

Detailed description of ESSIP objectives

ESSIP Plan - Edition 2015



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Content of the document

This document contains the consolidated list of all ESSIP Objectives available in the ESSIP Plan 2015, in alphabetical order. It also provides the full details of each objective, including the description of the Stakeholders Lines of Action, Supporting Material and Finalisation Criteria.

In order to facilitate the reading, the document contains as well the Applicability List of Airports implementing ESSIP Objectives, as extracted from Part 1, Section 4 of the ESSIP Plan 2015.

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APPLICABILITY TO AIRPORTS

Several ESSIP Objectives are applicable to specific European airports. For the Objectives related to the PCP, the area of applicability fully includes the list of airports as defined in the PCP Regulation. However, the scope of some of the airport Objectives is substantially broader than the PCP as some airports have committed to implementation even if not explicitly targeted by the PCP Regulation. The applicability area for all airport Objectives is consolidated in the following table:

Airports with ESSIP Objectives			ESSIP Objectives applicable to the airports ¹								
State	Code	Airport	AOP04.1	AOP04.2	AOP05	AOP10	AOP11	AOP12	ATC07.1	ENV01	ENV02
AT	LOWW	Vienna	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
AM	UDYZ	Yerevan	X	X	X	X	-	X	X	√	√
BE	EBAW	Antwerp	X	X	X	X	-	X	X	√	X
BE	EBBR	Brussels	PCP	PCP	PCP	X	-	PCP	PCP	√	√
BE	EBCI	Charleroi	X	X	X	X	-	X	X	√	X
BE	EBLG	Liege	X	X	X	X	-	X	X	√	X
BE	EBOS	Ostende	X	X	X	X	-	X	X	√	X
BA	LQSA	Sarajevo	X	X	X	X	-	X	X	√	√
BG	LBSF	Sofia	√	√	X	X	-	X	X	X	X
CZ	LKPR	Prague	√	√	√	X	-	X	√	√	√
DK	EKCH	Copenhagen	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
EE	EETN	Tallinn	√	√	√	X	-	X	X	√	√
FI	EFHK	Helsinki	√	√	√	X	-	X	√	√	√
FR	LFBO	Toulouse	√	√	X	X	-	X	X	√	√
FR	LFLY	Lyon	√	√	√	X	-	X	X	√	√
FR	LFML	Marseille	√	√	X	X	-	X	X	√	√
FR	LFMN	Nice	PCP	PCP	PCP	X	-	PCP	PCP	√	√
FR	LFPG	Paris, Charles de Gaulle	√	PCP	√	X	-	PCP	PCP	√	√
FR	LFPO	Paris Orly	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
DE	EDDB	Berlin Brandenburg	√	PCP	√	X	-	PCP	PCP	√	√
DE	EDDF	Frankfurt Main	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
DE	EDDH	Hamburg	X	X	X	X	-	X	X	√	X
DE	EDDK	Cologne - Bonn	X	X	X	X	-	X	X	√	X
DE	EDDL	Düsseldorf	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
DE	EDDM	Munich	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
DE	EDDN	Nuremberg	X	X	X	X	-	X	X	√	X
DE	EDDS	Stuttgart	X	X	X	X	-	X	X	√	X
DE	EDDV	Hannover	X	X	X	X	-	X	X	√	X
GR	LGAV	Athens	√	√	√	X	-	X	X	X	√
GR	LGIR	Iraklion	X	X	√	X	-	X	X	X	X
GR	LGRP	Rhodes	X	X	√	X	-	X	X	X	X
GR	LGTS	Thessaloniki	√	√	X	X	-	X	X	X	X
HR	LDZA	Zagreb	X	X	X	X	-	X	X	√	X
HU	LHBP	Budapest	√	√	√	X	-	X	X	√	√
IE	EIDW	Dublin	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
IT	LIMC	Milan Malpensa	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√

¹ With the exception of ESSIP objective AOP03 and AOP11.

- The applicability area of AOP03 and of AOP11 is all ECAC aerodromes. Nonetheless, it is for the individual National safety authority to decide upon the strategy of implementation at aerodromes within its State.

- As AOP11 is a new Objective in the ESSIP Plan Edition 2015, no airports have expressed a commitment yet.

Airports with ESSIP Objectives			ESSIP Objectives applicable to the airports ¹								
State	Code	Airport	AOP04.1	AOP04.2	AOP05	AOP10	AOP11	AOP12	ATC07.1	ENV01	ENV02
IT	LIME	Bergamo Orio al Serio	X	X	√	X	-	X	X	X	X
IT	LIML	Milan Linate	√	√	√	X	-	X	X	√	√
IT	LIPZ	Venezia	√	√	√	X	-	X	X	√	√
IT	LIRF	Rome Fiumicino	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
IT	LIRN	Napoli Capodichino	X	X	√	X	-	X	X	X	X
LV	EVRA	Riga	√	√	X	X	-	X	√	X	X
LT	EYVI	Vilnius	√	√	√	X	-	X	X	√	√
NL	EHAM	Amsterdam Schiphol	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
NO	ENGM	Oslo Gardermoen	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
PL	EPWA	Warsaw	√	√	√	X	-	X	√	√	√
PT	LPPT	Lisbon	√	√	√	X	-	X	√	√	√
RO	LROP	Bucharest	√	√	X	X	-	X	√	√	X
RS	LYBE	Belgrade	X	X	X	X	-	X	X	√	X
ES	LEBL	Barcelona	PCP	PCP	PCP	X	-	PCP	PCP	√	√
ES	LEMD	Madrid Barajas	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
ES	LEPA	Palma de Mallorca	PCP	PCP	PCP	X	-	PCP	PCP	√	√
SE	ESGG	Göteborg	X	X	X	X	-	X	X	√	X
SE	ESMS	Malmö-Sturup	X	X	X	X	-	X	X	√	X
SE	ESNU	Umea	X	X	X	X	-	X	X	√	X
SE	ESSA	Stockholm Arlanda	PCP	PCP	PCP	X	-	PCP	PCP	√	√
CH	LSGG	Geneva	√	√	√	X	-	X	√	√	√
CH	LSZH	Zurich	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
TR	LTAC	Ankara	√	√	X	X	-	X	X	X	X
TR	LTAI	Antalya	√	√	√	X	-	X	X	√	√
TR	LTBA	Istanbul	√	√	√	-	-	-	√	√	√
UA	UKBB	Kyiv Boryspil	√	√	√	X	-	X	√	√	X
GB	EGBB	Birmingham	X	X	√	X	-	X	X	√	√
GB	EGCC	Manchester	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
GB	EGGW	London Luton	X	X	√	X	-	X	X	√	√
GB	EGGD	Bristol	X	X	X	X	-	X	X	√	√
GB	EGKK	London Gatwick	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
GB	EGLC	London City	X	X	X	X	-	X	X	X	√
GB	EGLL	London Heathrow	PCP	PCP	PCP	PCP	-	PCP	PCP	√	√
GB	EGNT	Newcastle	X	X	X	X	-	X	X	√	√
GB	EGNX	Nottingham East Midlands	X	X	X	X	-	X	X	√	X
GB	EGPF	Glasgow	X	X	X	X	-	X	X	√	√
GB	EGPH	Edinburgh	√	√	√	X	-	X	X	√	√
GB	EGSS	London Stansted	PCP	PCP	PCP	X	-	PCP	PCP	√	√

Legend:

√	Objective directly applicable to the airport or which is being implemented even if the airport is not in the applicability area.
PCP	Objective applicable due to the PCP
X	Objective not applicable to the airport
-	Applicability will be evaluated based on information collected from LSSIP 2015 cycle

Table 4: Participation of the airports in ESSIP Objectives

PCP		Active					ECAC	
AOM13.1		Harmonise Operational Air Traffic (OAT) and General Air Traffic (GAT) handling						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 5 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates.

Ensure that the principles, rules and procedures for OAT and GAT handling can be commonly applied to the maximum possible extent within ECAC airspace.

The needs of military aviation and ATM support are often beyond the scope of civil aviation and therefore not sufficiently covered by ICAO provisions for General Air Traffic (GAT). This requires the military to use Operational Air Traffic (OAT) as the means to provide the regulatory provisions and ATM arrangements necessary for successful military training and mission accomplishment. However, each State has developed different OAT rules, which need to be harmonised in line with the Functional Airspace Blocks (FAB) principles in order to further enhance civil-military coordination and in particular to progress and implement the interoperability of GAT and OAT structures and operations.

Harmonisation of OAT/GAT handling covers the following main actions:

- Identifying the various types of military operations which cannot be accommodated applying GAT rules and require additional rules and procedures (OAT);
- Defining EUROAT rules and procedures for handling military operations in European Civil Aviation Conference (ECAC) airspace whilst developing common civil military principles for the safe handling of civil and military traffic in one continuum of airspace.
- Harmonisation of military aeronautical information in Europe through European Aeronautical Service (EAD).

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2012

Applicability Area

Full operational capability

31/12/2018

Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -							
Enablers -	AAMS-10a	AIMS-19b						
OI step -	[AOM-0301]-Harmonised EUROCONTROL ECAC Area Rules for OAT-IFR and GAT Interface							
Enablers -	PRO-181							
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002	Covered by SLoA(s) in another objective			WXYZ-003	Not covered in the ESSIP Plan
			zzz	ESSIP objective covering the enabler				

Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

Regulation (EU) No 805/2011 of 10 August 2011 laying down detailed rules for air traffic controllers- licences and certain certificates pursuant to

Regulation (EC) No 216/2008 of the European Parliament and of the Council

Regulation (EC) No 2150/2005 of 23 December 2005 laying down common rules for the flexible use of airspace

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

AOM13.1	Harmonise Operational Air Traffic (OAT) and General Air Traffic (GAT) handling
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Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
AOM13.1-REG01	Revise national legislation as required	01/01/2012	31/12/2018
AOM13.1-ASP01	Apply common principles, rules and procedures for OAT handling and OAT/GAT interface	01/01/2012	31/12/2018
AOM13.1-ASP02	Train staff as necessary	01/01/2012	31/12/2018
AOM13.1-MIL01	Apply common principles, rules and procedures for OAT handling and OAT/GAT interface	01/01/2012	31/12/2018
AOM13.1-MIL02	Provide feedback on result of conformance analysis between national rules to EUROAT	01/01/2011	31/12/2012
AOM13.1-MIL03	Implement a harmonized OAT Flight Plan	DELETED	
AOM13.1-MIL04	Migrate military aeronautical information to EAD	01/01/2010	31/12/2015
AOM13.1-MIL05	Implementing a pan-European OAT-IFR Transit Service (OATTS)	DELETED	

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Less chance of error through the use of common rules and procedures for OAT handling and for OAT/GAT interface.
Capacity :	Potential increase through the use of common rules and procedures for OAT handling and for OAT/GAT interface.
Cost effectiveness :	Improved through increased efficiency of operations.
Environment :	Improved through better use of airspace resources.
Security :	N/A

Detailed SLoA descriptions

AOM13.1-REG01	Revise national legislation as required	From:	By:
		01/01/2012	31/12/2018

Action by :	State Authorities
Description & purpose :	<p>Enact regulatory material for implementation of new principles, rules and procedures for OAT/GAT handling in a mixed environment.</p> <p>Perform conformance analysis between existing rules and the EUROCONTROL Specification for harmonized Rules for Operational Air Traffic (OAT) under Instrument Flight Rules (IFR) inside controlled Airspace of the ECAC Area (EUROAT). Based on these findings, determine change of regulatory material, if required.</p> <p>Develop Annex with national regulations and rules pertinent to this specification.</p> <p>Upon official reception of the Specification, the States are asked to examine their implementation options and come to a respective decision latest within one year.</p> <p>Following the respective national implementation decision, inform EUROCONTROL about the official national implementation date and provide the additional required information as detailed in Annex 1 of the EUROAT Specification.</p>
Derogations :	None
Finalisation criteria :	<p>1 - National publications have been updated in accordance with EUROAT.</p> <p>2 - Clear identification of pertinent and acknowledged documents stating the implementation of such OAT/GAT interfaces on a regulatory level has been provided.</p> <p>3 - Additionally the evidence of adequate procedures comprising their operational realisation has been provided.</p>

AOM13.1-ASP01	Apply common principles, rules and procedures for OAT handling and OAT/GAT interface	From:	By:
		01/01/2012	31/12/2018

Action by :	ANS Providers
Description & purpose :	<p>Apply common principles, rules and procedures for the OAT/GAT interface.</p> <p>Define and develop additional or revised procedures to match local and regional organisation ensuring that they do not conflict with those of adjacent States/Functional Airspace Blocks (FAB).</p>
Derogations :	None
ATM Master Plan relationship :	<p>[AAMS-10a]-Initial airspace management system enhanced with commonly applied GAT/OAT handling</p> <p>[PRO-181]-Procedures related to Rule on OAT handling and OAT-IFR GAT interface</p>

AOM13.1	Harmonise Operational Air Traffic (OAT) and General Air Traffic (GAT) handling
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Finalisation criteria :

1 - Clear identification of pertinent and acknowledged documents stating the implementation of such OAT/GAT interfaces on a regulatory level has been provided.

AOM13.1-ASP02	Train staff as necessary	From:	By:
		01/01/2012	31/12/2018

Action by : **ANS Providers**

Description & purpose : Establish the mechanism to ensure pertinent training for competent personnel during all training phases in order to train Air Traffic Services (ATS) personnel in provision of ATS to OAT-IFR flights.
Train ATS staff in new procedures that comprise OAT elements.

