EASA
European Aviation Safety Agency

ARISE+
Funded by the European Union and implemented by the European Aviation Safety Agency

European ATM Master Plan Level 3
&
Local Single Sky Implementation (LSSIP)

Implementation Planning, Reporting and Monitoring

Paul Bosman,
Head of Aviation Cooperation and Strategies, EUROCONTROL

EUROCONTROL

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Outline

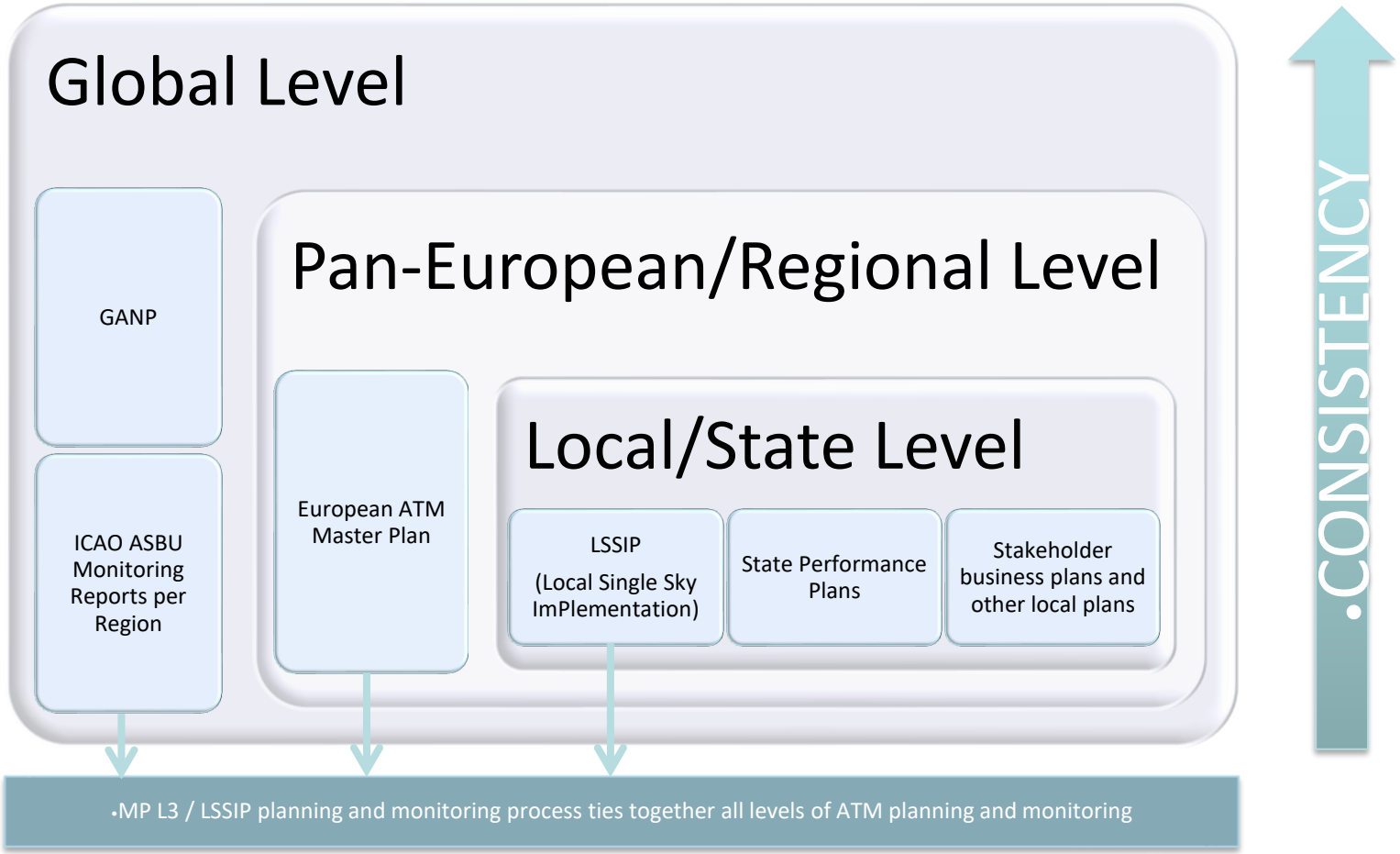
- Introduction
- Implementation Planning, Reporting and Monitoring:
  - Requirements
  - Deliverables
  - Process
  - Tools
- Summary

European ATM Master Plan Level 3
+ LSSIP reporting

Introduction:
Scope and purpose of this presentation

- Broad overview of the SES implementation planning and reporting mechanisms, at both (pan-)European and local levels.
- Topics covered:
  - ATM Master Plan Level 3 (MP L3) Implementation view
  - Implementation Objectives
  - Tools and Processes
  - Criteria to determine implementation progress
  - Stakeholders and Users

Introduction:
Simplified framework

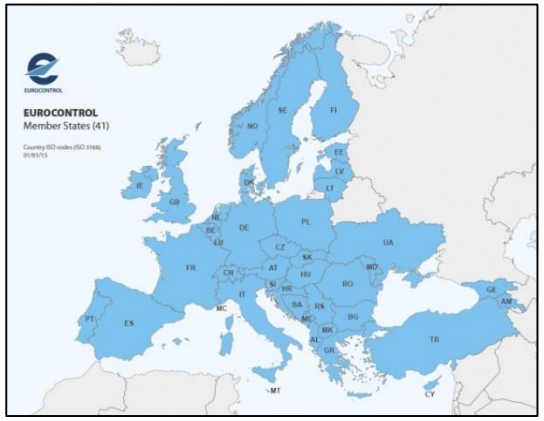


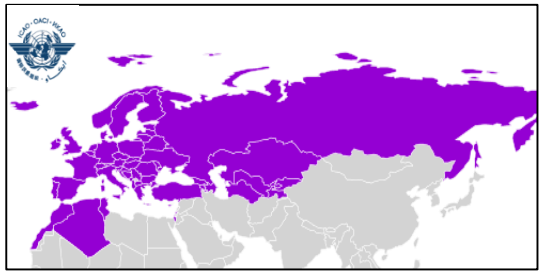
Introduction:
The broad picture

- Both Single European Sky Master Plan and ICAO Global Air Navigation Plan need concrete implementation plans and monitoring.
- Local and regional plans are developed for all the ATM Stakeholders.
- Individual Stakeholders compile their own implementation progress reports.
- These are later consolidated at Regional level for overall deployment planning and progress reporting purposes

Introduction:
EUROCONTROL's role

- Coordination of the contributions to the annual **ATM Master Plan Level 3 Implementation** Plan (previously called **ESSIP – European Single Sky Implementation**).
- Facilitation of the development of national Stakeholders' implementation progress reports (i.e. **Local Single Sky Implementation** - **LSSIP** documents).
- Production of consolidated reports on a European level:
  - ATM Master Plan (MP) Level 3 Implementation Report;
  - ICAO GANP/ASBU monitoring report.
- Support to the decision-making by various steering bodies on any remedial action needed to implement the plans.





Requirements: Why?

- Single European Sky (SES) and SESAR framework require Stakeholders to agree at European level on implementation actions prior to local deployment.

- Facilitate the achievement of endorsed implementation actions by all concerned ATM Stakeholders as a major contribution to reach the expected benefits of SES and SESAR in particular against agreed performance targets.

•SESAR's performance ambitions

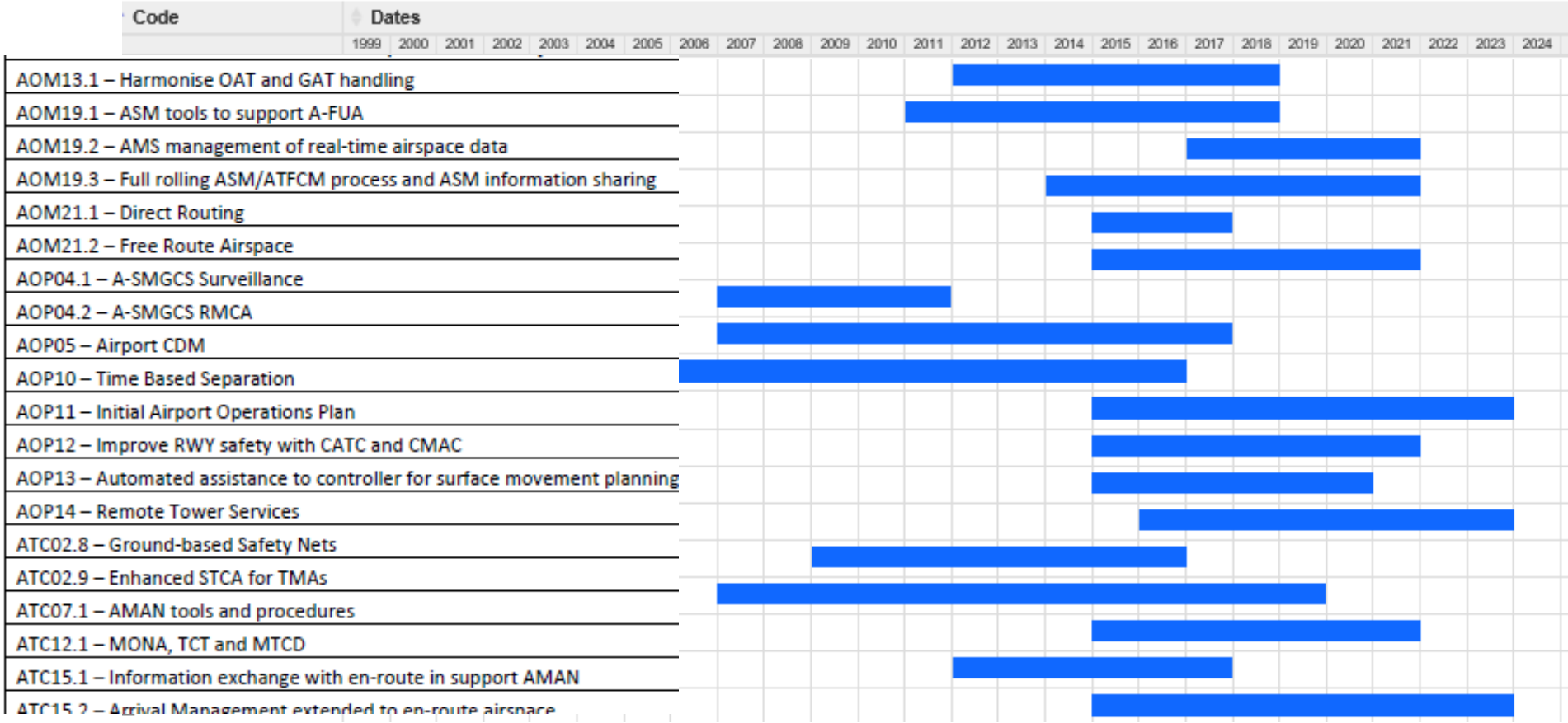
Requirements:
Master Plan Level 3 / LSSIP Mechanism

Cyclic process including three main components:

1. Deployment planning: MP L3 Implementation Plan
2. Deployment reporting and monitoring at local level: LSSIP documents
3. Deployment reporting and monitoring at European level: MP L3 Implementation Progress Report

Deliverables
Master Plan L3 Implementation Plan (1)

Examples of Implementation Objectives:



Deliverables
Master Plan L3 Implementation Plan (2)

Structure based on three views:

- Strategic View: presents the **main operational changes according to the four SESAR Key Features** as defined in the Master Plan Level 1 and gives an overview of what is in the pipeline for deployment.
- Deployment view: gives a **more detailed description** of each Implementation Objective, including the link with the MP L2, the SDM DP, and the ICAO Aviation Systems Block Upgrades (ASBUs).
- Engineering view: provides a **complete description** of each Implementation Objective with **details of the Stakeholder Lines of Action (SLoAs)** and reference to the necessary supporting material.

