

SESAAR		Achieved							Multi-N	
FCM04.1		Short Term ATFCM Measures (STAM) - Phase 1								
REG	ASP	MIL	APO	USE	INT	IND	NM	MET	AIS	USP

Subject matter and scope

The rigid application of ATFM regulations based on standard capacity thresholds as the predominant tactical capacity measure needs to be replaced by a close working relationship between ANSP/FMP, AU and NMF, which would monitor both the real demand, the effective capacity of sectors having taken into account the complexity of expected traffic situation.

In order to close the gap between ATC and ATFCM, local operational procedures need to be developed. The aim is to improve the efficiency of the system using flow management techniques close to the real time operations with direct impact on tactical capacity management, occupancy counts and tactical action on traffic. The target of the short term ATFCM measures (STAM) is to replace en-route CASA regulations for situations where the capacity is nominal.

This objective deals with the initial version of STAM already deployed in some FMPs following some operational experimentations which is labelled STAM phase 1. A more automated version of STAM labelled STAM phase 2 will be released in the next years by SESAAR. The deployment of STAM phase 1 is expected to happen only in selected core area FMPs. Once released, STAM Phase 2 will be deployed ECAC wide or at least in the high complexity ACCs.

Airports can be involved in the STAM process but the decision to involve them is a local decision

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			
Timescales:		From:	By:
Initial operational capability		01/09/2013	Applicability Area
Full operational capability		31/10/2017	Applicability Area

References

European ATM Master Plan

OI step -		<a href="#">[DCB-0205]-Short Term ATFCM Measures</a>									
Enablers -		CTE-C06a	CTE-C06b COM12	NIMS-08	NIMS-13a	PRO-038					
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

Commission 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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SESAAR Solution

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ICAO GANP - ASBUs

- none -
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Deployment Programme

- none -
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European Plan for Aviation Safety

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- none -	
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## Operating Environments

En-Route
Network
Terminal Airspace

## Stakeholder Lines of Action (SLoAs)

SLoA ref.	Title	From	By
<b>FCM04.1-REG01</b>	Review, as appropriate, the safety argument of the changes imposed by the implementation of Short Term ATFCM Measures Phase 1	<b>DELETED</b>	
<b>FCM04.1-ASP01</b>	Availability of demand-capacity balancing tools via CHMI	<b>FINALISED</b>	
<b>FCM04.1-ASP02</b>	Provision of ANSPs sector and traffic occupancy parameters data to NM	<b>FINALISED</b>	
<b>FCM04.1-ASP03</b>	Implement FCM Procedures to enable application of flow management techniques on traffic streams closer to real-time and including more accurate assessment of forecast sector loads and cooperative management of groups of sectors and ATCO resources.	<b>FINALISED</b>	
<b>FCM04.1-ASP04</b>	Develop, and deliver as necessary, a safety assessment of the changes imposed by the implementation of Short Term ATFCM Measures Phase 1	<b>FINALISED</b>	
<b>FCM04.1-USE01</b>	Availability of demand-capacity balancing tools	<b>FINALISED</b>	
<b>FCM04.1-NM01</b>	Develop and implement demand-capacity balancing tools via CHMI	<b>FINALISED</b>	
<b>FCM04.1-NM02</b>	Integration of ANSPs sector and traffic occupancy parameters data into NM systems	<b>FINALISED</b>	

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>	Some enhancement through the prevention of overloads.
<b>Capacity:</b>	Sector occupancy counts are used to identify 'hotspots' where action can be taken to reduce traffic complexity. This results in a streamlined ATCO workload, thus improving capacity and safety.
<b>Operational Efficiency:</b>	-
<b>Cost Efficiency:</b>	-
<b>Environment:</b>	-
<b>Security:</b>	-