Derogations : None

Supporting material(s) : EUROCONTROL - Air Traffic Controller Training at Operational Units - Edition 2.0 / 06/1999

Url : <https://trainingzone.eurocontrol.int>

EUROCONTROL - SPEC 113 - EUROCONTROL Specification for ATCO Common Core Content Initial Training (Main document plus 7 Annexes) - Edition 1.0 / 10/2008

Url : <http://www.eurocontrol.int/publications/atco-common-core-content-initial-training-specification>

Finalisation criteria : 1 - The mechanism to train competent ATS personnel during all training phases in provision of ATS to OAT-IFR flights has been established.

2 - ATS personnel have been qualified to provide ATS to OAT-IFR flights in accordance with national regulations and has demonstrated equivalence to:- ESARR 5 for non EU member states, or- Commission Regulation (EU) No 805/2011 for EU member states.

AOM13.1-MIL01	Apply common principles, rules and procedures for OAT handling and OAT/GAT interface	From:	By:
		01/01/2012	31/12/2018

Action by : **Military Authorities**

Description & purpose : Apply common principles, rules and procedures for OAT handling.
Define and develop additional or revised procedures to match local and regional organisation, ensuring that they do not conflict with those of adjacent States/FAB.

Derogations : None

ATM Master Plan relationship : [\[AAMS-10a\]-Initial airspace management system enhanced with commonly applied GAT/OAT handling](#)

[\[PRO-181\]-Procedures related to Rule on OAT handling and OAT-IFR GAT interface](#)

Finalisation criteria : 1 - Clear identification of pertinent and acknowledged documents stating the implementation of such OAT/GAT interfaces on a regulatory level has been provided.

2 - Additionally the evidence of adequate procedures comprising their operational realisation has been provided.

AOM13.1-MIL02	Provide feedback on result of conformance analysis between national rules to EUROAT	From:	By:
		01/01/2011	31/12/2012

Action by : **Military Authorities**

Description & purpose : Provide national Point Of Contact (POC) and distribution list for the dissemination of EUROAT specification.
Enhance understanding of the change to EUROAT and its impact to OAT flights in new Single European Sky (SES) environment.

Derogations : None

Finalisation criteria : 1 - Civil-Military ATM Coordination Unit (DSS/CMAC) has received national POC and distribution list from the national military authorities.

AOM13.1-MIL04	Migrate military aeronautical information to EAD	From:	By:
		01/01/2010	31/12/2015

Action by : **Military Authorities**

Description & purpose : Identify Military needs in terms of validated aeronautical data not covered in ICAO AIP.
Assess applicability of civil standards (e.g. AIXM) for military aeronautical data.
Migrate military aeronautical information to EAD.
The implementation to be based on and supported with the following actions by DNM/Network Operations Management:
- Organise an EAD awareness campaign for the military stakeholders;
- Get commitment of military organisations to migrate to EAD;
- Develop customised migration plans for individual military organisations following its commitment to migrate to EAD;
- Support & monitor the migration of military organisations to EAD.

Derogations : None

Supporting material(s) : EUROCONTROL - EAD Safety Case - Edition 2.3 / 09/2009

Url : <https://www.eurocontrol.int/articles/adq-library>

AOM13.1	Harmonise Operational Air Traffic (OAT) and General Air Traffic (GAT) handling
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ATM Master Plan
relationship :

[\[AIMS-19b\]-Aeronautical Information system is interfaced to receive and distribute aeronautical information electronically to military systems.](#)

Finalisation criteria :

- 1 - All Military Authorities responsible for AIS Data have signed a Data Provider Agreement with EUROCONTROL.
- 2 - All Military Authorities responsible for AIS Data have implemented EAD and maintain the three sets of AIP Data (SDO, INO and PAMS).

PCP	Active						ECAC
AOM19	Implement Advanced Airspace Management						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

This objective is functionally related to ATM Functionality 3 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates.

Establish a collaborative civil-military airspace planning at the European Network level through an integrated Airspace Management/Air Traffic Flow Capacity Management (ASM/ATFCM) process and an extended planning phase into the day of operations.

Ensure full exploitation of capacity becoming available through the identification of efficient combinations of areas allocation, routes availability, including CDRs, and sector configurations able to cope with traffic demand. The process will be applied also for improving the planning activities related to the updates to airspace status.

Foster a consistent application of the Flexible Use of Airspace (FUA) Concept across the European network, and support a safe, efficient and accurate flow of ASM data.

This will support the ECAC States collective responsibility for European airspace planning and management that provides for a continuum and transparency of airspace structures and rules at boundaries while satisfying national security and defence requirements.

The improved planning process refers to the use of specific procedures allowing Airline Operators (AOs) to optimise their flight planning in order to achieve a more efficient utilization of available airspace through more dynamic responses to specific short notice or real-time airspace status changes, requirements and route optimisation at the pre-tactical and/or tactical levels.

Develop, validate and implement ASM/ATFCM processes, procedures and supporting tools at national, sub-regional and the European Network level to ensure that airspace is used more flexibly, capacity is better balanced and predictability is enhanced through greater adherence to planned activities as a result of better planning and notification.

It will provide a coherent response to the recommendations of the Performance Review Commission (PRC) report on Civil-Military Airspace Utilisation (2007) in accordance with the Dynamic Management of the European Airspace Network (DMEAN) Framework Programme and DMEAN Conception of Operations (CONOPS) and supporting expected deliverables of SESAR WP7 [Network Operations] in particular P7.5.2 [Advanced FUA Concept].

Ultimately, the ASM operations continue until the real-time activation of airspaces or routes. The alignment between both ASM/ATFCM processes shall continue to ensure the assessment of the network impact, the identification of flights affected by real-time modifications, as well as the timely dissemination of the decisions. Airspace uses (allocations, activations, deactivations) are issued from the ASM tools (LARA, STANLY, etc) via B2B.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2011

Applicability Area

Full operational capability

31/12/2016

Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -							
	Enablers -	AAMS-11						
OI step -	[AOM-0201]-Moving Airspace Management Into Day of Operation							
	Enablers -	PRO-184	PRO-185					
OI step -	[AOM-0202]-Enhanced Real-time Civil-Military Coordination of Airspace Utilisation							

AOM19	Implement Advanced Airspace Management									
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	Enablers -	AAMS-06a	AAMS-08	AAMS-09	AAMS-10a AOM13.1	AAMS-15 FCM05	AIMS-21	AIMS-22	GGSWIM-49	
		PRO-184								

OI step -	[AOM-0205]-Modular Temporary Airspace Structures and Reserved Areas									
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	Enablers -	AAMS-08	AIMS-20 FCM05	NIMS-14a	NIMS-14b FCM05	PRO-009	PRO-082	PRO-185		
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OI step -	[AOM-0401]-Multiple Route Options & Airspace Organisation Scenarios									
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	Enablers -									
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OI step -	[DCB-0203]-Enhanced ASM/ATFCM Coordinated Process									
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	Enablers -	AAMS-06a	AIMS-21	AIMS-22	PRO-010					
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Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan
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Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)
Regulation (EC) No 2150/2005 of 23 December 2005 on Implementation and Application of the Flexible Use of Airspace
Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
AOM19-ASP01	Implement an improved ASM/ATFCM process	DELETED	
AOM19-ASP02	Implement CIAM Phase 1	DELETED	
AOM19-ASP03	Implement CIAM Phase 2	DELETED	
AOM19-ASP04	Implement Rolling ASM/ATFCM process	01/12/2011	31/12/2016
AOM19-ASP05	Implement Interoperability of local ASM support system with NM system	01/01/2014	31/12/2015
AOM19-ASP06	Simplify CDR categorisation	DELETED	
AOM19-ASP07	Optimise flexible airspace structure design and availability	01/01/2009	31/12/2015
AOM19-ASP08	Improve accuracy of airspace booking	01/12/2010	31/12/2015
AOM19-ASP09	Deploy automated ASM support systems	01/07/2010	31/12/2015
AOM19-ASP10	Improve notification to airspace users	01/07/2011	31/12/2016
AOM19-USE01	Implement an improved Notification Process supporting the Rolling ASM/ATFCM process	01/05/2009	31/12/2016
AOM19-USE02	Implement improved notification process supporting the Rolling ASM/ATFCM process	DELETED	
AOM19-NM01	Develop System and procedures for an improved ASM/ATFCM process	01/12/2010	31/12/2015
AOM19-NM02	Upgrade NM systems to allow exchange in real-time of ASM information	01/09/2014	31/12/2016

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

AOM19	Implement Advanced Airspace Management
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Safety :	Improved through better co-ordination of civil and military airspace needs at the European Network level. Potential gains through more efficient airspace allocation and better knowledge of traffic environment and some enhancement through reduction in controller workload.
Capacity :	Increased through better utilization of airspace resources within and across airspace boundaries. Potential increase through dynamic adjustment of airspace resources and suppression of some flight regulations thanks to local ATFCM measures with the same ATC sector manning.
Cost effectiveness :	Potential cost reduction through the availability of more optimum routes/trajectories and reduction of flight delays thanks to increased capacity.
Environment :	Emissions reduced through the use of more optimum routes/trajectories.
Security :	N/A

Detailed SloA descriptions

AOM19-ASP04	Implement Rolling ASM/ATFCM process	From:	By:
		01/12/2011	31/12/2016

Action by :	ANS Providers
Description & purpose :	<p>Implement Rolling ASM/ATFCM process comprising the following:</p> <ul style="list-style-type: none"> - Introduce Rolling airspace update process by providing for draft UUP reflecting any change in airspace use planning as described in the ASM Handbook; - Consider advice by the NM to re-consider UUP; - Submit UUP to NM as described in the ASM Handbook.
Derogations :	None
Supporting material(s) :	<p>EUROCONTROL - ERNIP Part 3 - Handbook for Airspace Management - Guidelines for Airspace Management 11/2014 Url : http://www.eurocontrol.int/sites/default/files/publication/files/ERNIP-ASM-Handbook-Part3.pdf</p> <p>EUROCONTROL - SPEC 112 - EUROCONTROL Specifications for the application of the Flexible Use of Airspace (FUA) - Edition 1.1 - OJ 2009/C 196/05 / 01/2009 Url : http://www.eurocontrol.int/documents/flexible-use-airspace-specification</p> <p>EUROCONTROL - Network Operations Handbook Url : http://www.eurocontrol.int/lists/publications/network-operations-library?title=&field_term_publication_type_tid=255&year[v alue]&year</p> <p>[PRO-009]-Military Procedures to identify and release previously reserved airspace back to civil aviation [PRO-184]-ASM Procedures related to Dynamic co-operative management of the airspace [PRO-185]-FUA Procedures</p>
ATM Master Plan relationship :	
Finalisation criteria :	1 - Rolling airspace update process has been deployed as defined in ASM Handbook.

AOM19-ASP05	Implement Interoperability of local ASM support system with NM system	From:	By:
		01/01/2014	31/12/2015

Action by :	ANS Providers
Description & purpose :	<p>Implement Dynamic ASM/ATFCM process comprising the following:</p> <ul style="list-style-type: none"> - Adapt local ASM support systems to make them interoperable with NM system (AIXM interface); - Conclude LoA with NM; - Provide relevant Aeronautical information required to implement dynamic ASM/ATFCM process; - Use common database in accordance with LoA with NM; - Deploy Rolling airspace update process by using NM facilities, providing for airspace update reflecting any change in airspace use planning as described in the ASM Handbook including real time airspace status information and collection of real time airspace data . <p>Provide airspace updates by means of system-to-system communication providing for automatic notification of all the stakeholders involved. This is in order to facilitate collaborative decision making process enabled by using a common database.</p> <p>Participate continuously in Dynamic ASM/ATFCM process collaborative decision making.</p>
Derogations :	None
Supporting material(s) :	<p>EUROCONTROL - Network Operations Handbook Url : http://www.eurocontrol.int/lists/publications/network-operations-library?title=&field_term_publication_type_tid=255&year[v alue]&year</p> <p>EUROCONTROL - SPEC 112 - EUROCONTROL Specifications for the application of the Flexible Use of Airspace (FUA) - Edition 1.1 - OJ 2009/C 196/05 / 01/2009 Url : http://www.eurocontrol.int/documents/flexible-use-airspace-specification</p> <p>EUROCONTROL - ERNIP Part 3 - Handbook for Airspace Management - Guidelines for Airspace Management 11/2014 Url : http://www.eurocontrol.int/sites/default/files/publication/files/ERNIP-ASM-Handbook-Part3.pdf</p>

AOM19	Implement Advanced Airspace Management		
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ATM Master Plan relationship : [\[AIMS-21\]-Airspace management system enhanced for external user access to the airspace data repository](#)
[\[AIMS-22\]-Airspace management functions enhanced to provide airspace status information](#)

Finalisation criteria : 1 - Local systems have been adapted to be interoperable with NM systems.
2 - LoA has been concluded with NM.
3 - Automatic airspace updates have been provided by means of NM.

AOM19-ASP07	Optimise flexible airspace structure design and availability	From:	By:
		01/01/2009	31/12/2015

Action by : **ANS Providers**

Description & purpose : Create CDRs and DCT, when appropriate, as a function of vertical and lateral sub-modular manageable areas design. Harmonise CDR and DCT, when appropriate, design and availability at national level (if affecting adjacent ATS units). The same applies at bilateral or sub-regional level.
This is to be achieved through the developments agreed in Route Network Development Sub-Group (RNDSG) and Airspace management Sub-Group working arrangements.