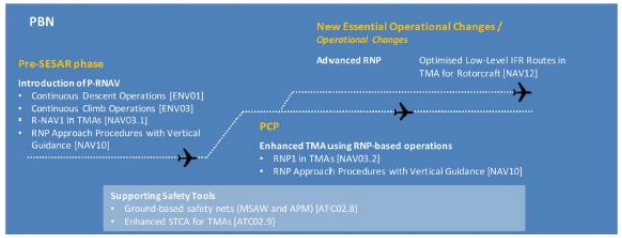
Deliverables
Master Plan L3 Implementation Plan (3)

Strategic View example

Performance Based Navigation (PBN)

ICAO's PBN concept has extended area navigation (RNAV) techniques, originally centred upon lateral navigation accuracy only, to a more extensive statement of required navigation performance (RNP) relating to accuracy, integrity and continuity and how this performance will to be achieved in terms of aircraft and crew requirements. RNP relies primarily on the use of satellite technologies.

The major ATM change for PBN will rely on advanced navigational capabilities of aircraft facilitating the implementation of more flexible and environmentally friendly procedures. This will enable better access to airspace and airports and will lead to a reduction in greenhouse gas emissions, providing a direct contribution towards the decarbonisation of aviation.



During the **pre-SESAR** phase, precision (P)-RNAV approaches combined, where possible, with continuous descent/climb operation techniques, have been deployed in a number of airports/TMAs mostly executing local initiatives. In the absence of a European-wide mandate, implementation has progressed slowly due to the difficulty of handling mixed-mode operations, especially in complex and busy TMAs.

The PBN concept suggests that RNAV specifications are effectively legacy specifications and is firmly set on RNP. The **PCP** Regulation mandates a number of high complexity TMAs to move to an RNP1 environment however, PCP pertains to a limited geographical scope.

SESAR 1 Solution #10 'Optimised Route Network using Advanced RNP' provides a PBN solution to link Free Route airspace (FRA) above FL310, to the final approach via a set of defined and de-conflicted routes, from fixed entry points at the base of the FRA to the final approach segment.

PCP-RELATED FUNCTIONALITY

AF1 Extended Arrival Management and Performance Based Navigation in high density Terminal Manoeuvring Area

- *s-AF1.1 AMAN extended to En-Route Airspace*
- s-AF1.2 Enhanced Terminal Airspace using RNP-Based Operations

PBN, in particular RNP1/0.3 applications, can also support a further integration of rotorcraft into the ATM system. SESAR 1 has validated a Solution [#113] proposing optimised low-level IFR routes in TMA, which enable an optimised use of the airspace and improve connectivity between the airports in the TMA. The Solution has been translated into an Implementation Objective.

Medium Term View

The PBN Regulation currently under consultation will set the wider scenario for the implementation of PBN in Europe. The Regulation has incurred some delays and this has created some uncertainty in the stakeholders' implementation commitments. Overall, Europe's airspace concept is evolving to include the use of advanced RNP in en-route and terminal operations, and RNP APCH on the approach to all runways.

Stakeholder Perspective

The implementation of PBN requires a strong partnership between many actors, primarily ANSPs, airspace users and regulatory authorities as follows:

Airspace Users (AUs)

The airspace users will retain a substantial role in the implementation of the change through:

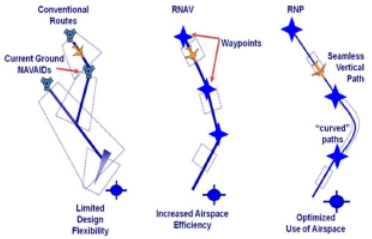
- The appropriate equipage of the airframes (e.g. RNAV 1 followed by RNP 1 capabilities) and,
- The training and the certification of aircrews.

These will allow the users to maximise benefits offered by the transition to a PBN environment.

Air Navigation Service Providers (ANSPs)

ANSPs will support this change by:

- Implementing new PBN procedures and airspace design, capitalising on improved navigation capabilities of aircraft.
- Adapting the ground navigation infrastructure in order to provide appropriate support to the airspace users.
- Deploying or updating of controller support tools (e.g. enhanced STCA), in order to take into account new patterns of traffic distribution.



Overall, this will allow a smoother evolution of the traffic (e.g. CDOs/CCOs, optimised route structure).

Regulatory Authorities

State authorities will play a key role in the implementation of PBN, not only to ensure its safe introduction through supervisory responsibilities, but also to actively participate in the development of an airspace concept that responds to the airspace users' requirements while preserving public interest.

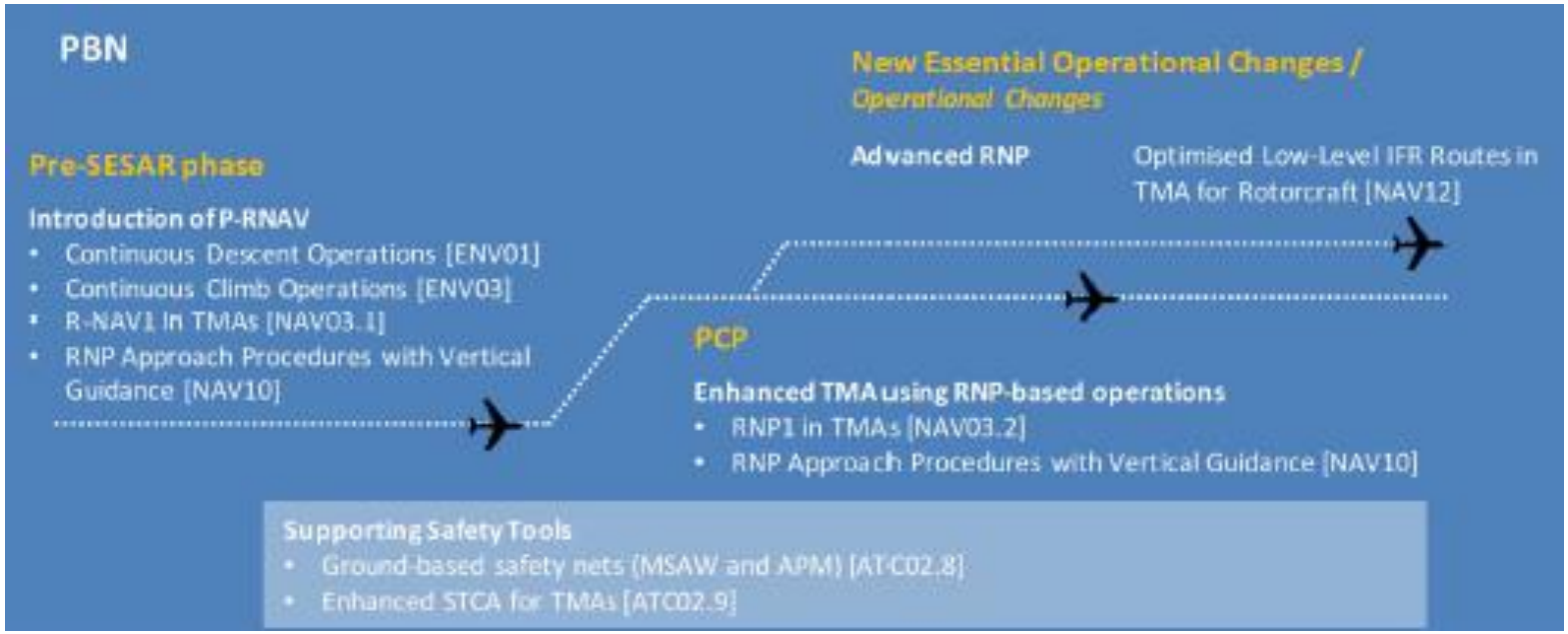
Military Authorities

The military stakeholders will be involved in the implementation of PBN within their role as service providers as well as airspace users (flying IFR/GAT). The relevant capabilities of military aircraft with equivalent performance to that of civil airspace user aircraft will allow seamless integration of traffic flows and enable benefits from optimised airspace organisation and procedures.

Performance Benefits

	Reduction in fuel burn through optimised routes and procedures.
	Emission of greenhouse gases and noise nuisance reduced by use of optimal flight procedures and routings.
	Improved through increased situational awareness, indirectly for both ATC and pilot through reduction of workload during RNAV/RNP/APV operations.
	Marginal improvement, in particular due to the implementation of APV procedures. This will allow improved access to airport in all weather conditions as well as lower minima, than what can be achieved with non-precision approaches.

