operational personnel concerned is adequately trained for their job functions in relation to the implementation of STAM Phase 2.		
Supporting material(s):	SJU - SESAR Solution 17: Data Pack for advanced Short ATFCM Measures (STAM) Url : https://www.sesarju.eu/sesar-solutions/advanced-short-term-atfcm-measures-stams EUROCONTROL - NM STAM CONOPS		
Finalisation criteria:	1 - Training plans covering STAM P2 have been developed and implemented.		