Derogations : None

Supporting material(s) : EUROCONTROL - ERNIP Part 3 - Handbook for Airspace Management - Guidelines for Airspace Management 11/2014
Url : <http://www.eurocontrol.int/sites/default/files/publication/files/ERNIP-ASM-Handbook-Part3.pdf>
EUROCONTROL - European ATS Route Network (ARN) Version 2013-2015 06/2013
Url : <http://www.eurocontrol.int/sites/default/files/publication/files/ernip-part2-arn-v-2013-2015-07062013.pdf>

Finalisation criteria : 1 - CDRs and DCT, when appropriate, have been created as a function of vertical and lateral sub-modular manageable areas design.
2 - CDRs and DCT, when appropriate, consistency achieved at national, bilateral or sub-regional level.
3 - Vertical and lateral modularity of manageable areas

AOM19-ASP08	Improve accuracy of airspace booking	From:	By:
		01/12/2010	31/12/2015

Action by : **ANS Providers**

Description & purpose : Improve planning and allocation of reserved/segregated airspace at pre-tactical ASM level 2 in order to increase accuracy. Plan reserved/segregated airspace utilization in accordance with actual need.
Release reserved/segregated non used airspace as soon as activity stops. Utilize reserved/segregated airspace that has not been planned in AUP (ad-hoc allocation procedure 3).

Derogations : None

Supporting material(s) : EUROCONTROL - ERNIP Part 3 - Handbook for Airspace Management - Guidelines for Airspace Management 11/2014
Url : <http://www.eurocontrol.int/sites/default/files/publication/files/ERNIP-ASM-Handbook-Part3.pdf>
EUROCONTROL - SPEC 112 - EUROCONTROL Specifications for the application of the Flexible Use of Airspace (FUA) - Edition 1.1 - OJ 2009/C 196/05 / 01/2009
Url : <http://www.eurocontrol.int/documents/flexible-use-airspace-specification>

ATM Master Plan relationship : [\[PRO-009\]-Military Procedures to identify and release previously reserved airspace back to civil aviation](#)
[\[PRO-010\]-Military Procedures to ensure that all operations that are involved with the airspace reservation are cognizant of the changes in cooperation with ASM](#)
[\[PRO-082\]-ASM procedures for the promulgation, system delineation and acknowledgement of receipt of the information change](#)

Finalisation criteria : 1 - Reserved/segregated airspace has been used in accordance with actual need (measured through military Key Performance Indicators - KPIs - in Pan-European Repository of Information Supporting Military KPIs - PRISMIL - tool).

AOM19-ASP09	Deploy automated ASM support systems	From:	By:
		01/07/2010	31/12/2015

Action by : **ANS Providers**

Description & purpose : Improve ASM system support by using either national or EUROCONTROL (Local and Regional ASM Application - LARA) automated support system in airspace planning and allocation.
Use simulation tool for ASM to access optimum airspace allocation. The simulation tool is to be delivered by the EUROCONTROL Agency.

Derogations : None

AOM19	Implement Advanced Airspace Management
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Supporting material(s) : EUROCONTROL - ERNIP Part 3 - Handbook for Airspace Management - Guidelines for Airspace Management 11/2014
 Url : <http://www.eurocontrol.int/sites/default/files/publication/files/ERNIP-ASM-Handbook-Part3.pdf>
 EUROCONTROL - SPEC 112 - EUROCONTROL Specifications for the application of the Flexible Use of Airspace (FUA) - Edition 1.1 - OJ 2009/C 196/05 / 01/2009
 Url : <http://www.eurocontrol.int/documents/flexible-use-airspace-specification>
 EUROCONTROL - Local And Regional Airspace Management Supporting System Conceptual Description - Edition 2.0 / 11/2008
 Url : <http://www.eurocontrol.int/sites/default/files/content/documents/single-sky/cm/civil-mil-coordination/lara-conceptual-description-20081111.pdf>
ATM Master Plan relationship : [\[AAMS-08\]-Airspace management system enhanced to support improved collaborative airspace planning](#)
[\[AAMS-09\]-Airspace management system enhanced to support the integrated European airspace planning process](#)
[\[AIMS-22\]-Airspace management functions enhanced to provide airspace status information](#)
Finalisation criteria : 1 - National or EUROCONTROL (LARA) automated support system in airspace planning and allocation has been deployed.

AOM19-ASP10	Improve notification to airspace users	From:	By:
		01/07/2011	31/12/2016

Action by : **ANS Providers**
Description & purpose : Provide areas allocation information to airspace users via AUP/UUP
Derogations : None
Supporting material(s) : EUROCONTROL - SPEC 112 - EUROCONTROL Specifications for the application of the Flexible Use of Airspace (FUA) - Edition 1.1 - OJ 2009/C 196/05 / 01/2009
 Url : <http://www.eurocontrol.int/documents/flexible-use-airspace-specification>
 EUROCONTROL - ERNIP Part 3 - Handbook for Airspace Management - Guidelines for Airspace Management 11/2014
 Url : <http://www.eurocontrol.int/sites/default/files/publication/files/ERNIP-ASM-Handbook-Part3.pdf>
Finalisation criteria : 1 - All States using AUP/UUP provide information of areas allocated

AOM19-USE01	Implement an improved Notification Process supporting the Rolling ASM/ATFCM process	From:	By:
		01/05/2009	31/12/2016

Action by : **Airspace Users**
Description & purpose : Adapt flight planning operations to benefit from dynamic airspace changes.
 React to airspace changes as notified by means of electronic Airspace Management Information Message (eAMI) via B2B service, Re-Routing Proposal Message (RRP) and Network Operation Plan (NOP).
 Improve usage of route opportunity tool.
Derogations : None
Supporting material(s) : EUROCONTROL - Network Operations Handbook
 Url : [http://www.eurocontrol.int/lists/publications/network-operations-library?title=&field_term_publication_type_tid=255&year\[value\]&year](http://www.eurocontrol.int/lists/publications/network-operations-library?title=&field_term_publication_type_tid=255&year[value]&year)
Finalisation criteria : 1 - Flight plans have been amended according to notified dynamic airspace changes.

AOM19-NM01	Develop System and procedures for an improved ASM/ATFCM process	From:	By:
		01/12/2010	31/12/2015

Action by : **NM**
Description & purpose : Take the following actions:
 - Improve NM system allowing interoperability with stakeholders systems via B2B
 - Develop procedures for pre-defined Airspace solutions to enhance the ASM/ATFCM process.
 - Develop the rolling ASM/ATFCM procedure(s)
Derogations : None
Supporting material(s) : EUROCONTROL - Network Operations Handbook
 Url : [http://www.eurocontrol.int/lists/publications/network-operations-library?title=&field_term_publication_type_tid=255&year\[value\]&year](http://www.eurocontrol.int/lists/publications/network-operations-library?title=&field_term_publication_type_tid=255&year[value]&year)
 EUROCONTROL - SPEC 112 - EUROCONTROL Specifications for the application of the Flexible Use of Airspace (FUA) - Edition 1.1 - OJ 2009/C 196/05 / 01/2009
 Url : <http://www.eurocontrol.int/documents/flexible-use-airspace-specification>
 EUROCONTROL - European Route Network Improvement Plan (ERNIP) PART 3 - Airspace Management Handbook - Guidelines for Airspace Management; 11/2014
 Url : <http://www.eurocontrol.int/sites/default/files/publication/files/ERNIP-ASM-Handbook-Part3.pdf>

AOM19	Implement Advanced Airspace Management
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ATM Master Plan relationship :

[\[PRO-009\]-Military Procedures to identify and release previously reserved airspace back to civil aviation](#)
[\[PRO-184\]-ASM Procedures related to Dynamic co-operative management of the airspace](#)
[\[PRO-185\]-FUA Procedures](#)

Finalisation criteria :

1 - The required procedures and systems have been developed by NM and ready for deployment by civil/military ANSPs

AOM19-NM02	Upgrade NM systems to allow exchange in real-time of ASM information	From:	By:
		01/09/2014	31/12/2016

Action by :

NM

Description & purpose :

Network Manager to upgrade NM systems to allow exchange in Real Time of Airspace management information and to update the central documentation and procedures.
This action may lead to a new SLoA for civil and military ANSPs to upgrade their local/regional automated ASM support systems and to update the local/regional documentation and procedures (to be analysed in future updates of the ESSIP plan).

Derogations :

None

Supporting material(s) :

EUROCONTROL - NM B2B Reference Manuals - access available on request to NM

Url : <http://www.eurocontrol.int/articles/nm-services-and-products>

EUROCONTROL - FLEXIBLE USE OF AIRSPACE AMC/CADF OPERATIONS MANUAL - Edition 5.1

Url : <http://www.eurocontrol.int/sites/default/files/publication/files/fua-amc-cadf-ops-manual-current.pdf>

ATM Master Plan relationship :

[\[AAMS-11\]-ASM support systems enhanced to exchange real-time airspace status updates](#)

Finalisation criteria :

1 - The required NM system updates have been implemented.

PCP		Active					ECAC	
AOM21.1		Implementation of Direct Routing						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 3 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, and is bound to its deployment target dates.

Direct Routing is foreseen as a first step towards Free Routing in Free Route Airspace (FRA). The geographical scope for Direct Routing is defined by PCP IR as the airspace for which the Member States are responsible at and above flight level 310 in the ICAO EUR Region. Direct Route Airspace is described as an airspace defined laterally and vertically with a set of entry/exit conditions where published direct routings are available. Within this airspace, flights remain subject to air traffic control.

The Direct Routing implementation is coordinated through the NM European Route Network Improvement Plan (ERNIP) and the Network Operations Plan following the Strategic Objectives and Targets set in the Network Strategic Plan and in the Network Manager Performance Plan. Some European ANSPs have included in the ERNIP Part 2 ARN Version 2014-2019 projects for full or partial implementation of Direct Routing selecting their implementation steps.

The Direct Routing ESSIP objective is derived from the ATMMP OI step AOM-500 (Direct Routing for flights both in cruise and vertically evolving for cross ACC borders and in high & very high complexity environments) supplemented by the provisions of the Pre-Step 1 OI steps AOM-0401 (Multiple Route Options & Airspace Organisation Scenarios) and AOM-0402 (Further Improvements to Route Network and Airspace incl. Cross-Border Sectorisation and Further Routeing Options).

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States at and above FL310 (not applicable for those States that have already implement FRA or planned to deploy FRA at and above FL310 before 1 January 2018)

Timescales:

	From:	By:	Applicable to:
Initial Operational Capability	01/01/2015		Applicability Area
Full Operational Capability		31/12/2017	Applicability Area

References

European ATM Master Plan relationship

OI step -	[AOM-0401]-Multiple Route Options & Airspace Organisation Scenarios									
	Enablers -									
OI step -	[AOM-0402]-Further Improvements to Route Network and Airspace incl. Cross-Border Sectorisation and Further Routing Options									
	Enablers -									
OI step -	[AOM-0500]-Direct Routing for flights both in cruise and vertically evolving for cross ACC borders and in high & very high complexity environments.									
	Enablers -	AAMS-06b	AAMS-06c	AAMS-09a	AAMS-11 AOM19	A/C-04a	ER APP ATC 15	ER ATC 157 ATC12.1	ER APP ATC 75	
		ER ATC 91 ATC12.1	NIMS-21a FCM06	NIMS-29	NIMS-37 FCM06	NIMS-42				
Legend:	WXYZ-001	Covered by SLoA(s) in this objective		WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan		

Applicable legislation

Commission Regulation (EU) No 677/2011 of 7 July 2011 laying down detailed rules for the implementation of air traffic management (ATM) network functions and amending Regulation (EU) No 691/2010
Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

AOM21.1	Implementation of Direct Routing
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<u>SloA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
AOM21.1-ASP01	Implement procedures and processes in support of the network dimension	01/01/2015	31/12/2017
AOM21.1-ASP02	Implement system improvements	01/01/2015	31/12/2017
AOM21.1-ASP03	Implement procedures and processes in support of the local dimension	01/01/2015	31/12/2017
AOM21.1-ASP04	Implement transversal activities (verification at local/regional level, safety case and training)	01/01/2015	31/12/2017
AOM21.1-NM01	Implement system improvements	01/01/2015	31/12/2017
AOM21.1-NM02	Implement procedures and processes	01/01/2015	31/12/2017

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Maintaining the safety levels
Capacity :	Slightly increased through the better airspace utilisation to enhance productivity and reduce controller workload
Cost effectiveness :	Savings in route distances as well as better fuel efficiency through increased use of preferred flight profiles and improved sectorisation
Environment :	Reductions in emissions through use of more optimal routes
Security :	N/A

Detailed SloA descriptions

AOM21.1-ASP01	Implement procedures and processes in support of the network dimension	From:	By:
		01/01/2015	31/12/2017

Action by : **ANS Providers**

Description & purpose : Take the following actions:
 -Identify the Direct Routing airspace volume (Lateral and Vertical) and applicable time
 -Direct Routings co-Exists with ATS route structure
 -Identify Direct Routing entry and exit points
 -Adapt Airspace design and ensure DIRECT ROUTING horizontal and vertical connectivity
 -Validate airspace design with NM
 -ATFCM Direct Routing procedures
 -Adapt RAD applicability
 -Validate RAD with NM

Derogations : None

Finalisation criteria : 1 - The DIRECT ROUTING airspace has been identified in coordination with the Network and FAB partners and the RAD has been updated accordingly.
 2 - The local ATFCM procedures have been updated in cooperation with the network to take on board the Direct Routing impact.