Deliverables
Master Plan L3 Implementation Plan (4)



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Deliverables
Master Plan L3 Implementation Plan (5)

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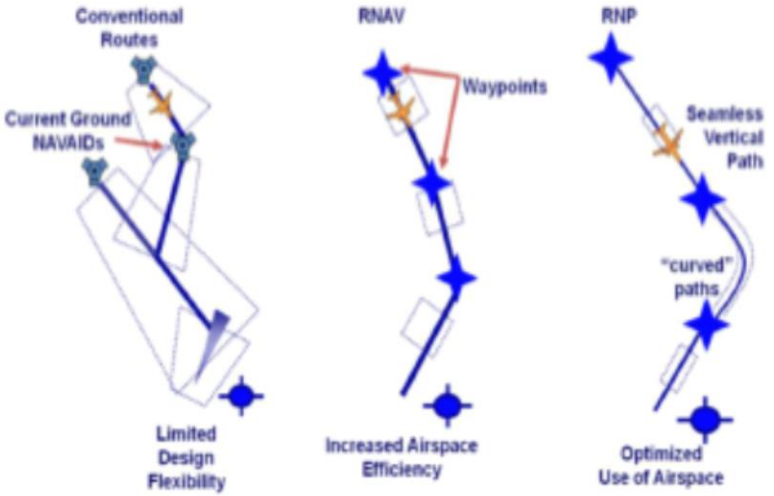

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Deliverables
Master Plan L3 Implementation Plan (6)

Performance Benefits

	Reduction in fuel burn through optimised routes and procedures.
	Emission of greenhouse gases and noise nuisance reduced by use of optimal flight procedures and routings.
	Improved through increased situational awareness, indirectly for both ATC and pilot through reduction of workload during RNAV/RNP/APV operations.
	Marginal improvement, in particular due to the implementation of APV procedures. This will allow improved access to airport in all weather conditions as well as lower minima, than what can be achieved with non-precision approaches.

Deliverables
Master Plan L3 Implementation Plan (7)

Structure based on three views:

- Strategic View: presents the main operational changes according to the four SESAR Key Features as defined in the Master Plan Level 1 and gives an overview of what is in the pipeline for deployment.
- Deployment view: gives a more detailed description of each Implementation Objective, including the link with the MP L2, the SDM DP, and the ICAO Aviation Systems Block Upgrades (ASBUs).
- Engineering view: provides a complete description of each Implementation Objective with details of the Stakeholder Lines of Action (SLoAs) and reference to the necessary supporting material.

Deliverables
Master Plan L3 Implementation Plan (8)

Deployment View example

FCM05 – Interactive Rolling NOP

This objective consists in the implementation of a platform that uses the state-of-the art technologies for creation of a virtual operations room for the physically distributed European ATM Network Operations, in support of the collaborative Network Operations Plan (NOP). This platform will support the network collaborative rolling processes from strategic to real-time operations, including capabilities for online performance monitoring integrated and feeding back into the collaborative network planning. Also, the platform provides access to post-operational data for offline analysis and performance reporting.

SESAR Solutions:	Solution #20 Initial collaborative NOP
SESAR Key Feature:	Optimised ATM Network Services
Essential Operational Change / PCP:	S-AF4.2 Collaborative NOP
DP Families:	4.2.2 Interactive Rolling NOP 4.2.4 AOP/NOP Information Sharing
OI Steps & *Enablers*:	DCB-0102, DCB-0103-A
Dependencies:	AOM19.1
ICAO ASBUs:	B1-ACDM, B1-NOPS
Network Strategy Plan:	SO2/1, SO2/2, SO2/3, SO2/4
Operating Environment:	Airport, Terminal, Mixed, En-Route, Network
EATMN Systems:	ATFCM

When

FOC: 31/12/2021

Who

Stakeholders:
- ANSPs
- Airspace Users
- Airport Operators
- Network Manager

Where

Applicability Area
All ECAC States except Armenia, FYROM, Luxembourg, Maastricht UAC and Moldova

Status On time

Completion rate - end 2017: 8%

Estimated achievement: 12/2021

Applicable regulations & standards

- Regulation (EU) 716/2014 - Establishment of the Pilot Common Project

Benefits

Cost Efficiency
Enhanced through use of cost efficient tools to access network information instead of expensive local tools or procedures.

Capacity
Small benefits through improved use of the airport and airspace capacity resulting from a better knowledge of the airspace availability and of the traffic demand.

Safety
Enhanced by improved sharing of the network situation.

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ANSPs Lines of Action:

ANSP SLoA listed in objective AOM19.1, identified as a dependency to this objective, are also relevant for FCM05. These SLoAs address the "Upgrade the automated ASM support system with the capability of AIXM 5.1 B2B data exchange with NM" and "The integration of the automated ASM support systems with the Network".

ASP04	Develop and implement ATFCM procedures for interaction with the NOP	31/12/2021
ASP05	Train the relevant personnel for interaction with the NOP	31/12/2021

Airport Operators Lines of Action:

APO01	Provide the required data to the Network Manager for Demand Data Repository (DDR)	31/12/2017
APO02	Perform the integration of the AOP with the NOP	31/12/2021

Airspace Users Lines of Action:

USE01	Provide the required data to the Network Manager for DDR	31/12/2017

Network Manager Lines of Action:

NM01	ADR to provide, common and consolidated view of European airspace data containing both static and dynamic digital data	Finalised
NM02	Upgrade NM system for external user access to the airspace data repository (making restrictions available in AIXM 5.1 format via B2B)	Finalised
NM03	Equip Airspace management system with tools for collection of airspace data (Interoperability with ASM tools in AIXM 5.1)	Finalised
NM04	Perform an integration of ASM support systems with the Network	Finalised
NM05	Upgrade NM systems to allow the access of interested users to the DDR	Finalised
NM06	Implement FCM Procedures for on-line access/update to the NOP and notification of updates	Finalised
NM07	Upgrade NM systems to allow FMP to remote access simulation via the NOP Portal (create of simulations and assessment of the results) and in a second step to edit scenario measures (regulation, config, capacities,...) prior to running simulations	Finalised
NM08	Flight Plan filing capability directly via the NOP portal	Finalised
NM09	Develop AOP/NOP interfaces	31/12/2018
NM10	Integrate the AOPs into the Network Operation Plan	31/12/2021
NM12	Enhance the NM technical platform and services	31/12/2021
NM13	Implement appropriate procedures	31/12/2021

Changes to the Objective since previous edition:

- Added operating environment.
- Removed link to ICAO GANP ASBU B0-NOPS and added link to B1-ACDM.

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Deliverables
Master Plan L3 Implementation Plan (9)

FCM05 – Interactive Rolling NOP

This objective consists in the implementation of a platform that uses the state-of-the art technologies for creation of a virtual operations room for the physically distributed European ATM Network Operations, in support of the collaborative Network Operations Plan (NOP). This platform will support the network collaborative rolling processes from strategic to real-time operations, including capabilities for online performance monitoring integrated and feeding back into the collaborative network planning. Also, the platform provides access to post-operational data for offline analysis and performance reporting.

Applicable regulations & standards

- Regulation (EU) 716/2014 - Establishment of the Pilot Common Project

Where

Applicability Area
All ECAC States except Armenia, FYROM, Luxembourg, Maastricht UAC and Moldova

Status **On time**

Completion rate - end 2017: 8%

Estimated

Deliverables
Master Plan L3 Implementation Plan (10)

ANSPs Lines of Action:

ANSP SLoA listed in objective AOM19.1, identified as a dependency to this objective, are also relevant for FCM05. These SLoAs address the "Upgrade the automated ASM support system with the capability of AIXM 5.1 B2B data exchange with NM" and "The integration of the automated ASM support systems with the Network".

ASP04	Develop and implement ATFCM procedures for interaction with the NOP	31/12/2021
ASP05	Train the relevant personnel for interaction with the NOP	31/12/2021

Airport Operators Lines of Action:

APO01	Provide the required data to the Network Manager for Demand Data Repository (DDR)	31/12/2017
APO02	Perform the integration of the AOP with the NOP	31/12/2021

Airspace Users Lines of Action:

USE01	Provide the required data to the Network Manager for DDR	31/12/2017

Network Manager Lines of Action:

NM01	ADR to provide, common and consolidated view of European airspace data containing both static and dynamic digital data	Finalised
NM02	Upgrade NM system for external user access to the airspace data repository (making restrictions available in AIXM 5.1 format via B2B)	Finalised

Deliverables
Master Plan L3 Implementation Plan (11)

Structure based on three views:

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Deliverables
Master Plan L3 Implementation Plan (12)

Engineering View example

SESAR					ECAC		
ATC17	Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

The operational context of electronic dialogue as automated assistance to controller during coordination and transfer addresses the facilities and processes between ATC components serving ATC units for the purpose of achieving:

1.The electronic dialogue in co-ordination prior to the transfer of flights from one ATC unit to the next.
In the scope of this objective the implementers should use the following OLDI messages in order to perform an electronic dialogue :
- Referred Activate Proposal Message (RAP);
- Referred Revision Proposal Message (RRV)
- Co-ordination Message (CDN)
- Acceptance Message (ACP)
- Reject Co-ordination Message (RJC)
- Stand-by Message (SBY)

2. The transfer of communication from one ATC unit to the next ATC unit of such flights.
In the scope of this objective the implementers should use the following OLDI messages in order to perform an electronic dialogue:
- Change of Frequency Message (COF)
- Manual Assumption of Communications Message (MAS)
- Transfer Initiation Message (TIM)
- Supplementary Data Message (SDM)
- Hand-Over Proposal Message (HOP)
- Request on Frequency Message (ROF)

3. The coordination processes that support the exchange of OLDI messages related to the Basic procedure, specifically Preliminary Activation Message (PAC) and, if applicable, SSR Code Assignment Message (COD).
The system permits controllers to conduct screen to screen coordination between adjacent ATSUs / sectors reducing workload associated with coordination, integration and identification tasks. The system supports coordination dialogue between controllers and transfer of flights between ATSUs, and facilitates early resolution of conflicts through inter ATSU/sector coordination.

NOTE: This objective complements the (mandatory) requirements of basic notification, coordination and transfer functionalities which were covered in Implementation objective ITY-COTR (achieved in 2015) and regulated by Regulation (EC) No 1032/2006.

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	All ECAC States except: Ireland, Slovak Republic, Ukraine		
Timescales:	**From:**	**By:**	**Applicable to:**
Initial operational capability	01/01/2013		Applicability Area
Full operational capability		31/12/2018	Applicability Area

References

European ATM Master Plan

OI step -	[CM-0201]-Automated Assistance to Controller for Seamless Coordination, Transfer and Dialogue								
	Enablers -	PRO-048							

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 (EC) No 1032/2006 laying down requirements for the exchange of flight data for the purpose of notification, coordination and transfer of flights between air traffic control units.