## Detailed SLoA Descriptions

<b>FCM04.1-ASP01</b>	<b>Availability of demand-capacity balancing tools via CHMI</b>	<b>From:</b> 01/09/2013	<b>By:</b> 31/10/2017
<b>Action by:</b>	<b>ANS Providers</b>		
<b>Description &amp; purpose:</b>	A tool supporting STAM phase 1 operations (hot spot detection based on occupancy counts, Occupancy Traffic Monitoring Values and Flight Lists) needs to be implemented. The tool can be CHMI or a local tool (if available).		
<b>Supporting material(s):</b>	EUROCONTROL - CFMU Human Machine Interface (CHMI) ATFCM Reference Guide - Edition 7.0 / 03/2012 Url : <a href="http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/chmi-atfcm-reference-guide-current.pdf">http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/chmi-atfcm-reference-guide-current.pdf</a>		
<b>ATM Master Plan relationship:</b>	<a href="#">[NIMS-08]-strategic and pre-tactical demand-capacity balancing evaluation, simulation and display tools</a>		
<b>Finalisation criteria:</b>	1 - The tools supporting STAM phase 1 have been implemented.		
<b>FCM04.1-ASP02</b>	<b>Provision of ANSPs sector and traffic occupancy parameters data to NM</b>	<b>From:</b> 01/09/2013	<b>By:</b> 31/10/2017
<b>Action by:</b>	<b>ANS Providers</b>		
<b>Description &amp; purpose:</b>	Provide the necessary up to date local sector and occupancy counts parameters to NM in order to get the NM system configured to properly support STAM Phase 1.		
<b>Supporting material(s):</b>	EUROCONTROL - CFMU Human Machine Interface (CHMI) ATFCM Reference Guide - Edition 7.0 / 03/2012 Url : <a href="http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/chmi-atfcm-reference-guide-current.pdf">http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/chmi-atfcm-reference-guide-current.pdf</a>		
<b>Finalisation criteria:</b>	1 - Local sector and occupancy counts parameters are provided to NM.		
<b>FCM04.1-ASP03</b>	<b>Implement FCM Procedures to enable application of flow management techniques on traffic streams closer to real-time</b>	<b>From:</b>	<b>By:</b>