AOM21.1-ASP02	Implement system improvements	From:	By:
		01/01/2015	31/12/2017

Action by : **ANS Providers**

Description & purpose : Take the following actions:
 -Upgrades FDP and CWP, if required, related to :
 -Direct Routing clearances;
 -Rerouting capabilities in cases the Direct Routing traversed the military airspace;
 -differentiation between different traffic type airspaces;
 -direct route beyond AoR;
 -Calculation of 4D trajectory with AoI;
 -Editing function for 4D trajectories;
 Note :Additional System improvement which might be required for Direct Routings are covered by other ESSIP Objectives like ATC 12.1 (MTCD, conflict resolution support information and MONA), ITY-COTR (OLDI), ATC17 (SYSCO) and ATC02.5 (APW)
 Note :No supporting material defined (subject to stakeholder analysis of the local needs)

Derogations : None

AOM21.1	Implementation of Direct Routing		
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ATM Master Plan relationship : [\[ER APP ATC 15\]-Flight Data Processing: support Dynamic Sectorisation and Dynamic Constraint Management.](#)
[\[ER APP ATC 75\]-Enhance FDP for Direct Route Operations.](#)
Finalisation criteria : 1 - The ANSP system has been upgraded according to the specifications representing the identified necessary changes

AOM21.1-ASP03	Implement procedures and processes in support of the local dimension	From:	By:
		01/01/2015	31/12/2017

Action by : **ANS Providers**
Description & purpose : Take the following actions:
-Adapt the LoA with adjacent ATS units
-Publish relevant data for Direct Routing in AIP
-Charts for Direct Routing operations
-Airspace management procedure for the implementation of Direct Routings
-ASM Procedures for identifying and promulgating Direct Routing areas
-ATC procedures to cover Direct Routing co-ordination and transfer of control, trajectory change in Direct Routing environment, conflict detection
-Validate airspace design, RAD and ASM procedures with NM.
Derogations : None
Supporting material(s) : EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 1 (Free Route Airspace Concept); Edition June 2012 06/2012
Url : <http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-1-airspace-design-methodology.pdf>
ATM Master Plan relationship : [\[ER APP ATC 15\]-Flight Data Processing: support Dynamic Sectorisation and Dynamic Constraint Management.](#)
[\[ER APP ATC 75\]-Enhance FDP for Direct Route Operations.](#)
Finalisation criteria : 1 - The Direct Routing airspace has been described and published in the AIP, RAD and/or the charts
2 - The Letters of Agreement have been updated if necessary
3 - The ASM and ATC procedures have been updated to take on board the Direct Routing impact

AOM21.1-ASP04	Implement transversal activities (verification at local/regional level, safety case and training)	From:	By:
		01/01/2015	31/12/2017

Action by : **ANS Providers**
Description & purpose : Take the following actions:
-Validate the Direct Routing concept (airspace organisation, ATC/ATFCM and ASM procedures, airspace restrictions) based on the local and/or regional conditions
-Train ATCOs on the application of Direct Routing
-Develop Direct Routing Safety Argument.
Derogations : None
Supporting material(s) : EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 1 (Free Route Airspace Concept); Edition June 2012 06/2012
Url : <http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-1-airspace-design-methodology.pdf>
ATM Master Plan relationship : [\[ER APP ATC 15\]-Flight Data Processing: support Dynamic Sectorisation and Dynamic Constraint Management.](#)
[\[ER APP ATC 75\]-Enhance FDP for Direct Route Operations.](#)
Finalisation criteria : 1 - Direct Routing concept has been validated; safety argument has been developed and delivered to the Regulator/NSA/Competent Authority, as appropriate, depending on the severity of the identified risks or the introduction of new aviation standards.
2 - ATCO training has been conducted.

AOM21.1-NM01	Implement system improvements	From:	By:
		01/01/2015	31/12/2017

Action by : **NM**
Description & purpose : -Adaptations of NM systems
-New AUP/UUP template
Derogations : None
Supporting material(s) : EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 1 (Free Route Airspace Concept); Edition June 2012 06/2012
Url : <http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-1-airspace-design-methodology.pdf>
Finalisation criteria : 1 - The required adaptations of NM systems (IFPS and Airspace Management tools) to support Direct Routing have been deployed

AOM21.1	Implementation of Direct Routing
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AOM21.1-NM02	Implement procedures and processes	From:	By:
		01/01/2015	31/12/2017

Action by : **NM**

Description & purpose : Take the following actions in coordination with ANSPs:
 -Identify the Direct Routing airspace volume (Lateral and Vertical) and applicable time
 -Identify Direct Routing entry and exit points
 -Adapt Airspace design and ensure Direct Routing horizontal and vertical connectivity
 -Validate airspace design with NM
 -ATFCM Direct Routing procedures
 -Adapt RAD applicability
 - Validate airspace design, RAD and ASM procedures with ANSPs.

Derogations : None

Supporting material(s) : EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 2 - European ATS Route Network - Version 2013-2015) Edition June 2013

Url : <http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-2-arn-v8.pdf>

EUROCONTROL - European Route Network Improvement Plan (ERNIP) PART 3 - Airspace Management Handbook - Guidelines for Airspace Management; Edition February 2013

Url :

<http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-1-airspace-design-methodology.pdf>

EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 4 - Route Availability Document Users Manual - Edition June 2013

Url : <http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-4-rad-users-manual.pdf>

Finalisation criteria : 1 - European Airspace has been updated with the integration of the coordinated Direct Routing definition
 2 - Route Availability Document has been updated accordingly

PCP		Active					ECAC	
AOM21.2		Implement Free Route Airspace						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 3 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, and is bound to its deployment target dates.

Free Route Airspace (FRA) is a specified airspace within which users may freely plan a route between a defined entry point and a defined exit point, with the possibility to route via intermediate (published or unpublished) waypoints, without reference to the ATS route network, subject to airspace availability. Within this airspace, flights remain subject to air traffic control.

The FRA concept brings significant flight efficiency benefits and a choice of user preferred routes to airspace users. As a step to full trajectory based operations the FRA concept brings increased flight predictability, reduced uncertainty for the Network which in turn can lead to potential capacity increases for ATM which will also benefit the user.

Several ACCs and ANSPs already fully or partially implemented FRA with further phased implementations planned by all FABs/ANSPs over the period 2015-2019. The following FRA deployments have already been done as:

- Free Route Airspace (FRA) H24 Denmark and Sweden within DK-SE FAB , SW FAB (Portugal and Madrid FIR sectors of Santiago and Asturias- FRASAI project-), Ireland, and Hungary
- FRA night: Romania, Bulgaria, Finland, Moldova

The PCP IR requires the deployment of Free Route Airspace (FRA) within Member States' airspace of the ICAO EUR region at and above FL 310. The implementation is coordinated through the NM European Route Network Improvement Plan (ERNIP) and the Network Operations Plan following the Strategic Objectives and Targets set in the Network Strategic Plan and in the Network Manager Performance Plan. All European ANSPs have included in the ERNIP Part 2 - ARN Version 2014-2019 projects for full or partial implementation of Free Route Airspace selecting their implementation step.

The FRA ESSIP objective is derived from the ATMMP OI step AOM-501 (Free Routing for Flights both in cruise and vertically evolving within low to medium complexity environments) supplemented by the provision of AOM-500 (Direct Routing for flights both in cruise and vertically evolving for cross ACC borders and in high & very high complexity environments) and Pre-Step 1 OI steps AOM-0401 (Multiple Route Options & Airspace Organisation Scenarios) and AOM-0402 (Further Improvements to Route Network and Airspace incl. Cross-Border Sectorisation and Further Routeing Options).

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2015

Applicability Area

Full operational capability

31/12/2021

Applicability Area

References

European ATM Master Plan relationship

OI step -	[AOM-0401]-Multiple Route Options & Airspace Organisation Scenarios									
	Enablers -									
OI step -	[AOM-0402]-Further Improvements to Route Network and Airspace incl. Cross-Border Sectorisation and Further Routing Options									
	Enablers -									
OI step -	[AOM-0501]-Free Routing for Flights both in cruise and vertically evolving within low to medium complexity environments									
	Enablers -	AAMS-06b	AAMS-16a	A/C-04a	A/C-37a	ER APP ATC 100	ER ATC 157 ATC12.1	ER APP ATC 160	NIMS-21a FCM06	
		PRO-085	SWIM-APS- 01a FCM05	SWIM-APS- 02a	SWIM-APS- 03a FCM05	SWIM-APS- 04a	SWIM-APS- 05a	SWIM-INFR- 01a	SWIM-INFR- 05a	
		SWIM-NET- 01a	SWIM-SUP T-01a	SWIM-SUPT -03a	SWIM-SUPT -05a					
OI step -	[AOM-0502]-Free Routing for Flights both in cruise and vertically evolving within high & very high-complexity environments									

AOM21.2	Implement Free Route Airspace									
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	Enablers -	AOC-ATM-10	ER APP ATC 78	NIMS-21b	PRO-148	PRO-149				
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OI step - [\[CM-0102-A\]-Automated Support for Dynamic Sectorisation and Dynamic Constraint Management](#)

	Enablers -	CTE-C05a COM11	CTE-C05b	ER APP ATC 15	ER APP ATC 93 FCM06	PRO-220a FCM06	PRO-220b FCM06	SWIM-APS-03a FCM05	SWIM-APS-04a	
		SWIM-INFR-05a	SWIM-NET-01a	SWIM-SUPT-01a	SWIM-SUPT-03a	SWIM-SUPT-05a				

Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan
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Applicable legislation

Commission Regulation (EU) No 677/2011 of 7 July 2011 laying down detailed rules for the implementation of air traffic management (ATM) network functions and amending Regulation (EU) No 691/2010
Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
AOM21.2-ASP01	Implement procedures and processes in support of the network dimension	01/01/2015	31/12/2021
AOM21.2-ASP02	Implement system improvements	01/01/2015	31/12/2021
AOM21.2-ASP03	Implement procedures and processes in support of the local dimension	01/01/2015	31/12/2021
AOM21.2-ASP04	Implement transversal activities (validation, safety case and training)	01/01/2015	31/12/2021
AOM21.2-USE01	Implement system improvements	01/01/2015	31/12/2021
AOM21.2-USE02	Implement procedures and processes	01/01/2015	31/12/2021
AOM21.2-USE03	Train aircrews and operational staff for FRA operations	01/01/2015	31/12/2021
AOM21.2-NM01	Implement system improvements	01/01/2015	31/12/2019
AOM21.2-NM02	Implement procedures and processes	01/01/2015	31/12/2017

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

<u>Safety</u> :	Maintaining the safety levels
<u>Capacity</u> :	Increased through the better airspace utilisation to enhance productivity and reduce controller workload
<u>Cost effectiveness</u> :	Savings in route distances as well as better fuel efficiency through increased use of preferred flight profiles and improved sectorisation.
<u>Environment</u> :	Reductions in emissions through use of more optimal routes.
<u>Security</u> :	N/A

Detailed SLoA descriptions

AOM21.2-ASP01	Implement procedures and processes in support of the network dimension	From:	By:
		01/01/2015	31/12/2021

Action by : **ANS Providers**

AOM21.2	Implement Free Route Airspace
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<u>Description & purpose</u> :	Take the following actions: -Identify the FRA airspace volume (Lateral and Vertical) and applicable time (not necessary H24 7/7) - Identify FRA entry and exit points, arrival transition point and departure transition point, and intermediate points -Adapt Airspace design and ensure FRA horizontal and vertical connectivity -Validate airspace design with NM -Network overview - connectivity consistency of FRA cross-border application -ATFCM FRA procedures -Adapt RAD applicability -Validate RAD with NM
<u>Derogations</u> :	None
<u>Supporting material(s)</u> :	EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 1 (Free Route Airspace Concept); Edition June 2012 06/2012 Url : http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-1-airspace-design-methodology.pdf
<u>ATM Master Plan relationship</u> :	[PRO-148]-ASM Procedures for identifying and promulgating 'Free Route' areas
<u>Finalisation criteria</u> :	1 - The local FRA airspace has been identified in coordination with the Network and FAB partners and the RAD has been updated accordingly. 2 - The local ATFCM procedures have been updated in cooperation with the network to take on board the FRA impact.

AOM21.2-ASP02	Implement system improvements	From:	By:
		01/01/2015	31/12/2021

<u>Action by</u> :	ANS Providers
<u>Description & purpose</u> :	Take the following actions: -Upgrades FDP and CWP, if required, related to : -Dynamic sectorisation by an application of pre-defined elementary volumes or dynamically shaped sector boundaries -ATC clearances beyond AoR Differentiation between different traffic type airspaces -Calculation of 4D trajectory with AoI -Editing function for 4D trajectories -Provision/integration of FP and real time data related to the FRA traffic to the Military ATS units -COP management for FRA -Enhance Conflict Management and Controller HMI functions to support conflict detection and resolution -Tactical Controller Tool (TCT), using the tactical trajectory and managing the clearances along that trajectory -CPDLC handling of LAT/LONG Note :Additional System improvement which might be required for FRA are covered by other ESSIP Objectives like ATC 12.1 (MTCD, conflict resolution support info and MONA), ITY-COTR (OLDI), ATC17 (SYSCO) and ATC02.5 (APW) Note :No supporting material defined (subject to stakeholder analysis of the local needs)
<u>Derogations</u> :	None
<u>ATM Master Plan relationship</u> :	[ER APP ATC 15]-Flight Data Processing: support Dynamic Sectorisation and Dynamic Constraint Management. [ER APP ATC 78]-Enhance FDP to use 4D trajectories to support extended direct routing beyond local AoR
<u>Finalisation criteria</u> :	1 - The ANSP system has been updated according to the specifications representing the identified necessary changes.