ICAO GANP – ASBUs

ATC17	Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer
B0-FICE	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration

Deployment Programme

3.2.1	Upgrade of ATM systems (NM, ANSPs, AUs) to support Direct Routings (DCTs) and Free Routing Airspace (FRA)

Stakeholder Lines of Action (SLoAs)

SloA ref.	Title	From	By
ATC17-REG01	Conduct safety oversight of the changes	DELETED	
ATC17-ASP01	Develop safety assessment for the changes	01/01/2013	31/12/2018
ATC17-ASP02	Upgrade and put into service ATC system to support the Basic procedure (specifically PAC and COD)	01/01/2013	31/12/2018
ATC17-ASP03	Upgrade and put into service ATC system to support electronic dialogue procedure in Transfer of communication process	01/01/2013	31/12/2018
ATC17-ASP04	Upgrade and put into service ATC system to support electronic dialogue procedure in Coordination process	01/01/2013	31/12/2018
ATC17-ASP05	Train ATC staff for applying electronic dialogue procedure	01/01/2013	31/12/2018

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

Expected Performance Benefits

Safety:	Reduction of human error due to automation of controller tasks during coordination and transfer.
Capacity:	Reduction of controller workload compared to conventional processes without automated support.
Operational Efficiency:	More efficient planning and operational decision making.
Cost Efficiency:	-
Environment:	-
Security:	-

Detailed SLoA Descriptions

ATC17-ASP01	Develop safety assessment for the changes	From: 01/01/2013	By: 31/12/2018
Action by:	ANS Providers		
Description & purpose:	Develop safety assessment of the changes, notably upgrades of the system to support Electronic Dialogue during Coordination and Transfer. The tasks to be done are as follows: - Conduct hazard identification, risk assessment in order to define safety objectives and safety requirements mitigating the risks; - Develop safety assessment; - Deliver safety assessment to the NSA, if new standards are applicable or if the severity class of identified risks is 1 or 2. This safety assessment shall be based on fully validated/recognised method.		
Supporting material(s):	EC - Regulation (EU) No 1035/2011-(OJ L 271, 18.10.2011, p. 23) - Regulation (EU) No 1035/2011 of 17 October 2011 laying down common requirements for the provision of air navigation services and amending Regulations (EC) No 482/2008 and (EU) No 691/2010 10/2011 Url : http://eur-lex.europa.eu/eli/reg_impl/2011/1035/oj EUROCONTROL - EAM 4 - ESARR 4 - Risk Assessment and Mitigation in ATM - Edition 1.0 / 04/2001 Url : http://www.eurocontrol.int/articles/esarr-4-risk-assessment-and-mitigation-atm EUROCONTROL - SPEC 106 - EUROCONTROL Specification for On-Line Data Interchange (OLDI) - Edition 4.2 - OJ 2011/C 146/11 / 12/2010 Url : http://www.eurocontrol.int/publications/line-data-interchange-oldi-specification		
Finalisation criteria:	1 - The Safety argument for all changes, generated by the upgrade of the system to support Electronic Dialogue during Coordination and Transfer has been delivered by the ANSP to the NSA.		

ATC17-ASP02	Upgrade and put into service ATC system to support the Basic	From:	By:

Link: https://www.eurocontrol.int/sites/default/files/content/documents/official-documents/reports/Engineering%20view_all%20objectives_Version12Sep2017.pdf

Deliverables
Master Plan L3 Implementation Plan (13)

ATC17	Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer

Subject matter and scope

The operational context of electronic dialogue as automated assistance to controller during coordination and transfer addresses the facilities and processes between ATC components serving ATC units for the purpose of achieving:

1.The electronic dialogue in co-ordination prior to the transfer of flights from one ATC unit to the next.
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- Reject Co-ordination Message (RJC)
- Stand-by Message (SBY)

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In the scope of this objective the implementers should use the following OLDI messages in order to perform an electronic dialogue:
- Change of Frequency Message (COF)
- Manual Assumption of Communications Message (MAS)
- Transfer Initiation Message (TIM)
- Supplementary Data Message (SDM)
- Hand-Over Proposal Message (HOP)
- Request on Frequency Message (ROF)

3. The coordination processes that support the exchange of OLDI messages related to the Basic procedure, specifically Preliminary Activation Message (PAC) and, if applicable, SSR Code Assignment Message (COD).
The system permits controllers to conduct screen to screen coordination between adjacent ATSUs / sectors reducing workload associated with coordination, integration and identification tasks. The system supports coordination dialogue between controllers and transfer of flights between ATSUs, and facilitates early resolution of conflicts through inter ATSU/sector coordination.

Deliverables
Master Plan L3 Implementation Plan (14)

ATC17	Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer

B0-FICE	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration

Deployment Programme

3.2.1	Upgrade of ATM systems (NM, ANSPs, AUs) to support Direct Routings (DCTs) and Free Routing Airspace (FRA)

Stakeholder Lines of Action (SLoAs)

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ATC17-ASP05	Train ATC staff for applying electronic dialogue procedure	01/01/2013	31/12/2018

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Expected Performance Benefits

Safety:	Reduction of human error due to automation of controller tasks during coordination and transfer.
Capacity:	Reduction of controller workload compared to conventional processes without automated support.
Operational Efficiency:	More efficient planning and operational decision making.
Cost Efficiency:	-
Environment:	-
Security:	-

Deliverables
Master Plan L3 Implementation Plan (15)

Detailed SLoA Descriptions

ATC17-ASP01	Develop safety assessment for the changes	From: 01/01/2013	By: 31/12/2018
Action by:	ANS Providers		
Description & purpose:	Develop safety assessment of the changes, notably upgrades of the system to support Electronic Dialogue during Coordination and Transfer. The tasks to be done are as follows: - Conduct hazard identification, risk assessment in order to define safety objectives and safety requirements mitigating the risks; - Develop safety assessment; - Deliver safety assessment to the NSA, if new standards are applicable or if the severity class of identified risks is 1 or 2. This safety assessment shall be based on fully validated/recognised method.		
Supporting material(s):	EC - Regulation (EU) No 1035/2011-(OJ L 271, 18.10.2011, p. 23) - Regulation (EU) No 1035/2011 of 17 October 2011 laying down common requirements for the provision of air navigation services and amending Regulations (EC) No 482/2008 and (EU) No 691/2010 10/2011 Url : http://eur-lex.europa.eu/eli/reg_impl/2011/1035/oj EUROCONTROL - EAM 4 - ESARR 4 - Risk Assessment and Mitigation in ATM - Edition 1.0 / 04/2001 Url : http://www.eurocontrol.int/articles/esarr-4-risk-assessment-and-mitigation-atm EUROCONTROL - SPEC 106 - EUROCONTROL Specification for On-Line Data Interchange (OLDI) - Edition 4.2 - OJ 2011/C 146/11 / 12/2010 Url : http://www.eurocontrol.int/publications/line-data-interchange-oldi-specification		
Finalisation criteria:	1 - The Safety argument for all changes, generated by the upgrade of the system to support Electronic Dialogue during Coordination and Transfer has been delivered by the ANSP to the NSA.		

ATC17-ASP02	Upgrade and put into service ATC system to support the Basic	From:	By:

Link: https://www.eurocontrol.int/sites/default/files/content/documents/official-documents/reports/Engineering%20view_all%20objectives_Version12Sep2017.pdf

Requirements:
Master Plan Level 3 / LSSIP Mechanism

Cyclic process including three main components:

1. Deployment planning: MP L3 Implementation Plan
2. Deployment reporting and monitoring at local level: LSSIP documents
3. Deployment reporting and monitoring at European level: MP L3 Implementation Progress Report

Deliverables
LSSIP Documents (1)

- Provide a ”Reality check” on the MP L3 Plan, as reported by National Stakeholders, who **sign and commit** to the report documents.
- **For each ECAC State** (+ MUAC, Israel, soon Morocco), the LSSIP delivers **one document** containing the local implementation plan and progress report.
- Present a review of the **situation at the end of the calendar year, the evolution over the past year, and the plans for next years** until achievement of each individual Implementation Objective.
- LSSIP process is also extended to the whole **ICAO EUR region**:
  - **directly** used for ECAC States;
  - with **questionnaire** for other ICAO EUR States.

Link: http://www.eurocontrol.int/articles/lssip

Deliverables
LSSIP Documents (2)

National Focal Points involved in the development of the document

State

Template

Guidance

Local Single Sky ImPlementation (LSSIP) document

Tools

On-line database

EURO CONT ROL

Support of dedicated Contact Person per State

Deliverables
LSSIP Documents (3)

The LSSIP documents (Level 1 – Implementation Overview) are structured into 6 chapters:

- **Chapter 1** – an overview of the ATM institutional arrangements within the State (including an overview of the airspace organization and classification, the ATC Units, the ATM systems operated by the main ANSP(s)).
- **Chapter 2** - a comprehensive picture of the situation of Air Traffic, Capacity and ATFM Delay per each ACC in the State.
- **Chapter 3** - a set of recommendations from the MP L3 Progress Report which are relevant to the state/Stakeholders concerned (including their plan to implement them).
- **Chapter 4** - a set of the main implementation projects (at national, FAB and regional level) which contribute directly to the implementation of the ATM MP related elements.
- **Chapter 5** - deals with the other cooperation activities beyond the projects. It provides an overview of the FAB cooperation and all other regional initiatives which are out of the FAB scope.
- **Chapter 6** - high-level information on progress and plans of each Implementation Objective

Deliverables
LSSIP Documents (4)

Level 1 – Implementation Overview – publicly available, printed
Level 2 – Detailed Implementation Status – more restricted, not printed

Link: https://www.eurocontrol.int/sites/default/files/content/documents/official-documents/reports/LSSIP2017_Spain_Released.pdf

Deliverables
LSSIP Documents (5)

How to determine progress – for an Objective: 7 possible values.