FCM04.1		Short Term ATFCM Measures (STAM) - Phase 1	
	<b>and including more accurate assessment of forecast sector loads and cooperative management of groups of sectors and ATCO resources.</b>	01/09/2013	31/10/2017
<b>Action by:</b>	<b>ANS Providers</b>		
<b>Description &amp; purpose:</b>	Define operational procedures to analyse the traffic in situation of normal capacity but where ATFM regulations would be applied and to define and apply measures (re-route, flight level cap) for ATFCM purpose.		
<b>Supporting material(s):</b>	EUROCONTROL - CFMU Human Machine Interface (CHMI) ATFCM Reference Guide - Edition 7.0 / 03/2012 Url : <a href="http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/chmi-atfcm-reference-guide-current.pdf">http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/chmi-atfcm-reference-guide-current.pdf</a>		
<b>ATM Master Plan relationship:</b>	<a href="#">[PRO-038]-FCM Procedures to enable application of flow management techniques on traffic streams closer to real-time</a>		
<b>Finalisation criteria:</b>	1 - Operational procedures are available.		
<b>FCM04.1-ASP04</b>	<b>Develop, and deliver as necessary, a safety assessment of the changes imposed by the implementation of Short Term ATFCM Measures Phase 1</b>	<b>From:</b> 01/09/2013	<b>By:</b> 31/10/2017
<b>Action by:</b>	<b>ANS Providers</b>		
<b>Description &amp; purpose:</b>	Notify the Regulator/NSA/Competent Authority of planned safety related changes and develop safety assessment of these changes, imposed by the integration implementation of Short Term ATFCM Measures Phase 1 The tasks to be performed are as follows: - notify the Regulator/NSA/Competent Authority of the planned safety related changes. - conduct hazard identification, risk assessment in order to define safety objectives and safety requirements mitigating the risks - develop a safety argument - deliver the safety argument to the Regulator/NSA/Competent Authority, if the severity class of identified risks is 1 or 2 or if the implementation of the changes requires the introduction of new aviation standards.		
	<b>Note</b> :Any other validated/recognised method for the safety assessment, is acceptable, if agreed with the Regulator/NSA/Competent Authority.		
<b>Supporting material(s):</b>	EC - COMMISSION IMPLEMENTING REGULATION (EU) 2017/373 - (OJ L 62, 8.03.2017, p. 1) - COMMISSION IMPLEMENTING REGULATION (EU) 2017/373 of 1 March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011 03/2017 Url : <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R0373&amp;from=EN">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R0373&amp;from=EN</a> EUROCONTROL - EAM 4 - ESARR 4 - Risk Assessment and Mitigation in ATM - Edition 1.0 / 04/2001 Url : <a href="https://www.eurocontrol.int/publication/esarr-4-risk-assessment-and-mitigation-atm">https://www.eurocontrol.int/publication/esarr-4-risk-assessment-and-mitigation-atm</a> EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006 Url : <a href="https://www.eurocontrol.int/tool/safety-assessment-methodology">https://www.eurocontrol.int/tool/safety-assessment-methodology</a>		
<b>Finalisation criteria:</b>	1 - Safety argument addressing the implementation of Short Term ATFCM Measures Phase 1, as required by the implementation of the ESSIP objective, has been developed. 2 - Safety argument addressing the implementation of Short Term ATFCM Measures Phase 1, as required by the implementation of the ESSIP objective, has been delivered to the Regulator/NSA/Competent Authority, as appropriate, depending on the severity of the identified risks or the introduction of new aviation standards.		
<b>FCM04.1-USE01</b>	<b>Availability of demand-capacity balancing tools</b>	<b>From:</b> 01/09/2013	<b>By:</b> 31/10/2017
<b>Action by:</b>	<b>Airspace Users</b>		
<b>Description &amp; purpose:</b>	A tool supporting STAM phase 1 operations for Airspace Users' needs be implemented. The tool can be CHMI or a local tool.		
<b>Supporting material(s):</b>	EUROCONTROL - CFMU Human Machine Interface (CHMI) ATFCM Reference Guide - Edition 7.0 / 03/2012 Url : <a href="http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/chmi-atfcm-reference-guide-current.pdf">http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/chmi-atfcm-reference-guide-current.pdf</a>		
<b>ATM Master Plan relationship:</b>	<a href="#">[NIMS-08]-strategic and pre-tactical demand-capacity balancing evaluation, simulation and display tools</a>		
<b>Finalisation criteria:</b>	1 - Tool supporting STAM Phase 1 is available.		
<b>FCM04.1-NM01</b>	<b>Develop and implement demand-capacity balancing tools via CHMI</b>	<b>From:</b> 01/03/2012	<b>By:</b> 31/03/2012
<b>Action by:</b>	<b>NM</b>		
<b>Description &amp; purpose:</b>	Develop tools via CHMI to support ANSPs and Airspace Users for STAM Phase 1 with the hot spot detection based on occupancy counts, Occupancy Traffic Monitoring Values and Flight Lists.		
<b>Supporting material(s):</b>	EUROCONTROL - CFMU Human Machine Interface (CHMI) ATFCM Reference Guide - Edition 7.0 / 03/2012 Url : <a href="http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/chmi-atfcm-reference-guide-current.pdf">http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/chmi-atfcm-reference-guide-current.pdf</a>		
<b>ATM Master Plan relationship:</b>	<a href="#">[NIMS-08]-strategic and pre-tactical demand-capacity balancing evaluation, simulation and display tools</a>		

FCM04.1		Short Term ATFCM Measures (STAM) - Phase 1	
Finalisation criteria:	1 - Tool available via CHMI equipped with STAM Phase 1 support functions has been deployed.		
FCM04.1-NM02	Integration of ANSPs sector and traffic occupancy parameters data into NM systems	From:	By:
		01/09/2013	31/10/2017
Action by:	NM		
Description & purpose:	Integrate the sector and occupancy counts parameters delivered by the ANSP in the NM systems to ensure a proper operation of the tools supporting STAM Phase 1.		
Supporting material(s):	EUROCONTROL - CFMU Human Machine Interface (CHMI) ATFCM Reference Guide - Edition 7.0 / 03/2012 Url : <a href="http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/chmi-atfcm-reference-guide-current.pdf">http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/chmi-atfcm-reference-guide-current.pdf</a>		
Finalisation criteria:	1 - Parameters have been integrated within NM systems.		