AOM21.2-ASP03	Implement procedures and processes in support of the local dimension	From:	By:
		01/01/2015	31/12/2021

<u>Action by</u> :	ANS Providers
<u>Description & purpose</u> :	Take the following actions: -Adapt the LoA with adjacent ATS units -Publish relevant data for FRA in AIP -Charts for FRA operations -Airspace management procedure for the implementation of free routes operation -ASM Procedures for identifying and promulgating 'Free Route' areas -ATC procedures to cover free route co-ordination and transfer of control, trajectory change in a free route environment, conflict detection -Validate airspace design, RAD and ASM procedures with NM.
<u>Derogations</u> :	None
<u>Supporting material(s)</u> :	EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 1 (Free Route Airspace Concept); Edition June 2012 06/2012 Url : http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-1-airspace-design-methodology.pdf
<u>ATM Master Plan relationship</u> :	[PRO-085]-ATC procedures to cover issues such as hand-off, transfer of control, and for defining trajectory changes necessitated by changes in airspace availability, weather constraints and other non-nominal events [PRO-148]-ASM Procedures for identifying and promulgating 'Free Route' areas

AOM21.2	Implement Free Route Airspace
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Finalisation criteria :

- 1 - The FRA airspace has been described and published in the AIP and the charts.
- 2 - The Letters of Agreement have been updated if necessary.
- 3 - The ASM and ATC procedures have been updated to take on board the FRA impact.

AOM21.2-ASP04	Implement transversal activities (validation, safety case and training)	From:	By:
		01/01/2015	31/12/2021

Action by : **ANS Providers**

Description & purpose : Take the following actions:
 -Validate FRA concept (airspace organisation, ATC/ATFCM and ASM procedures, airspace restrictions)
 -Train ATCOs on the application of FRA
 -Develop FRA Safety Argument.

Derogations : None

Supporting material(s) : EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 1 (Free Route Airspace Concept); Edition June 2012 06/2012
 Url : <http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-1-airspace-design-methodology.pdf>

Finalisation criteria :

- 1 - FRA concept has been validated, safety argument has been developed and delivered to the Regulator/NSA/Competent Authority, as appropriate, depending on the severity of the identified risks or the introduction of new aviation standards.
- 2 - ATCO training has been conducted.

AOM21.2-USE01	Implement system improvements	From:	By:
		01/01/2015	31/12/2021

Action by : **Airspace Users**

Description & purpose : Adapt as necessary the flight Planning system to support free routing.
Note :No supporting material identified (subject to stakeholder analysis of the local needs)

Derogations : None

ATM Master Plan relationship : [\[AOC-ATM-10\]-Modification of AOC/WOC-ATM trajectory management system \(or new systems\) to allow quality of service requested by NOP for pre-flight trajectory with dynamic routing](#)

Finalisation criteria : 1 - Flight Planning system has been amended if necessary.

AOM21.2-USE02	Implement procedures and processes	From:	By:
		01/01/2015	31/12/2021

Action by : **Airspace Users**

Description & purpose : Take the following actions:
 - Develop and apply operational Procedures for free route
 - Develop and apply operational Procedures to take into account airspace and traffic constraints when selecting a route.

Derogations : None

Supporting material(s) : EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 1 (Free Route Airspace Concept); Edition June 2012 06/2012
 Url : <http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-1-airspace-design-methodology.pdf>

ATM Master Plan relationship : [\[PRO-149\]-Airline Operational Procedures to select the most appropriate route based upon TTA, EOBT, METEO and other operational conditions drawing from a continuously updated NOP](#)

Finalisation criteria : 1 - Procedures have been updated to take into account Free Route Airspace.

AOM21.2-USE03	Train aircrews and operational staff for FRA operations	From:	By:
		01/01/2015	31/12/2021

Action by : **Airspace Users**

Description & purpose : Develop and apply training packages for pilots and personnel involved in flight planning, on the basis of procedures developed as described in SLoA AOM21-USE02.

Derogations : None

Finalisation criteria : 1 - Pilots and Flight Planners have been trained to Free Route operations.

AOM21.2-NM01	Implement system improvements	From:	By:
		01/01/2015	31/12/2019

Action by : **NM**

AOM21.2	Implement Free Route Airspace
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Description & purpose : -Adaptations (tuning) of NM systems
-New AUP/UUP template

Derogations : None

Supporting material(s) : EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 1 (Free Route Airspace Concept); Edition June 2012 06/2012

Url :

<http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-1-airspace-design-methodology.pdf>

ATM Master Plan relationship : [\[AAMS-16a\]-Airspace management functions equipped with tools able to deal with free-routing](#)

Finalisation criteria : 1 - The required adaptations of NM systems (IFPS and Airspace Management tools) to FRA have been deployed

AOM21.2-NM02	Implement procedures and processes	From:	By:
		01/01/2015	31/12/2017

Action by : **NM**

Description & purpose : Take the following actions in coordination with ANSPs:
-Identify the FRA airspace volume (Lateral and Vertical) and applicable time
-Identify FRA entry and exit points, arrival transition point and departure transition point, and intermediate points
-Adapt Airspace design and ensure FRA horizontal and vertical connectivity
-Network overview-connectivity consistency of FRA cross-border application
-ATFCM FRA procedures
-Adapt RAD applicability
-Validate airspace design, RAD and ASM procedures with ANSPs.

Derogations : None

Supporting material(s) : EUROCONTROL - European Route Network Improvement Plan (ERNIP) PART 3 - Airspace Management Handbook - Guidelines for Airspace Management; 11/2014

Url : <http://www.eurocontrol.int/sites/default/files/publication/files/ERNIP-ASM-Handbook-Part3.pdf>

EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 1 (Free Route Airspace Concept); Edition June 2012 06/2012

Url :

<http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-1-airspace-design-methodology.pdf>

EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 2 - European ATS Route Network - Version 8 (2012-2014) 06/2012

Url : <http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-2-am-v8.pdf>

EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 4 - Route Availability Document Users Manual - Edition June 2012 06/2012

Url : <http://www.eurocontrol.int/sites/default/files/content/documents/nm/airspace/ernip-part-4-rad-users-manual.pdf>

ATM Master Plan relationship : [\[PRO-148\]-ASM Procedures for identifying and promulgating 'Free Route' areas](#)

Finalisation criteria : 1 - European Airspace has been updated with the integration of the coordinated FRA definition.
2 - Route Availability Document has been updated accordingly.

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SESAR	Active					APT	
AOP03	Improve runway safety by preventing runway incursions						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

Prevent runway accidents by identifying and eliminating the risks of runway incursions.

This objective has been updated in 2010 to encompass the new recommendations in the European Action Plan for Prevention of Runway Incursions (EAPPRI) Edition 2.0.

A few recommendations have been completed, progressed or improved. All the remaining recommendations which were part of the previous EAPPRI Editions are still valid. New recommendations are based upon best practices from airports across Europe and can be found in sections 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, and the new sections 1.9 -Technology for the prevention of runway incursions - and 1.10 - Civil-military joint use aerodromes.

The applicability area of this objective is all ECAC aerodromes. Nonetheless, it is for the individual National safety authority to decide upon the strategy of implementation at aerodromes within its own State.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Applicability Area(s) & Timescale(s)

Applicability Area

See list in ESSIP Plan - Part I Section 4

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/04/2003

Applicability Area

Full operational capability

31/12/2013

Applicability Area

References

European ATM Master Plan relationship

OI step -	[AO-0101]-Reduced Risk of Runway Incursions through Improved Procedures and Best Practices on the Ground							
Enablers -	PRO-062b	PRO-062c						
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002	Covered by SLoA(s) in another objective		WXYZ-003	Not covered in the ESSIP Plan	
			zzz	ESSIP objective covering the enabler				

Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
AOP03-REG01	Implement recommendations contained in the European Action Plan for the Prevention of Runway Incursions in accordance with the explanatory notes	01/04/2003	31/12/2013
AOP03-ASP01	Establish a local Runway Safety Team and implement General principles contained in the European Action plan for the prevention of runway incursions in accordance with the explanatory notes	01/04/2003	31/12/2013
AOP03-ASP02	Ensure Air Traffic Controller Best Practices are implemented	01/04/2003	31/12/2013
AOP03-ASP03	Implement Communication recommendations	FINALISED	
AOP03-ASP04	Implement Aeronautical information management	01/04/2003	31/12/2013
AOP03-APO01	Establish a local Runway Safety Team and implement General principles contained in the European Action Plan for the Prevention of Runway Incursions in accordance with the explanatory notes	01/04/2003	31/12/2013

AOP03	Improve runway safety by preventing runway incursions		
AOP03-APO02	Ensure that all airport infrastructure, practices and procedures are in accordance with ICAO provisions	01/04/2003	31/12/2013
AOP03-APO03	Implement Communication recommendations	01/04/2003	31/12/2013
AOP03-APO04	Implement Aeronautical information management	01/04/2003	31/12/2013
AOP03-APO05	Put in place a formal training and assessment for drivers and all personnel who operate on or near the runway	01/04/2003	31/12/2013
AOP03-APO06	Implement Safety Management Systems (SMS) in accordance with ICAO provisions for its aerodrome operations	01/04/2003	31/12/2013
AOP03-USE01	Implement recommendations contained in the European Action Plan for the Prevention of Runway Incursions in accordance with the explanatory notes	01/04/2003	31/12/2013

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Significant, through reduced risk of incidents and accidents on runways.
Capacity :	Indirect through prevention of delay problems caused by runway incursion incidents.
Cost effectiveness :	The prevention of accidents is a highly cost-effective measure and the application is based upon the implementation of existing ICAO provisions.
Environment :	Negligible
Security :	N/A

Detailed SLoA descriptions

AOP03-REG01	Implement recommendations contained in the European Action Plan for the Prevention of Runway Incursions in accordance with the explanatory notes	From:	By:
		01/04/2003	31/12/2013

Action by :	State Authorities
Description & purpose :	Implement recommendations contained in the EAPRI Edition 2.0 related to general principles for prevention of runway incursions (1.1.1, 1.1.4 and 1.1.5), airport operator issues (1.2.8, 1.2.11 & 1.2.15), data collection and lessons sharing (1.6.1 to 1.6.2), regulatory issues (1.7.1 to 1.7.9), Aeronautical Information Management (AIM) (1.8.1, 1.8.5 & 1.8.6) and civil-military joint use of aerodromes (1.10.1, 1.10.2, 1.10.3, 1.10.4 and 1.10.12). For the responsible organisation is to decide specific details, after taking local conditions into account.
Derogations :	None
Supporting material(s) :	EUROCONTROL - European Action Plan for the Prevention of Runway Incursions - Edition 2.0 Url : http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Incursions ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015 Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf
Finalisation criteria :	1 - Recommendations 1.1.1, 1.1.4, 1.1.5, 1.2.8, 1.2.11, 1.2.15, 1.6.1 to 1.6.2, 1.7.1 to 1.7.9, 1.8.1, 1.8.5, 1.8.6, 1.10.1, 1.10.2, 1.10.3, 1.10.4 and 1.10.12 have been implemented.

AOP03-ASP01	Establish a local Runway Safety Team and implement General principles contained in the European Action plan for the prevention of runway incursions in accordance with the explanatory notes	From:	By:
		01/04/2003	31/12/2013

Action by :	ANS Providers
Description & purpose :	Implement recommendations contained in the EAPPRI Edition 2.0 related to general principles for prevention of runway incursions (1.1.1 to 1.1.7). The responsible organization is to decide specific details, after taking local conditions into account.
Derogations :	None
Supporting material(s) :	EUROCONTROL - European Action Plan for the Prevention of Runway Incursions - Edition 2.0 Url : http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Incursions ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015 Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf
Finalisation criteria :	1 - Recommendations 1.1.1 to 1.1.7 have been implemented.

AOP03	Improve runway safety by preventing runway incursions		
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AOP03-ASP02	Ensure Air Traffic Controller Best Practices are implemented	From:	By:
		01/04/2003	31/12/2013

Action by : **ANS Providers**

Description & purpose : Ensure that recommendations on ATC best practices contained in the EAPPRI Edition 2.0 are implemented. These recommendations are specified in sections related to airport operator issues (1.2.7, 1.2.8, 1.2.10, 1.2.11, 1.2.14 and 1.2.15), ANSP issues (1.5.1 to 1.5.18), data collection and lesson sharing (1.6.2), regulatory issues (1.7.6), technology (1.9.1) and civil-military joint use of aerodromes (1.10.2, 1.10.3, 1.10.6, 1.10.7, 1.10.8, and 1.10.9) The responsible organisation is to decide specific details, after taking local conditions into account.

Derogations : None

Supporting material(s) : EUROCONTROL - European Action Plan for the Prevention of Runway Incursions - Edition 2.0

Url : http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Incursions

ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015

Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf

[\[PRO-062b\]-Airport Operational Procedures implementing Best Practices for Prevention of Runway Incursions](#)

ATM Master Plan relationship :

Finalisation criteria : 1 - Recommendations 1.2.7, 1.2.8, 1.2.10, 1.2.11, 1.2.14, 1.2.15, 1.5.1 to 1.5.18, 1.6.2, 1.7.6, 1.9.1, 1.10.2, 1.10.3, 1.10.6, 1.10.7, 1.10.8 and 1.10.9 have been implemented.

AOP03-ASP04	Implement Aeronautical information management	From:	By:
		01/04/2003	31/12/2013

Action by : **ANS Providers**

Description & purpose : Implement recommendations related to Aeronautical Information Management (AIM) contained in the EAPPRI Ed 2.0 (1.8.1, 1.8.4, 1.8.5 and 1.8.6), general principles (1.1.3), and communication section (1.3.9). The responsible organisation is to decide specific details, after taking local conditions into account.