Starting at SLoA – to Stakeholder – to Objective

"Progress"	Definition	Computed percentage
Completed	The development or improvement aimed by a SLoA is fulfilled in accordance with the MP L3 Plan Finalisation Criteria. Relevant info should be provided confirming the completion, e.g. completion date, reference(s) to a publication(s), evidences of compliance with relevant national or EC regulations, EUROCONTROL released data, an audit confirming compliance or completion etc. For those Objectives where the implementation depends on adjacent countries, an SLoA can be reported "Completed" if the implementation is at least achieved with one adjacent country.	100%
Ongoing	Implementation has kicked off but is not yet fully completed and the planned implementation date is within the SLoA finish date.	1-99%
Planned	A planned schedule and proper (approved and committed budgeted) actions are specified within the SLoA finish date for completion (last Checkpoint is within the SLoA finish date) but not yet kicked off (SLoA/Objective covered by stakeholder's Business Plan). Relevant information must be explained.	0%
Late	An SLoA shall be reported "Late" in the case when there is a firm commitment to implement the SLoA (e.g. budget and schedule approved) but foreseen to be achieved after the SLoA finish date, and relevant information must be explained.	0-99%

No Plan	1) The Stakeholder has not yet defined a project management/ implementation plan for this SLoA with assigned financial and human resources, but has the intention to implement it for the next year; or 2) The Stakeholder cannot develop a project management/implementation plan with relevant financial or human resources for the implementation of this SLoA due to (local/national) austerity measures, but has the general intention to implement it; or 3) The Stakeholder is in the scoping phase where he is developing a feasibility study including a cost benefit analysis etc. and hence has not yet finally decided on a project management/implementation plan to implement the SLoA. For any case, the Stakeholder must provide a justification.	0-99%
Not Applicable	1) The Stakeholder is not part of the MP L3 Plan 'Applicability Area'; or 2) The Stakeholder is part of the MP L3 Plan 'Applicability Area', however: • The Stakeholder does not provide the required service for this SLoA i.e. Military not providing ATC services to GAT or in the case of MUAC providing only upper area control services; or • The Stakeholder has reviewed the SLoA and there is no intention to implement it because it is not justified particularly in terms of the cost/benefit ratio or there are national/local restrictions in terms of environment or legislation which prevent the Stakeholder to implement it; or • The Stakeholder is implementing alternative solutions to the one described in the SLoA (e.g. not distributing information via a leaflet, but via other electronic means). For any case, the Stakeholder must provide a justification.	-
Missing Data	Lack of data from a Stakeholder makes it impossible to define "Progress". If following the closure of the LSSIP Database, at the end of the yearly LSSIP cycle, the information required is missing in the LSSIP Database.	0%

- **Planned date > Deadline**

Deliverables
LSSIP Documents (6)

"Progress"	Definition	Computed percentage
Completed	The development or improvement aimed by a SLoA is fulfilled in accordance with the MP L3 Plan Finalisation Criteria. Relevant info should be provided confirming the completion, e.g. completion date, reference(s) to a publication(s), evidences of compliance with relevant national or EC regulations, EUROCONTROL released data, an audit confirming compliance or completion etc. For those Objectives where the implementation depends on adjacent countries, an SLoA can be reported "Completed" if the implementation is at least achieved with one adjacent country.	100%
Ongoing	Implementation has kicked off but is not yet fully completed and the planned implementation date is within the SLoA finish date.	1-99%
Planned	A planned schedule and proper (approved and committed budgeted) actions are specified within the SLoA finish date for completion (last Checkpoint is within the SLoA finish date) but not yet kicked off (SLoA/Objective covered by stakeholder's Business Plan). Relevant information must be explained.	0%
Late	An SLoA shall be reported "Late" in the case when there is a firm commitment to implement the SLoA (e.g. budget and schedule approved) but foreseen to be achieved after the SLoA finish date, and relevant information must be explained.	0-99%

Deliverables
LSSIP Documents (7)

No Plan	1) The Stakeholder has not yet defined a project management/ implementation plan for this SLoA with assigned financial and human resources, but has the intention to implement it for the next year; or 2) The Stakeholder cannot develop a project management/implementation plan with relevant financial or human resources for the implementation of this SLoA due to (local/national) austerity measures, but has the general intention to implement it; or 3) The Stakeholder is in the scoping phase where he is developing a feasibility study including a cost benefit analysis etc. and hence has not yet finally decided on a project management/implementation plan to implement the SLoA. For any case, the Stakeholder must provide a justification	0-99%
Not Applicable	1) The Stakeholder is not part of the MP L3 Plan 'Applicability Area'; or 2) The Stakeholder is part of the MP L3 Plan 'Applicability Area', however: • The Stakeholder does not provide the required service for this SLoA i.e. Military not providing ATC services to GAT or in the case of MUAC providing only upper area control services; or • The Stakeholder has reviewed the SLoA and there is no intention to implement it because it is not justified particularly in terms of the cost/benefit ratio or there are national/local restrictions in terms of environment or legislation which prevent the Stakeholder to implement it; or • The Stakeholder is implementing alternative solutions to the one described in the SLoA (e.g. not distributing information via a leaflet, but via other electronic means). For any case, the Stakeholder must provide a justification	-
Missing Data	Lack of data from a Stakeholder makes it impossible to define "Progress". If following the closure of the LSSIP Database, at the end of the yearly LSSIP cycle, the information required is missing in the LSSIP Database.	0%

Deliverables
LSSIP Documents (8)

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: 31/12/2020	10%	Ongoing
LEBL - Barcelona Airport			
Implementation of EFS support tool is already on-going under CEF 2014 and CEF 2015 projects			31/12/2020
ASP (By:12/2020)			
ENAIRE		13%	Ongoing
Implementation of EFS support tool is already on-going under CEF 2014 and CEF 2015 projects 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 Programme Monitoring View	Electronic Flight Strips (EFS)		31/12/2020
AOP12-ASP01	Install required 'Airport Safety Nets'		by:31/12/2020
ENAIRE	-	0%	Planned
1	Activity started (e.g. Project kicked-off)	10%	N -
2	Airport Safety Nets function defined and appropriate system (if necessary) procured	30%	N -
3	Airport Safety Nets function support system (if required) installed	35%	N -
4	Airport Safety Nets function tested, validated and in operational use	25%	N 31/12/2020
AOP12-ASP02	Train aerodrome control staff on the functionality of 'Airport Safety Nets'		by:31/12/2020
ENAIRE	-	0%	Planned
1	Activity started (e.g. Project kicked-off)	10%	N -
2	Training on the Airport Safety Nets functionality ongoing	40%	N -
3	Training on the Airport Safety Nets functionality completed	50%	N 31/12/2020
AOP12-ASP03	Implement digital systems such as electronic flight strips (EFS)		by:31/12/2020
ENAIRE	-	40%	Ongoing
1	Activity started (e.g. Project kicked-off)	10%	Y 01/01/2014
2	Digital systems (such as EFS) procured	30%	Y 31/12/2015
3	Digital systems (such as EFS) installed	35%	N -
4	Digital systems (such as EFS) tested, validated and available for operational use	25%	N 31/12/2019
Comment:	Projects #057AF2 and 2015_212_AF2 A first version has been installed in September 2017.		
APO (By:12/2020)			
Aena S.A.		0%	Planned
Aligned with the date provided by ENAIRE.	-		31/12/2020
AOP12-APO01	Train all relevant staff on the functionality of 'Airport Safety Nets'		by:31/12/2020
Aena S.A.	-	0%	Planned
1	Activity started (e.g. Project kicked-off)	10%	N -
2	Training of staff on the Airport Safety Nets functionality ongoing	40%	N -
3	Training of staff on the Airport Safety Nets functionality completed	50%	N 31/12/2020

6. And now at Objective level

How to determine progress – for an Objective

Example: LSSIP ES L2

4. So now the three SLoAs together: 1/3 of 40% is 13%

1. Start at SLoA level – here no checkpoint completed, but there's a plan for end 2020, so "Planned", because foreseen timing is <= then the 31/12/2020 MPL3 Plan date (for the SLoA)

2. As above

3. Here two checkpoints already completed, so 40%.

5. Now the same procedure for the other Stakeholder

Requirements:
Master Plan Level 3 / LSSIP Mechanism

Cyclic process including three main components:

1. Deployment planning: MP L3 Implementation Plan
2. Deployment reporting and monitoring at local level: LSSIP documents
3. Deployment reporting and monitoring at European level: MP L3 Implementation Progress Report

Deliverables
Master Plan L3 Implementation Progress Report (1)

- Also an official MP reporting deliverable.
- Gives an overview of progress for all Implementation Objectives represented in the MP L3 Implementation Plan.

Link: https://www.eurocontrol.int/sites/default/files/content/documents/official-documents/reports/MPLevel3Report2018_SJU.pdf

Deliverables
Master Plan L3 Implementation Progress Report (2)

EXECUTIVE SUMMARY

What is the role of the European Master Plan Level 3 Implementation Report?

The European ATM Master Plan (MP) Level 3 Implementation Report provides a holistic view of the implementation of commonly agreed actions to be taken by ECAC States, in the context of the implementation of SESAR. These actions are consolidated in the form of "Implementation Objectives" that set out the operational, technical and institutional improvements that have to be applied to the European ATM network to meet the performance requirements for the key ATM performance areas defined in the MP Level 1 – safety, capacity, operational efficiency, cost efficiency, environment and security.

What is the overall progress of SESAR implementation?

This 2017 Level 3 Report is based on the MP Level 3 2017 Implementation Plan that included 50 Implementation Objectives. Three (3) out of these 50 Objectives are so called "Initial" Implementation Objectives which provide advanced notice to stakeholders but which contain aspects requiring further validation. Therefore they were not yet monitored at local level in 2017. In order to reflect to the largest extent the results of SESAR 1 and its mature and performing SESAR Solutions, the 2017 edition of the Plan introduced a new type of Implementation Objectives called "Local". These Objectives are addressing solutions considered beneficial for specific operating environments, therefore for which a clear widespread commitment for implementation has not been expressed yet. Typically this is the case for local deployments which may include selected main/core operating environments, subject to positive business cases at local level. Amongst the 50 Implementation Objectives included in the 2017 Implementation Plan, four (4) belong to this new "Local" category.

Overall, the implementation progress of the Master Plan Level 3 at ECAC level is steady. A very solid baseline is being implemented, paving the way for the deployment of the more advanced functionalities envisaged by the PCP and other SESAR 1 results as well as preparing the ground for the incoming SESAR2020 functionalities while, at the same time acknowledging the very high pressure on the Air Navigation Service Providers to deploy the already mandatory elements, especially in the framework of the Performance Scheme. A massive number of Objectives associated to the SESAR Baseline implementation (16 Objectives) are expected to be achieved in 2018/2019 shortly to be followed by the advent of the PCP implementation in the timeframe 2021/2023.

It should be noted that there were few Objectives introduced recently, which are at very early phases of implementation planning or for which concrete implementation plans have not been defined yet. For these Objectives it is premature to establish implementation trends and therefore to identify fully reliable estimated achievement dates.

What are the most important implementation issues per SESAR Key Feature?

a) Optimised ATM Network Services

The overall progress of the Implementation Objectives in this key feature is mostly in accordance with the implementation plan, with two implementation spikes expected in 2018 (for the Objectives associated to the SESAR baseline) and in 2021 (for the Objectives related to the PCP). However, it should be observed that the implementation of "Collaborative Flight Planning" Objective (FCM03) is particularly slow (the very initial completion date for the Objective was expected for 2005, now it is

STAKEHOLDERS REG ASP APT AU NM MIL IND

Network Operations Plan (NOP)

The Network Operations Plan (NOP) provides a short to medium-term outlook of how the ATM Network will operate, including expected performance at network and local level. It gives details of capacity and flight efficiency enhancement measures planned at network level and by each Area Control Centre (ACC), as well as a description of the airport performance assessment and improvement measures that are planned at those airports that generate a high level of delay.