Derogations : None

Supporting material(s) : ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015

Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf

EUROCONTROL - European Action Plan for the Prevention of Runway Incursions - Edition 2.0

Url : http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Incursions

Finalisation criteria : 1 - Recommendations 1.1.3, 1.3.9, 1.8.1, 1.8.4, 1.8.5 and 1.8.6 have been implemented.

AOP03-APO01	Establish a local Runway Safety Team and implement General principles contained in the European Action Plan for the Prevention of Runway Incursions in accordance with the explanatory notes	From:	By:
		01/04/2003	31/12/2013

Action by : **Airport Operators**

Description & purpose : Implement recommendations contained in the EAPPRI Edition 2.0 related to general principles for prevention of runway incursions (1.1.1 to 1.1.7). The responsible organization is to decide specific details, after taking local conditions into account.

Derogations : None

Supporting material(s) : EUROCONTROL - European Action Plan for the Prevention of Runway Incursions - Edition 2.0

Url : http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Incursions

ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015

Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf

Finalisation criteria : 1 - Recommendations 1.1.1 to 1.1.7 have been implemented.

AOP03-APO02	Ensure that all airport infrastructure, practices and procedures are in accordance with ICAO provisions	From:	By:
		01/04/2003	31/12/2013

Action by : **Airport Operators**

Description & purpose : Ensure that all recommendations related to ICAO provisions for airport infrastructure, practices and procedures contained in the EAPPRI Edition 2.0 are implemented. These recommendations are specified in sections related to airport operator issues (1.2.1, 1.2.2, 1.2.4 to 1.2.16) and Civil-Military joint use of aerodromes (1.10.2, 1.10.5, 1.10.10 and 1.10.12). The responsible organization is to decide specific details, after taking local conditions into account.

Derogations : None

Supporting material(s) : EUROCONTROL - European Action Plan for the Prevention of Runway Incursions - Edition 2.0

Url : http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Incursions

ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015

Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf

Finalisation criteria : 1 - Recommendations 1.2.1, 1.2.2, 1.2.4 to 1.2.16, 1.10.2, 1.10.5, 1.10.10 and 1.10.12 have been implemented.

AOP03	Improve runway safety by preventing runway incursions		
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AOP03-APO03	Implement Communication recommendations	From:	By:
		01/04/2003	31/12/2013

Action by : **Airport Operators**

Description & purpose : Implement communication recommendations contained in the EAPPRI Edition 2.0. These recommendations are related to language, radiotelephony, phraseologies and procedures (all these are covered by recommendations 1.3.1 to 1.3.7, and 1.3.9); and Civil-Military joint use of aerodromes (1.10.7). The responsible organization is to decide specific details, after taking local conditions into account.

Derogations : None

Supporting material(s) : EUROCONTROL - European Action Plan for the Prevention of Runway Incursions - Edition 2.0

Url : http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Incursions

ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015

Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf

Finalisation criteria : 1 - Recommendations 1.3.1 to 1.3.7, 1.3.9 and 1.10.7 have been implemented.

AOP03-APO04	Implement Aeronautical information management	From:	By:
		01/04/2003	31/12/2013

Action by : **Airport Operators**

Description & purpose : Implement recommendations related to AIM contained in the EAPPRI Edition 2.0. These recommendations are specified in sections aeronautical information management (1.8.1, 1.8.3, 1.8.4, 1.8.5 and 1.8.6) and Civil-Military joint use of aerodromes (1.10.3). The responsible organization is to decide specific details, after taking local conditions into account.

Derogations : None

Supporting material(s) : EUROCONTROL - European Action Plan for the Prevention of Runway Incursions - Edition 2.0

Url : http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Incursions

ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015

Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf

Finalisation criteria : 1 - Recommendations 1.8.1, 1.8.3, 1.8.4, 1.8.5, 1.8.6 and 1.10.3 have been implemented.

AOP03-APO05	Put in place a formal training and assessment for drivers and all personnel who operate on or near the runway	From:	By:
		01/04/2003	31/12/2013

Action by : **Airport Operators**

Description & purpose : Implement recommendations contained in the EAPPRI Edition 2.0 which are related to training and assessment of drivers and personnel who operate on or near runway. These recommendations are specified in sections related to generic principles for prevention of runway incursions (1.1.4 and 1.1.5) and aerodrome operator issues (1.2.6, 1.2.7, 1.2.10, 1.2.13 and 1.2.16). The responsible organization is to decide specific details, after taking local conditions into account.

Derogations : None

Supporting material(s) : EUROCONTROL - European Action Plan for the Prevention of Runway Incursions - Edition 2.0

Url : http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Incursions

ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015

Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf

Finalisation criteria : 1 - Recommendations 1.1.4, 1.1.5, 1.2.6, 1.2.7, 1.2.10, 1.2.13 and 1.2.16 have been implemented.

AOP03-APO06	Implement Safety Management Systems (SMS) in accordance with ICAO provisions for its aerodrome operations	From:	By:
		01/04/2003	31/12/2013

Action by : **Airport Operators**

Description & purpose : Implement recommendations contained in the EAPPRI Edition 2.0 related to the implementation of the Safety Management System (SMS) on the airports (1.2.3). The responsible organization is to decide specific details, after taking local conditions into account.

Derogations : None

Supporting material(s) : ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015

Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf

EUROCONTROL - European Action Plan for the Prevention of Runway Incursions - Edition 2.0

Url : http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Incursions

Finalisation criteria : 1 - Recommendation 1.2.3 has been implemented.

AOP03	Improve runway safety by preventing runway incursions
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AOP03-USE01	Implement recommendations contained in the European Action Plan for the Prevention of Runway Incursions in accordance with the explanatory notes	From:	By:
		01/04/2003	31/12/2013

Action by : **Airspace Users**

Description & purpose : Implement recommendations contained in the EAPPRI Edition 2.0 which are related to aircraft operators. These recommendations are specified in sections related to general principles for prevention of runway incursions (1.1.1, 1.1.5 to 1.1.7), communications (1.3.1 to 1.3.5 and 1.3.7), aircraft operator issues (1.4.1 to 1.4.15), ANSP issues (1.5.17), data collection and lessons sharing (1.6.2), regulatory issues (1.7.6), aeronautical information management (1.8.3 and 1.8.4), technology (1.9.1) and civil-military joint use of aerodromes (1.10.6, 1.10.8, 1.10.11 to 1.10.12). The responsible organization is to decide specific details, after taking local conditions into account.

Specific applicability: Military authorities shall consider revising appropriate manuals and checklists so that military aircrew operating to and from civil aerodromes on a regular basis, are able to apply runway safety best practices.

Derogations : None

Supporting material(s) : EUROCONTROL - European Action Plan for the Prevention of Runway Incursions - Edition 2.0

Url : http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Incursions

ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015

Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf

ATM Master Plan relationship : [\[PRO-062b\]-Airport Operational Procedures implementing Best Practices for Prevention of Runway Incursions](#)

Finalisation criteria : 1 - Recommendations 1.1.1, 1.1.5 to 1.1.7, 1.3.1 to 1.3.5, 1.3.7, 1.4.1 to 1.4.15, 1.5.17, 1.6.2, 1.7.6, 1.8.3, 1.8.4, 1.9.1, 1.10.6, 1.10.8, 1.10.11 and 1.10.12 have been implemented.

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PCP	Active					APT	
AOP04.1	Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level1						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

This objective is functionally related to ATM Functionality 2 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates.

Implement A-SMGCS Level I which consists of an airport surface surveillance system that provides ATC with the position and automatic identity of:

- All relevant aircraft on the movement area;
- All relevant vehicles on the manoeuvring area.

A-SMGCS Level 1 surveillance data may be used to replace visual observation as required, in accordance with ICAO EUR Doc 7030, chapter 6.5.6 (approved March 2009), and as the basis of controller decision making. Traffic will be controlled through the use of appropriate procedures allowing the issuance of information and clearances to traffic on the basis of A-SMGCS Level 1 surveillance data.

Apron management units, airlines and other interested parties may also benefit from the provision of A-SMGCS Level 1 surveillance data.

A-SMGCS Level 1 is a prerequisite for A-SMGCS Level 2.

All reference documentation listed in SLoAs is available via the EUROCONTROL website:

<https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Applicability Area(s) & Timescale(s)

Applicability Area

See list in ESSIP Plan - Part I Section 4

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2007

Applicability Area

Full operational capability

31/12/2011

Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -						
Enablers -	CTE-S02b	CTE-S03b	CTE-S04b				

OI step -	[AO-0201]-Enhanced Ground Controller Situational Awareness in all Weather Conditions						
Enablers -	AERODRO ME-ATC-04	AERODRO ME-ATC-28	AERODRO ME-ATC-36	ER APP ATC 164	PRO-201a		

Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan
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Applicable legislation

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
AOP04.1-REG01	Mandate the carriage of required aircraft equipment to enable location and identification of aircraft on the movement area (including military aircraft, as appropriate).	01/01/2007	31/12/2010

AOP04.1	Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level1		
AOP04.1-REG02	Mandate the carriage of required vehicle equipment to enable location and identification of vehicles on the manoeuvring area	01/01/2007	31/12/2010
AOP04.1-REG03	Publish A-SMGCS Level 1 procedures (including transponder operating procedures) in national aeronautical information publications	01/01/2007	31/12/2010
AOP04.1-REG04	Approve A-SMGCS Level 1 implementations for operation	DELETED	
AOP04.1-ASP01	Install required surveillance equipment	01/01/2007	31/12/2010
AOP04.1-ASP02	Train aerodrome control staff in the use of A-SMGCS Level 1 surveillance in the provision of aerodrome control service	01/01/2007	31/12/2010
AOP04.1-ASP03	Implement approved A-SMGCS operational procedures at airports equipped with A-SMGCS	01/01/2007	31/12/2011
AOP04.1-APO01	Install required surveillance equipment	01/01/2007	31/12/2010
AOP04.1-APO02	Equip Ground Vehicles	01/01/2007	31/12/2010
AOP04.1-APO03	Train Ground Vehicle Drivers	01/01/2007	31/12/2010
AOP04.1-USE01	Update aircrew training manual to include procedures for use of correct Mode-S transponder setting for enabling cooperative A-SMGCS detection on the movement area	01/01/2004	31/12/2010
AOP04.1-INT01	Coordinate amendments to the related ICAO documentation to include A-SMGCS Level 1 procedures	01/11/2004	31/12/2011
AOP04.1-AGY01	Production of agreed & validated requirements & guidance material for the implementation of A-SMGCS Level 1	FINALISED	
AOP04.1-AGY02	Develop agreed A-SMGCS Level 1 ATC procedures, through established EUROCONTROL Agency processes and mechanisms for proposal to ICAO	FINALISED	
AOP04.1-AGY03	Develop and incorporate A-SMGCS licensing requirements into the European Air Traffic Controller Licensing Scheme	FINALISED	
AOP04.1-AGY04	Develop A-SMGCS Level 1 training guidelines	FINALISED	
AOP04.1-AGY05	Develop and propose amendments to ICAO documentation, using established processes	FINALISED	

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Improved situational awareness for aerodrome controllers, particularly during periods of reduced visibility and darkness will enhance safe operations.
Capacity :	Ability to maintain traffic throughput during periods when aerodrome traffic cannot be observed visually by aerodrome controllers, through the use of surveillance information and appropriate procedures.
Cost effectiveness :	More efficient control of aerodrome surface traffic, leading to a reduction in delay and fuel burn.
Environment :	Reduction of noise and emissions.
Security :	N/A

Detailed SLoA descriptions

AOP04.1-REG01	Mandate the carriage of required aircraft equipment to enable location and identification of aircraft on the movement area (including military aircraft, as appropriate).	From:	By:
		01/01/2007	31/12/2010

Action by : **State Authorities**

Description & purpose : Mandate the equipage of aircraft operating into airports equipped with A-SMGCS Level 1 with the necessary systems to provide their position and identity to the A-SMGCS Level 1 surveillance system.

Derogations : None

AOP04.1	Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level1
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<u>Supporting material(s)</u> :	<p>ETSI - EN 303 213-3 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 3: Deployed cooperative sensor including its interfaces; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010 Url : http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp</p> <p>ETSI - EN 303 213-4-1 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 4: Deployed non-cooperative sensor including its interfaces; Sub-part 1: Generic requirements for non-cooperative sensor; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010 Url : http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp</p> <p>ETSI - EN 303 213-4-2 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 4: Deployed non-cooperative sensor including its interfaces; Sub-part 2: Specific requirements for a deployed Surface Movement Radar sensor; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010 Url : http://webapp.etsi.org/workprogram/Report_WorkItem.asp?WKI_ID=37166</p> <p>ICAO - Doc 9830 - Advanced Surface Movement Guidance and Control Systems (A-SMGCS) Manual - Edition 1 / 12/2004 Url : http://www.icao.int/publications/Pages/catalogue.aspx</p> <p>EUROCONTROL - Advanced Surface Movement, Guidance and Control Systems (A-SMGCS) Implementation Manual - Edition 1.0 / 04/2011 Url : https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs</p> <p>EUROCAE - ED-87B - Minimum Aviation System Performance Specification for Advanced Surface Movement Guidance and Control Systems (A-SMGCS) – Levels 1 & 2- Including Amendment N°1 - January 2009 08/2008 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>EUROCAE - ED-117 - Minimum Operational Performance Specification for Mode S Multilateration Systems for Use in Advanced Surface Movement Guidance and Control Systems (A-SMGCS) 11/2003 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>EUROCAE - ED-116 - Minimum Operational Performance Specification for Surface Movement Radar Sensor Systems for Use in A-SMGCS 01/2004 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>ETSI - EN 303 213-1 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 1: A-SMGCS Level 1 including external interfaces; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.3.1 / 04/2012 Url : http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp</p>
<u>Finalisation criteria</u> :	<p>1 - Mandate to equip the aircraft operating into the airports equipped with A-SMGCS Level 1 with necessary systems to provide position and identity to A-SMGCS Level 1 surveillance system has been issued by the regulator.</p> <p>2 - Airworthiness certificate has been issued by the regulator for aircraft equipped with A-SMGCS Level 1 capabilities.</p> <p>3 - Transponder operating procedure published in AIP</p>

AOP04.1-REG02	Mandate the carriage of required vehicle equipment to enable location and identification of vehicles on the manoeuvring area	From:	By:
		01/01/2007	31/12/2010

<u>Action by</u> :	State Authorities
<u>Description & purpose</u> :	Mandate the equipage of vehicles operating on the manoeuvring area of airports equipped with A-SMGCS Level 1 with the necessary systems to provide their position and identity to the A-SMGCS Level 1 surveillance system.
<u>Derogations</u> :	None

AOP04.1	Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level1
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Supporting material(s) : ETSI - EN 303 213-1 - Advanced Surface Movement Guidance and Control System (A-SMGCS);
Part 1: A-SMGCS Level 1 including external interfaces;
Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.3.1 / 04/2012
Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>

ETSI - EN 303 213-3 - Advanced Surface Movement Guidance and Control System (A-SMGCS);
Part 3: Deployed cooperative sensor including its interfaces;
Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010
Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>

ETSI - EN 303 213-4-1 - Advanced Surface Movement Guidance and Control System (A-SMGCS);
Part 4: Deployed non-cooperative sensor including its interfaces;
Sub-part 1: Generic requirements for non-cooperative sensor;
Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010
Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>

ETSI - EN 303 213-4-2 - Advanced Surface Movement Guidance and Control System (A-SMGCS);
Part 4: Deployed non-cooperative sensor including its interfaces;
Sub-part 2: Specific requirements for a deployed Surface Movement Radar sensor;
Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010
Url : http://webapp.etsi.org/workprogram/Report_WorkItem.asp?WKI_ID=37166

ICAO - Doc 9830 - Advanced Surface Movement Guidance and Control Systems (A-SMGCS) Manual - Edition 1 / 12/2004
Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

EUROCONTROL - Advanced Surface Movement, Guidance and Control Systems (A-SMGCS) Implementation Manual - Edition 1.0 / 04/2011
Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>

ICAO - Doc 9774 - Manual on Certification of Aerodromes - Edition 1 / 12/2001
Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

EUROCAE - ED-87B - Minimum Aviation System Performance Specification for Advanced Surface Movement Guidance and Control Systems (A-SMGCS) – Levels 1 & 2- Including Amendment N°1 - January 2009 08/2008
Url : <http://boutique.eurocae.net/catalog/index.php>

EUROCAE - ED-117 - Minimum Operational Performance Specification for Mode S Multilateration Systems for Use in Advanced Surface Movement Guidance and Control Systems (A-SMGCS) 11/2003
Url : <http://boutique.eurocae.net/catalog/index.php>

EUROCAE - ED-116 - Minimum Operational Performance Specification for Surface Movement Radar Sensor Systems for Use in A-SMGCS 01/2004
Url : <http://boutique.eurocae.net/catalog/index.php>

Finalisation criteria : 1 - Mandate to equip the vehicles operating on the manoeuvring area of the airports equipped with A-SMGCS Level1 with necessary systems to provide position and identity to A-SMGCS Level 1 surveillance system has been issued by the regulator.
2 - Operating certificate has been issued by the regulator for the vehicles equipped with A-SMGCS Level 1 capabilities.

AOP04.1-REG03	Publish A-SMGCS Level 1 procedures (including transponder operating procedures) in national aeronautical information publications	From:	By:
		01/01/2007	31/12/2010

Action by : **State Authorities**

Description & purpose : Incorporate the agreed and validated A-SMGCS Level 1 operating procedures into national aeronautical information publications.

Derogations : None

AOP04.1	Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level1
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<u>Supporting material(s)</u> :	<p>ETSI - EN 303 213-1 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 1: A-SMGCS Level 1 including external interfaces; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.3.1 / 04/2012 Url : http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp</p> <p>ETSI - EN 303 213-3 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 3: Deployed cooperative sensor including its interfaces; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010 Url : http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp</p> <p>ETSI - EN 303 213-4-1 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 4: Deployed non-cooperative sensor including its interfaces; Sub-part 1: Generic requirements for non-cooperative sensor; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010 Url : http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp</p> <p>ETSI - EN 303 213-4-2 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 4: Deployed non-cooperative sensor including its interfaces; Sub-part 2: Specific requirements for a deployed Surface Movement Radar sensor; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010 Url : http://webapp.etsi.org/workprogram/Report_WorkItem.asp?WKI_ID=37166</p> <p>ICAO - Doc 9830 - Advanced Surface Movement Guidance and Control Systems (A-SMGCS) Manual - Edition 1 / 12/2004 Url : http://www.icao.int/publications/Pages/catalogue.aspx</p> <p>EUROCONTROL - Advanced Surface Movement, Guidance and Control Systems (A-SMGCS) Implementation Manual - Edition 1.0 / 04/2011 Url : https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs</p> <p>ICAO - Doc 9774 - Manual on Certification of Aerodromes - Edition 1 / 12/2001 Url : http://www.icao.int/publications/Pages/catalogue.aspx</p> <p>EUROCAE - ED-87B - Minimum Aviation System Performance Specification for Advanced Surface Movement Guidance and Control Systems (A-SMGCS) – Levels 1 & 2- Including Amendment N°1 - January 2009 08/2008 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>EUROCAE - ED-117 - Minimum Operational Performance Specification for Mode S Multilateration Systems for Use in Advanced Surface Movement Guidance and Control Systems (A-SMGCS) 11/2003 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>EUROCAE - ED-116 - Minimum Operational Performance Specification for Surface Movement Radar Sensor Systems for Use in A-SMGCS 01/2004 Url : http://boutique.eurocae.net/catalog/index.php</p>
<u>Finalisation criteria</u> :	<p>1 - Agreed and validated procedures have been incorporated into national aeronautical information publication (AIP)</p> <p>2 - Transponder operating procedure published in AIP</p>

AOP04.1-ASP01	Install required surveillance equipment	From:	By:
		01/01/2007	31/12/2010

<u>Action by</u> :	ANS Providers
<u>Description & purpose</u> :	Install all the surveillance equipment and related systems as specified in the functional specifications for A-SMGCS, in order to enable aerodrome controllers to locate and identify aircraft and vehicles on the manoeuvring area (in co-operation with Airport operators, as appropriate).
<u>Derogations</u> :	None

AOP04.1	Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level1
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<u>Supporting material(s)</u> :	<p>ETSI - EN 303 213-1 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 1: A-SMGCS Level 1 including external interfaces; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.3.1 / 04/2012 Url : http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp</p> <p>ETSI - EN 303 213-3 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 3: Deployed cooperative sensor including its interfaces; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010 Url : http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp</p> <p>ETSI - EN 303 213-4-1 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 4: Deployed non-cooperative sensor including its interfaces; Sub-part 1: Generic requirements for non-cooperative sensor; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010 Url : http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp</p> <p>ETSI - EN 303 213-4-2 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 4: Deployed non-cooperative sensor including its interfaces; Sub-part 2: Specific requirements for a deployed Surface Movement Radar sensor; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010 Url : http://webapp.etsi.org/workprogram/Report_WorkItem.asp?WKI_ID=37166</p> <p>ICAO - Doc 9830 - Advanced Surface Movement Guidance and Control Systems (A-SMGCS) Manual - Edition 1 / 12/2004 Url : http://www.icao.int/publications/Pages/catalogue.aspx</p> <p>EUROCONTROL - Advanced Surface Movement, Guidance and Control Systems (A-SMGCS) Implementation Manual - Edition 1.0 / 04/2011 Url : https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs</p> <p>EUROCAE - ED-87B - Minimum Aviation System Performance Specification for Advanced Surface Movement Guidance and Control Systems (A-SMGCS) – Levels 1 & 2- Including Amendment N°1 - January 2009 08/2008 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>EUROCAE - ED-117 - Minimum Operational Performance Specification for Mode S Multilateration Systems for Use in Advanced Surface Movement Guidance and Control Systems (A-SMGCS) 11/2003 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>EUROCAE - ED-116 - Minimum Operational Performance Specification for Surface Movement Radar Sensor Systems for Use in A-SMGCS 01/2004 Url : http://boutique.eurocae.net/catalog/index.php</p> <p><u>ATM Master Plan relationship</u> :</p> <p>[AERODROME-ATC-04]-ANSP Civil ATS Aerodrome service providers (incl Civil AMS Apron Management Service) [AERODROME-ATC-28]-Surface movement control workstation equipped with initial tools for Aerodrome Control Service [AERODROME-ATC-36]-Airport surveillance data processing and distribution upgraded to store and forward flight plan data [CTE-S02b]-Surface Movement Radar [CTE-S03b]-ADS-B station for RAD and APT surveillance (ED-102A) [CTE-S04b]-Airport Multilateration (MLAT)</p>
<u>Finalisation criteria</u> :	1 - Surveillance equipment that meets required performance specifications have been installed. Such equipment must include both non-cooperative sensors (e.g. SMR) and co-operative sensors (e.g. Mode S Multilateration).

AOP04.1-ASP02	Train aerodrome control staff in the use of A-SMGCS Level 1 surveillance in the provision of aerodrome control service	From:	By:
		01/01/2007	31/12/2010

<u>Action by</u> :	ANS Providers
<u>Description & purpose</u> :	Train aerodrome controllers in the use of A-SMGCS Level 1 tools and procedures (including phraseology) in accordance with agreed training requirements.
<u>Derogations</u> :	None
<u>Supporting material(s)</u> :	<p>EUROCONTROL - ATCO Rating Training - Training Plans: Aerodrome Training - Annex B: Detailed Training Plans - Edition 1.0 / 03/2004 Url : https://trainingzone.eurocontrol.int</p> <p>EUROCONTROL - Advanced Surface Movement, Guidance and Control Systems (A-SMGCS) Implementation Manual - Edition 1.0 / 04/2011 Url : https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs</p> <p>EUROCONTROL - Guidance on Training Requirements for Operational Users of A-SMGCS Levels 1 & 2 - Edition 1.1 / 11/2006 Url : https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs</p>
<u>Finalisation criteria</u> :	1 - Controllers training has been completed in accordance with agreed training requirements and programme.

AOP04.1	Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level1
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AOP04.1-ASP03	Implement approved A-SMGCS operational procedures at airports equipped with A-SMGCS	From:	By:
		01/01/2007	31/12/2011

Action by : **ANS Providers**

Description & purpose : Develop and apply agreed and validated A-SMGCS Level 1 procedures as an integral part of the aerodrome control service.

Derogations : None

Supporting material(s) : EUROCONTROL - Advanced Surface Movement, Guidance and Control Systems (A-SMGCS) Implementation Manual - Edition 1.0 / 04/2011
 Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>
[\[PRO-201a\]-Procedures linked to Improvement of Surveillance on the Manoeuvring Area on and around the Runway](#)

ATM Master Plan relationship :

Finalisation criteria : 1 - Implementation of the procedures at airports equipped with A-SMGCS Level 1 has been completed.
 2 - Harmonized application of transponder operating procedures consistent with the equipment in use.

AOP04.1-APO01	Install required surveillance equipment	From:	By:
		01/01/2007	31/12/2010

Action by : **Airport Operators**

Description & purpose : Install all the surveillance equipment and related systems as specified in the functional specifications for A-SMGCS, in order to enable aerodrome controllers to locate and identify aircraft and vehicles on the manoeuvring area (in co-operation with ANS provider, as appropriate).

Derogations : None

Supporting material(s) : ETSI - EN 303 213-1 - Advanced Surface Movement Guidance and Control System (A-SMGCS);
 Part 1: A-SMGCS Level 1 including external interfaces;
 Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.3.1 / 04/2012
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 ETSI - EN 303 213-3 - Advanced Surface Movement Guidance and Control System (A-SMGCS);
 Part 3: Deployed cooperative sensor including its interfaces;
 Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 ETSI - EN 303 213-4-1 - Advanced Surface Movement Guidance and Control System (A-SMGCS);
 Part 4: Deployed non-cooperative sensor including its interfaces;
 Sub-part 1: Generic requirements for non-cooperative sensor;
 Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 ETSI - EN 303 213-4-2 - Advanced Surface Movement Guidance and Control System (A-SMGCS);
 Part 4: Deployed non-cooperative sensor including its interfaces;
 Sub-part 2: Specific requirements for a deployed Surface Movement Radar sensor;
 Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010
 Url : http://webapp.etsi.org/workprogram/Report_WorkItem.asp?WKI_ID=37166
 ICAO - Doc 9830 - Advanced Surface Movement Guidance and Control Systems (A-SMGCS) Manual - Edition 1 / 12/2004
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 EUROCONTROL - Advanced Surface Movement, Guidance and Control Systems (A-SMGCS) Implementation Manual - Edition 1.0 / 04/2011
 Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>
 EUROCAE - ED-87B - Minimum Aviation System Performance Specification for Advanced Surface Movement Guidance and Control Systems (A-SMGCS) – Levels 1 & 2- Including Amendment N°1 - January 2009 08/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-117 - Minimum Operational Performance Specification for Mode S Multilateration Systems for Use in Advanced Surface Movement Guidance and Control Systems (A-SMGCS) 11/2003
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-116 - Minimum Operational Performance Specification for Surface Movement Radar Sensor Systems for Use in A-SMGCS 01/2004
 Url : <http://boutique.eurocae.net/catalog/index.php>

AOP04.1	Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level1
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ATM Master Plan relationship :

[AERODROME-ATC-04]-ANSP Civil ATS Aerodrome service providers (incl Civil AMS Apron Management Service)
[AERODROME-ATC-28]-Surface movement control workstation equipped with initial tools for Aerodrome Control Service
[AERODROME-ATC-36]-Airport surveillance data processing and distribution upgraded to store and forward flight plan data

Finalisation criteria :

1 - Surveillance equipment that meets agreed performance specifications has been installed. Such equipment must include both non-cooperative sensors (e.g. SMR) and co-operative sensors (e.g. Mode S Multilateration).