The NOP describes the operational actions to be taken by the Network Manager and other stakeholders, needed to respond to the performance targets set by the Performance Framework of the Single European Sky (SESII) package. The NOP also provides both a qualitative and quantitative assessment of the impact of these actions on the performance of the European ATM network. As such, it represents a consolidated network flow and capacity overview, enabling operational partners to anticipate or react to any events and to increase their mutual knowledge of the situation from the strategic phase to the real-time operation phase and into post operations analysis. All this is achieved by using a number of tools that support network operations.

Figure 4: NOP phases

The operations planning process consolidates forecasts and plans from all partners involved in ATM operations (ANSPs, airports, AOs, MIL) and from the EUROCONTROL units in charge of flow, capacity, and airspace management. Starting with the strategic planning of capacities, the process moves to an operational level with the development of derived seasonal, weekly and daily plans (the so-called 'NOP Coordination'). Currently applicable network operations plan is the European Network Operations Plan 2018-2019/22. The related implementation objective is **FCM05** and the implementation date is 12/2021 in Master Plan Level 3 2017 Implementation Plan, supported by the system related **AOM19.1** objective on Airspace Management support tools (part of the "Free Route & Advanced FUA" Major ATM Change) as well as by objective **AOP11** objective on Airport operations plan (included in the "Collaborative airport" Major ATM Change).

Network Operations Planning contains six main elements:

- ✓ Local and Network Operational Planning
- ✓ Route Network and Airspace Structure Development
- ✓ Airspace Management (ASM)
- ✓ ATM (ATS/ASM/ATFCM) Procedures
- ✓ Airspace Modelling

SUCCESS STORY: NM B2B IMPROVEMENTS

The objective of these improvements is an extension of the targeted users of NM B2B web services (Publish/Subscribe Flight Data in particular) to FMP, by making the Publish/Subscribe Flight Data message a complete alternative to EFD.

The module improves the Flight Data via Publish/Subscribe providing more information as well as means for re-synchronisation, contingency. It aims to:

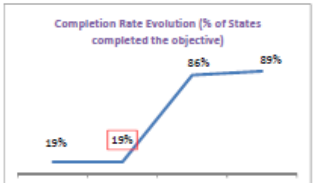
- Make flight version number available via B2B. The goal is to provide users with the version number of any given flight updates via publish/subscribe and via Request/Reply. It should help to determine which flight update is the latest. This is especially important in case of system failure, contingency, etc.

The Module also improves the efficiency in processing the tactical updates:

- Support update of multiple tactical plans at once in B2B. The goal is to provide users with the ability to update multiple tactical plans (Update Capacity plan, Update OTMV plan) at once. It should help improve the efficiency in processing the tactical updates.

AOM19.1 ASM tools to support A-FUA

Stakeholders:	• ANSPs • Network Manager
FOC:	12/2018
Estimated achievement:	12/2018
	Risk of delay
Applicability Area:	All ECAC States except Armenia, FYROM, Malta, Luxembourg and Moldova
SESAR Solutions:	Solution #31 Variable profile military reserved areas and enhanced civil-military collaboration
SESAR Key Features:	Optimised ATM Network Services
PCP Sub-Functionality:	5-AF3.1 ASM and Advanced FUA
ICAO ASBU:	B0-FRTO, B1-FRTO, B1-NOPS
OI Steps:	AOM-0202, AOM-0202-A
Network Strategy Plan:	SO3/2, SO3/3

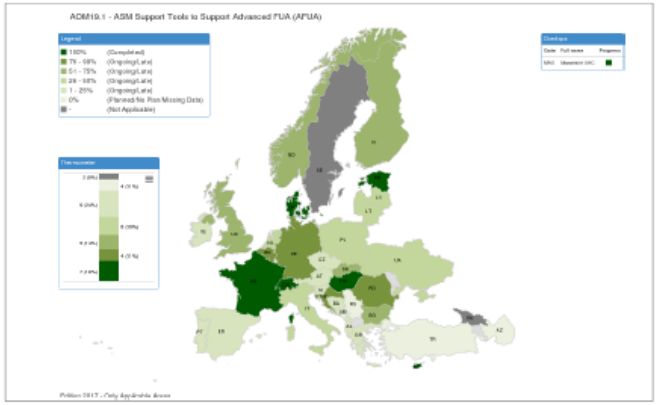


Main 2017 developments:

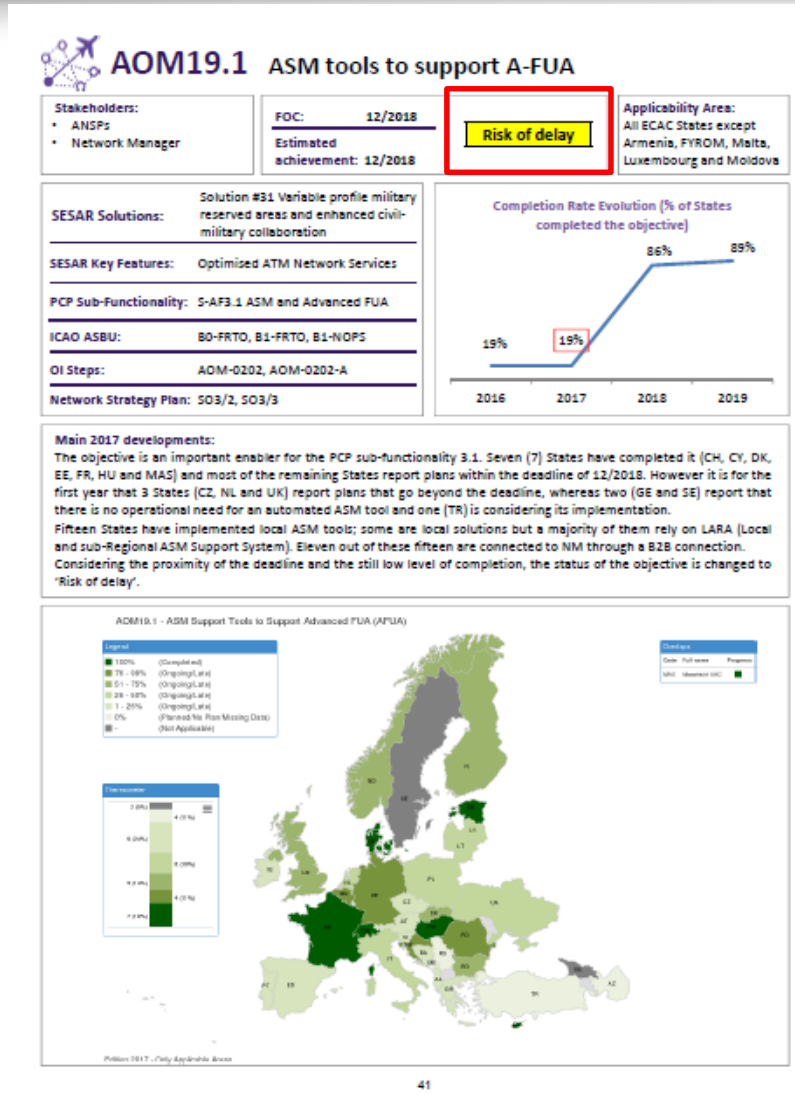
The objective is an important enabler for the PCP sub-functionality 3.1. Seven (7) States have completed it (CH, CY, DK, EE, FR, HU and MAS) and most of the remaining States report plans within the deadline of 12/2018. However it is for the first year that 3 States (CZ, NL and UK) report plans that go beyond the deadline, whereas two (GE and SE) report that there is no operational need for an automated ASM tool and one (TR) is considering its implementation.

Fifteen States have implemented local ASM tools; some are local solutions but a majority of them rely on LARA (Local and sub-Regional ASM Support System). Eleven out of these fifteen are connected to NM through a B2B connection.

Considering the proximity of the deadline and the still low level of completion, the status of the objective is changed to 'Risk of delay'.



Deliverables
Master Plan L3 Implementation Progress Report (3)



AOM19.1 ASM tools to support A-FUA

Stakeholders:
- ANSPs
- Network Manager

FOC: 12/2018
Estimated achievement: 12/2018

Risk of delay

Applicability Area: All ECAC States except Armenia, FYROM, Malta, Luxembourg and Moldova

SESAR Solutions:	Solution #31 Variable profile military reserved areas and enhanced civil-military collaboration
SESAR Key Features:	Optimised ATM Network Services
PCP Sub-Functionality:	S-AF3.1 ASM and Advanced FUA
ICAO ASBU:	B0-FRTO, B1-FRTO, B1-NOPS
OI Steps:	AOM-0202, AOM-0202-A
Network Strategy Plan:	SO3/2, SO3/3

Completion Rate Evolution (% of States completed the objective)

Main 2017 developments:
The objective is an important enabler for the PCP sub-functionality 3.1. Seven (7) States have completed it (CH, CY, DK, EE, FR, HU and MAS) and most of the remaining States report plans within the deadline of 12/2018. However it is for the first year that 3 States (CZ, NL and UK) report plans that go beyond the deadline, whereas two (GE and SE) report that there is no operational need for an automated ASM tool and one (TR) is considering its implementation.
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Considering the proximity of the deadline and the still low level of completion, the status of the objective is changed to 'Risk of delay'.

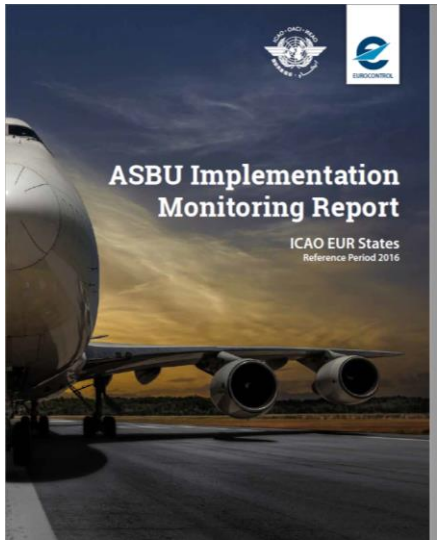
41

The progress status for each Implementation Objective is described in the following terms:

Status	Progress assessment
On Time	Implementation progress is on time. No delays expected.
Risk of delay	The estimated achievement date is in line with the FOC date, but there are risks that could jeopardise the timely implementation of the Implementation Objective.
Planned delay	The estimated achievement date is beyond the FOC date. Stakeholders already envisage delays in implementation. The FOC date is still in the future, some corrective measures can still be taken to achieve the Objective in line with its FOC date.
Late	The estimated achievement date is beyond the FOC date and the FOC date is in the past.
Achieved	The Objective has fulfilled the achievement criteria (80% completion in the applicability area). For some Objectives (PCP/SES/ICAO ASBU related), the Objective may be monitored until 100% achievement.
Closed	The Objective can be declared as closed because it is replaced or renamed, or it is considered as no longer relevant nor contributing to the European ATM Network Performance.

Deliverables
ICAO ASBU Implementation Monitoring Report (1)

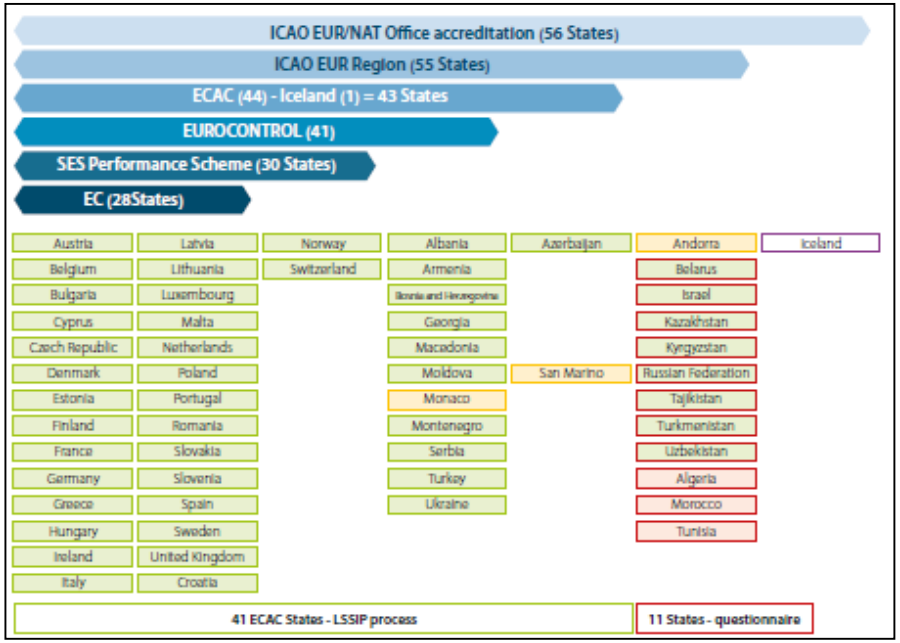
- Developed by EUROCONTROL in cooperation with ICAO EUR/NAT Office.
- LSSIP reporting mechanism already existing in the European region is also used to prepare report for ICAO HQ on ASBU implementation:
  - For ECAC States **no double reporting** to comply with ICAO monitoring requirements - all info extracted from ESSIP/LSSIP process;
- For non-ECAC States reporting burden limited to a minimum with specific guidance provided by EUROCONTROL.



Link: https://www.eurocontrol.int/sites/default/files/content/documents/official-documents/reports/2016-icao-report-final.pdf

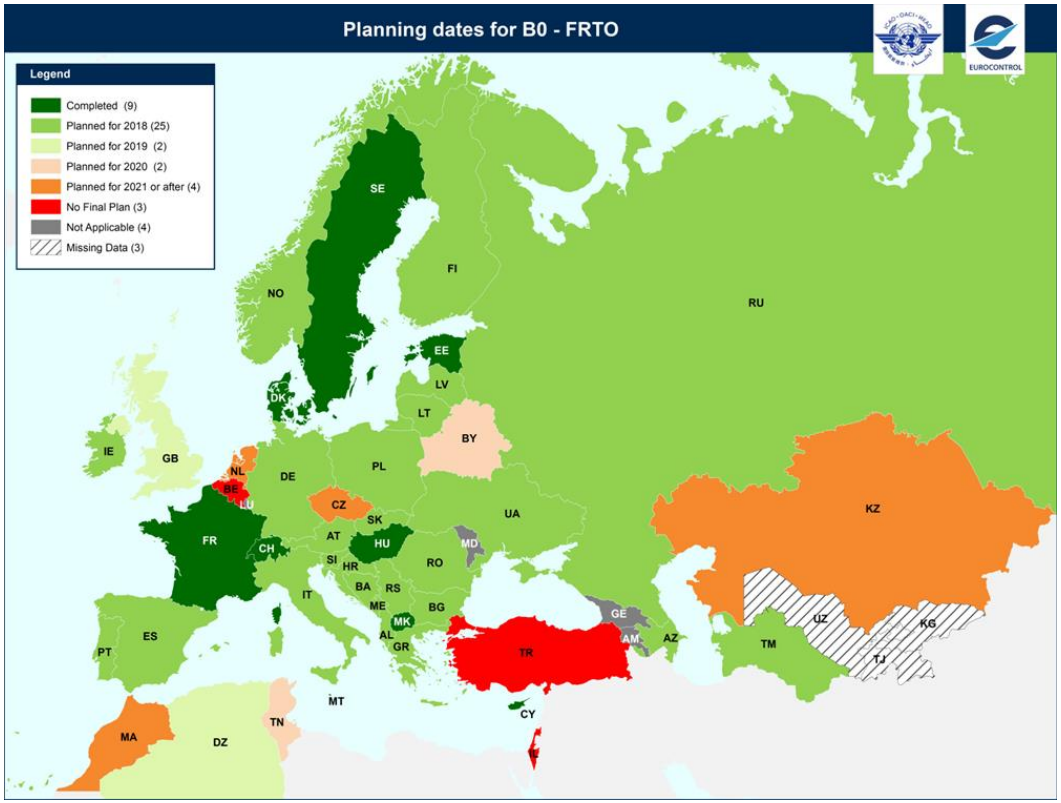
Deliverables
ICAO ASBU Implementation Monitoring Report (2)

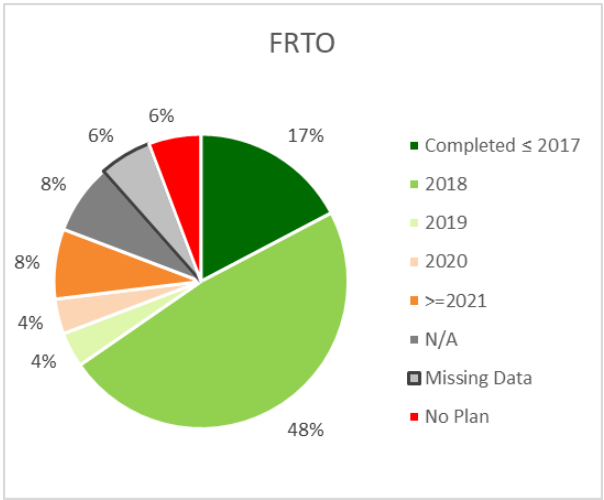
Presented on an annual basis to the EANPG for endorsement, then submitted for inclusion into the annual ICAO Global Air Navigation Report, so that the regional developments/deployment actions can be coordinated across the regions and global interoperability can be ensured at the highest level.



Deliverables
ICAO ASBU Implementation Monitoring Report (3)

Planning View



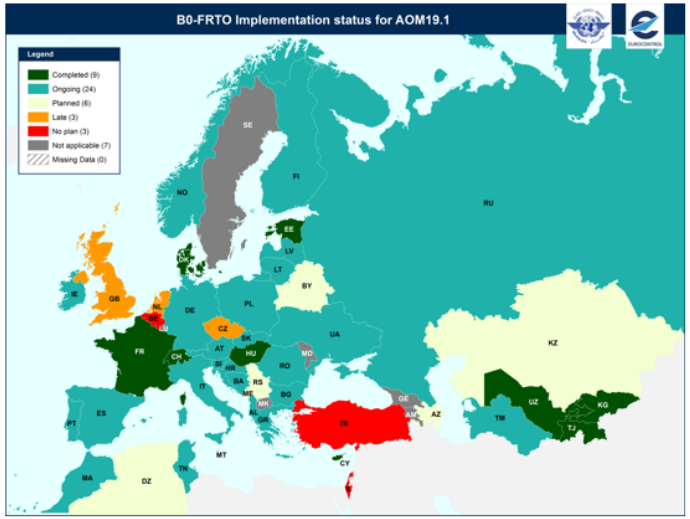


Deliverables
ICAO ASBU Implementation Monitoring Report (4)

Implementation View

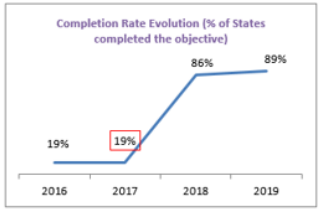
4.9 B0-FRTO

Improved Operations through Enhanced En-Route Trajectories	
AOM19.1	Implement AMS support tools to support A-FUA



1 -Progress for States in the LSSIP mechanism

FOC: 12/2018
Estimated achievement: 12/2018
Risk of delay



Main 2017 developments:

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Fifteen States have implemented local ASM tools; some are local solutions but a majority of them rely on LARA (Local and sub-Regional ASM Support System). Eleven out of these fifteen are connected to NM through a B2B connection.

Considering the proximity of the deadline and the still

Israel	No plan (the objective has been reviewed but no implementation decision has been taken yet). At tactical level there is a local tool supporting ASM.	No Plan

2- Status for remaining States

Algeria	There is a national Airspace management board made up of highly civil and military personal where FUA enhancements are under discussion. LoAs have been established between the civil and military aviation stakeholders and coordination of ASM is done in regular quarterly meetings. Following the recommendations of the last ICAO seminar on civil / military coordination held in Algiers from 26 to 28 March 2018, a joint transport / ANSP and military committee is set up to put in place a progressive concept of the concept. FUA in FIR Algiers.	Planned 12/2019
Belarus	Belarus intends to implement A-FUA concept at a later stage.	Planned 12/2020
Kazakhstan	Kazakhstan ASM systems supporting the airspace planning and allocation will be deployed by 2022.	Planned 12/2022
Kyrgyzstan	Kyrgyzstan is operating a combined civil military ATFM Unit which provides the describe services. The SAR coordination center is an integrated part of this unit.	Completed
Morocco	Implementation of FUA is planned in the "AREA-M" project in three phases. FMP implemented in Casablanca since 2007.	Ongoing (40%) 12/2025
Russian Federation	The system is in operation, the next level of automation with functionalities equivalent to LARA is being implemented.	Ongoing (50%) 12/2018
Tajikistan	The Tajikistan Main Air Navigation Center includes an ATFM Unit which provides the describe services.	Completed 12/2012
Turkmenistan	Turkmenistan is operating a combined civil military Airspace Management (ASM) Unit which provides the describe services. Asgabat ACC and Turkmenbashi ACC have also integrated a military CWP. The coordination with adjacent units/ACCs is done verbally and ATFM is done at tactical level (ATC supervisor) only. The main ATFM unit is Asgabat and the coordination with other ATFM units is done via NOTAM and phone.	Ongoing (75%) 12/2018
Tunisia (data from 2016 cycle)	Basic coordination for ASM aspects are currently conducted by Tunis FMP. Strategic and pre-tactical levels are implemented. To be developed with EUROCONTROL to ensure the process of advanced ASM activities.	Ongoing (0%) 12/2020
Uzbekistan	Uzaeronavigation has a combined civil military Airspace Management (ASM) Unit which provides some of the ATFM services. All ACCs (Tashkent, Samarkand and Nukus) have an integrated military CWP. The coordination with adjacent units/ACCs is done verbally and ATFM is done at tactical level (ATC supervisor). The main ATFM unit is located in Tashkent and the coordination with other ATFM units is done via phone. No regional coordination is done with Moscow ATFMU or the NMOC in Brussels. Due to low traffic, no additional implementation actions are planned for aerodromes of Uzbekistan.	Completed 12/2017

Deliverables
ICAO ASBU Implementation Monitoring Report (5)

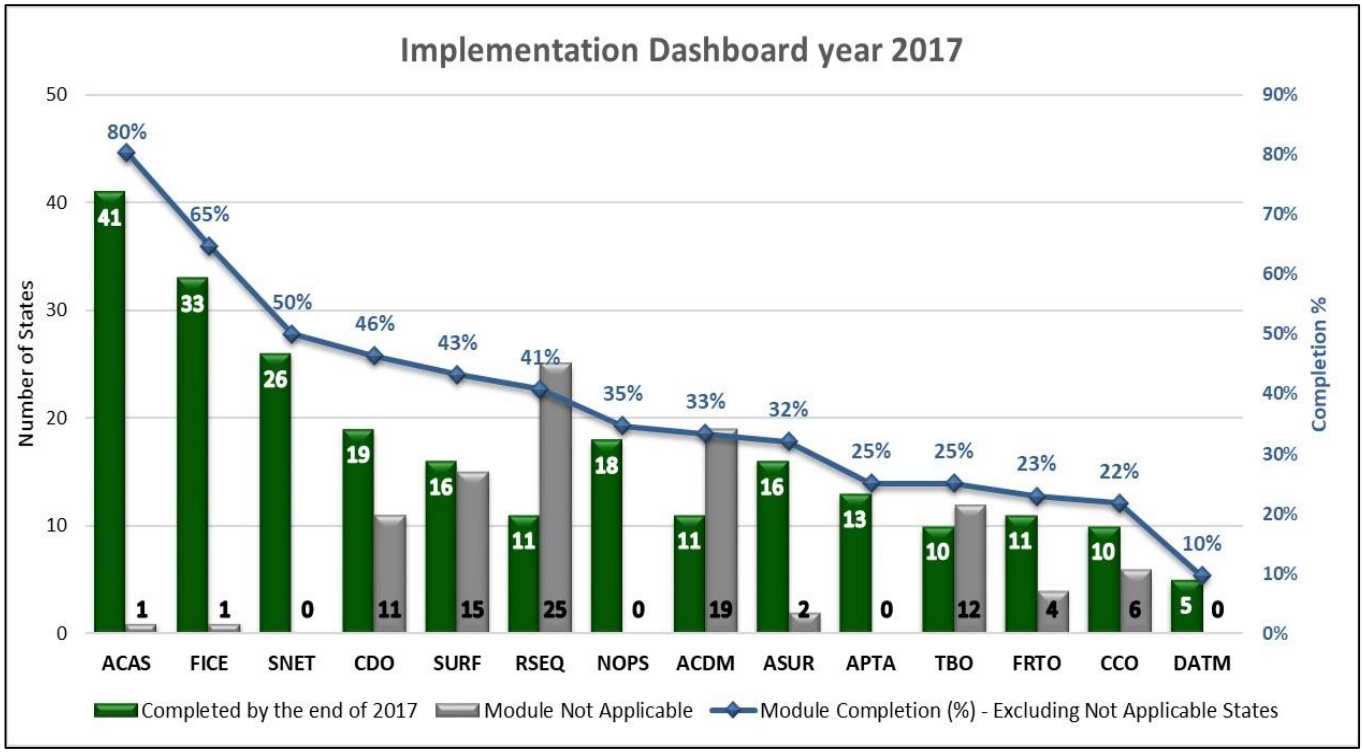
The ASBU Block 0 Implementation Dashboard and the Modules Implementation Outlook provide an overall understanding of the ASBUs implementation status.

The Modules Implementation Outlook shows the “Completion” status (number of States and rates) foreseen to be achieved by the end of 2020, in accordance with the planning dates reported by States in the ICAO EUR Region.

ASBU B0 Module	Number of States Completed by the end of 2020	Not Applicable States	Completion by the end of 2020 (%) - Excludes States where the module is Not Applicable
ACAS	50	1	98%
ACDM	29	20	91%
APTA	41	0	79%
ASUR	46	2	92%
CCO	33	5	70%
CDO	36	11	88%
DATM	46	0	88%
FICE	40	2	80%
FRTO	38	4	79%
NOPS	48	0	92%
RSEQ	27	20	84%
SNET	47	0	90%
SURF	36	14	95%
TBO	33	12	83%

Deliverables
ICAO ASBU Implementation Monitoring Report (6)

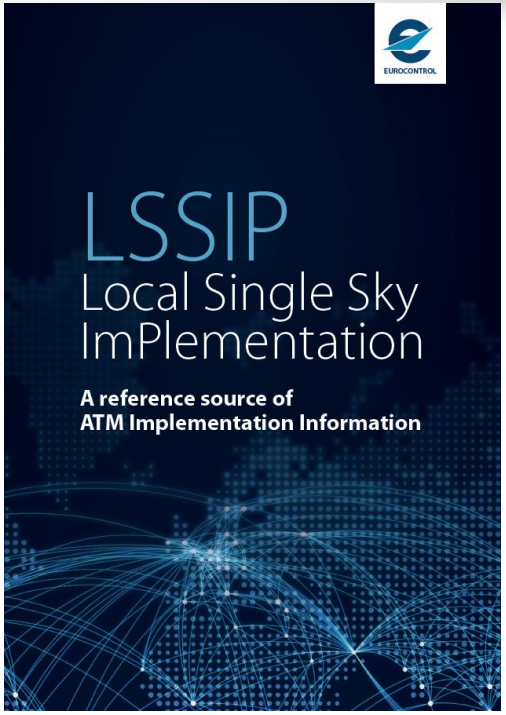
- The Implementation Dashboard shows the current number of States that have achieved implementation and gives an overall rate of “Completion”.



In a nutshell

The Master Plan Level 3 and LSSIP planning and reporting mechanism is:

- A unique ATM Implementation & Monitoring process throughout entire ECAC
- Exists for 25 years
- Has been continuously adapting in the past, and will be in the future
- Is performed through contact between dedicated Contact Persons (EUROCONTROL) and Focal Points (national stakeholders)
- Familiar/used by all national stakeholders, EDA, EASA, NSAs, Airspace Users, ICAO, EP, etc.
- Is by nature annual, with fixed milestones
- In line with ATM Master Plan, ICAO GANP, etc.
- Pragmatic, cost efficient, full-cycle
- Neutral assessments
- Full stakeholder involvement at all levels
- Preventing as much as possible double reporting – e.g. reporting to ICAO is a “non-issue” for ECAC Stakeholders!



25 YEARS of ATM Implementation Reporting in Europe

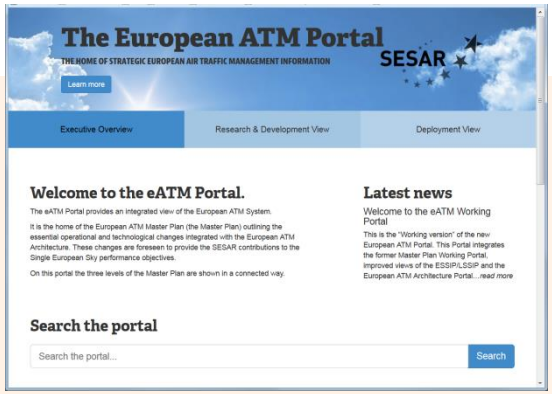
Useful Links

•UPDATE

European ATM Master Plan Web-portal

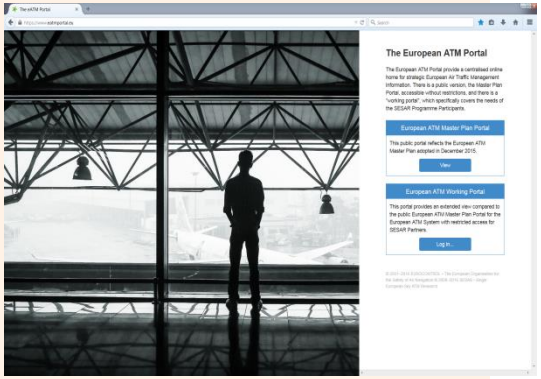
www.eatmportal.eu

(www.atmmasterplan.eu)



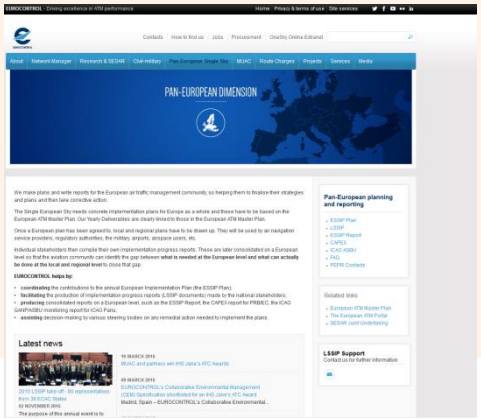
PEPR Team

www.eurocontrol.int/articles/pepr-team



All MP L3/LSSIP information

www.eurocontrol.int/pepr



EASA
European Aviation Safety Agency

ARISE+
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Thank you for your attention!

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