AOP04.1-APO02	Equip Ground Vehicles	From:	By:
		01/01/2007	31/12/2010

Action by :

Airport Operators

Description & purpose :

Ensure vehicles operating on the manoeuvring area of airports equipped with A-SMGCS Level 1 are equipped with the necessary systems as specified in the functional specifications for A-SMGCS, to provide their position and identity to the A-SMGCS Level 1 surveillance system.

Derogations :

None

Supporting material(s) :

EUROCONTROL - Operational Concept and Requirements for A-SMGCS Implementation Level 1 - Edition 2.1 / 06/2010

Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>

Finalisation criteria :

1 - Vehicle equipment that meets required performance specifications has been installed.

AOP04.1-APO03	Train Ground Vehicle Drivers	From:	By:
		01/01/2007	31/12/2010

Action by :

Airport Operators

Description & purpose :

Ensure drivers of vehicles operating on the manoeuvring area of airports equipped with A-SMGCS Level 1 are trained in the operation of equipment associated with A-SMGCS Level 1.

Derogations :

None

Supporting material(s) :

EUROCONTROL - Advanced Surface Movement, Guidance and Control Systems (A-SMGCS) Implementation Manual - Edition 1.0 / 04/2011

Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>

EUROCONTROL - Mode S Transponder in an Airport/A-SMGCS Environment - Edition 1.1 / 05/2005

Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>

Finalisation criteria :

1 - Vehicle drivers have been trained and authorized.

AOP04.1-USE01	Update aircrew training manual to include procedures for use of correct Mode-S transponder setting for enabling cooperative A-SMGCS detection on the movement area	From:	By:
		01/01/2004	31/12/2010

Action by :

Airspace Users

Description & purpose :

Perform the training of aircrew in the use of aircraft equipment and procedures in accordance with A-SMGCS Level 1.

Derogations :

None

Supporting material(s) :

EUROCONTROL - Mode S Transponder in an Airport/A-SMGCS Environment - Edition 1.1 / 05/2005

Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>

Finalisation criteria :

1 - Procedures for use of correct Mode-S transponder setting for enabling co-operative A-SMGCS detection on the movement area have been incorporated in the pilot ab-initio and recurrent training programmes

AOP04.1-INT01	Coordinate amendments to the related ICAO documentation to include A-SMGCS Level 1 procedures	From:	By:
		01/11/2004	31/12/2011

Action by :

EUROCONTROL Agency

Description & purpose :

Obtain the incorporation of A-SMGCS Level 1 related procedures (including phraseology) into ICAO documentation.

Derogations :

None

Supporting material(s) :

EUROCONTROL - Advanced Surface Movement, Guidance and Control Systems (A-SMGCS) Implementation Manual - Edition 1.0 / 04/2011

Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>

Finalisation criteria :

1 - Proposed A-SMGCS Level 1 procedures have been adopted by ICAO and published in ICAO documents (i.e. Doc. 4444, and/or Doc. 7030).

PCP		Active					APT	
AOP04.2		Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level 2						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 2 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates.

Implement A-SMGCS Level 2 which consists of an airport surface surveillance system (i.e. A-SMGCS Level 1) complemented by the A-SMGCS function to detect potential conflicts on runways and intrusions into restricted areas and provide the controllers with appropriate alerts.

Since the ESSIP Plan ed. 2015 this objective also covers the implementation of a digital system, such as Electronic Flights Strips (EFS), allowing the air traffic controller to input all clearances given to aircraft or vehicles into the ATC system.

The implementation of A-SMGCS Level 1 is a pre-requisite for the implementation of A-SMGCS Level 2.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

See list in ESSIP Plan - Part I Section 4

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2007

Applicability Area

Full operational capability

31/12/2017

Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -								
Enablers -	CTE-S02b	CTE-S03b	CTE-S04b						

OI step -	[AO-0102]-Automated Alerting of Controller in Case of Runway Incursion or Intrusion into Restricted Areas								
Enablers -	ADSB-0003	ADSB-0102a	ADSB-0106	AERODRO ME-ATC-03	ASMGCS-0101	ASMGCS-0102	ASMGCS-0103	ASMGCS-0104	
	ASMGCS-0113	ASMGCS-0114	ASMGCS-0115	A/C-48	A/C-48a AOP09	ER APP ATC 164	PRO-139	PRO-201b	

OI step -	[AO-0201]-Enhanced Ground Controller Situational Awareness in all Weather Conditions								
Enablers -	AERODRO ME-ATC-04 AOP04.1	AERODRO ME-ATC-28 AOP04.1	AERODRO ME-ATC-36 AOP04.1, AOP12	ER APP ATC 164	PRO-201a				

Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan
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Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)
Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
AOP04.2-REG01	Approve A-SMGCS Level 2 implementations for operation	DELETED	
AOP04.2-ASP01	Install required A-SMGCS control function equipment	01/01/2007	31/12/2017

AOP04.2		Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level 2	
AOP04.2-ASP02	Train aerodrome control staff in the use of A-SMGCS Level 2 in the provision of an aerodrome control service	01/01/2007	31/12/2017
AOP04.2-ASP03	Implement approved A-SMGCS Level 2 operational procedures at airports equipped with A-SMGCS Level 2	01/01/2007	31/12/2017
AOP04.2-APO01	Install required A-SMGCS control function equipment	01/01/2007	31/12/2017
AOP04.2-INT01	Coordinate amendments to the related ICAO documentation to include A-SMGCS Level 2 procedures	01/11/2004	31/12/2017
AOP04.2-AGY01	Production of agreed & validated guidance material for the implementation of A-SMGCS Level 2	FINALISED	
AOP04.2-AGY02	Develop agreed ATC procedures for A-SMGCS Level 2, through established EUROCONTROL Agency processes and mechanisms for proposal to ICAO	FINALISED	
AOP04.2-AGY03	Develop and incorporate A-SMGCS Level 2 training requirements into the common core training syllabus	FINALISED	
AOP04.2-AGY04	Develop and propose amendments to ICAO documentation, using established processes	FINALISED	

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	The systematic presentation of potentially hazardous conflicts or infringements of runway and restricted areas will help ensure the safety of aerodrome operations.
Capacity :	Ability to maintain traffic throughput during periods when aerodrome traffic cannot be observed visually by aerodrome controllers, through the use of A-SMGCS Level 2 safety net combined with improved surveillance information of A-SMGCS Level 1 and appropriate procedures.
Cost effectiveness :	More efficient control of aerodrome surface traffic, leading to a reduction in delay and fuel burn. Reduction of incidents & accidents on manoeuvring area.
Environment :	N/A
Security :	N/A

Detailed SLoA descriptions

AOP04.2-ASP01	Install required A-SMGCS control function equipment	From:	By:
		01/01/2007	31/12/2017

Action by : **ANS Providers**

Description & purpose : Install A-SMGCS control function systems in order to enable the detection of conflicts & intrusions in accordance with A-SMGCS Level 2 requirements (in co-operation with Airport Operators, as appropriate). Such equipment should be provided in addition to the equipment requirements for A-SMGCS Level 1.

Derogations : None

AOP04.2	Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level 2
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<u>Supporting material(s)</u> :	<p>ETSI - EN 303 213-2 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 2: Level 2 including external interfaces; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.2.1 / 04/2012 Url : http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp</p> <p>ETSI - EN 303 213-3 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 3: Deployed cooperative sensor including its interfaces; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010 Url : http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp</p> <p>ETSI - EN 303 213-4-1 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 4: Deployed non-cooperative sensor including its interfaces; Sub-part 1: Generic requirements for non-cooperative sensor; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010 Url : http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp</p> <p>ETSI - EN 303 213-4-2 - Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 4: Deployed non-cooperative sensor including its interfaces; Sub-part 2: Specific requirements for a deployed Surface Movement Radar sensor; Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010 Url : http://webapp.etsi.org/workprogram/Report_WorkItem.asp?WKI_ID=37166</p> <p>ICAO - Doc 9830 - Advanced Surface Movement Guidance and Control Systems (A-SMGCS) Manual - Edition 1 / 12/2004 Url : http://www.icao.int/publications/Pages/catalogue.aspx</p> <p>EUROCONTROL - Advanced Surface Movement, Guidance and Control Systems (A-SMGCS) Implementation Manual - Edition 1.0 / 04/2011 Url : https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs</p> <p>EUROCONTROL - Functional Requirements for A-SMGCS Implementation Level 2 - Edition 2.1 / 06/2010 Url : https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs</p> <p>EUROCAE - ED-87B - Minimum Aviation System Performance Specification for Advanced Surface Movement Guidance and Control Systems (A-SMGCS) – Levels 1 & 2- Including Amendment N°1 - January 2009 08/2008 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>EUROCAE - ED-117 - Minimum Operational Performance Specification for Mode S Multilateration Systems for Use in Advanced Surface Movement Guidance and Control Systems (A-SMGCS) 11/2003 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>EUROCAE - ED-116 - Minimum Operational Performance Specification for Surface Movement Radar Sensor Systems for Use in A-SMGCS 01/2004 Url : http://boutique.eurocae.net/catalog/index.php</p> <p><u>ATM Master Plan relationship</u> :</p> <p>[AERODROME-ATC-03]-Surface movement control workstation equipped with tools for runway incursion detection and alerting</p> <p>[CTE-S02b]-Surface Movement Radar</p> <p>[CTE-S03b]-ADS-B station for RAD and APT surveillance (ED-102A)</p> <p>[CTE-S04b]-Airport Multilateration (MLAT)</p> <p><u>Finalisation criteria</u> :</p>
	1 - Equipment that meets agreed performance requirements and specifications of A-SMGCS Level 2 has been installed.

AOP04.2-ASP02	Train aerodrome control staff in the use of A-SMGCS Level 2 in the provision of an aerodrome control service	From:	By:
		01/01/2007	31/12/2017

<u>Action by</u> :	ANS Providers
<u>Description & purpose</u> :	Train aerodrome controllers in the use of A-SMGCS Level 2 systems and procedures (including phraseology) in accordance with agreed training requirements.
<u>Derogations</u> :	None
<u>Supporting material(s)</u> :	<p>EUROCONTROL - ATCO Rating Training - Training Plans: Aerodrome Training - Annex B: Detailed Training Plans - Edition 1.0 / 03/2004 Url : https://trainingzone.eurocontrol.int</p> <p>EUROCONTROL - Advanced Surface Movement, Guidance and Control Systems (A-SMGCS) Implementation Manual - Edition 1.0 / 04/2011 Url : https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs</p> <p>EUROCONTROL - Guidance on Training Requirements for Operational Users of A-SMGCS Levels 1 & 2 - Edition 1.1 / 11/2006 Url : https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs</p>
<u>Finalisation criteria</u> :	1 - Controllers training in accordance with agreed training requirements and programme has been completed.

AOP04.2	Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level 2
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AOP04.2-ASP03	Implement approved A-SMGCS Level 2 operational procedures at airports equipped with A-SMGCS Level 2	From:	By:
		01/01/2007	31/12/2017

Action by : **ANS Providers**

Description & purpose : Apply agreed and validated A-SMGCS Level 2 procedures as an integral part of the aerodrome control service.

Derogations : None

Supporting material(s) : EUROCONTROL - Advanced Surface Movement, Guidance and Control Systems (A-SMGCS) Implementation Manual - Edition 1.0 / 04/2011
 Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>
 EUROCONTROL - Mode S Transponder in an Airport/A-SMGCS Environment - Edition 1.1 / 05/2005
 Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>
 EUROCONTROL - Operational concept and requirements for A-SMGCS implementation level 2 - 2.1 / 06/2010
 Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>
ATM Master Plan relationship : [\[PRO-139\]-ATC Procedures \(Airport\) for standardised response to runway incursion alerts](#)
[\[PRO-201a\]-Procedures linked to Improvement of Surveillance on the Manoeuvring Area on and around the Runway](#)
Finalisation criteria : 1 - Local procedures have been developed, implemented, approved/certified and are being used by controllers at airports equipped with A-SMGCS Level 2.

AOP04.2-APO01	Install required A-SMGCS control function equipment	From:	By:
		01/01/2007	31/12/2017

Action by : **Airport Operators**

Description & purpose : Install A-SMGCS control function systems in order to enable the detection of conflicts & intrusions in accordance with A-SMGCS Level 2 requirements (in co-operation with ANSPs, as appropriate). Such equipment should be provided in addition to the equipment requirements for A-SMGCS Level 1.

Derogations : None

AOP04.2	Implement Advanced Surface Movement Guidance and Control System (A-SMGCS) Level 2
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Supporting material(s) : ETSI - EN 303 213-2 - Advanced Surface Movement Guidance and Control System (A-SMGCS);
Part 2: Level 2 including external interfaces;
Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.2.1 / 04/2012
Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>

ETSI - EN 303 213-3 - Advanced Surface Movement Guidance and Control System (A-SMGCS);
Part 3: Deployed cooperative sensor including its interfaces;
Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010
Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>

ETSI - EN 303 213-4-1 - Advanced Surface Movement Guidance and Control System (A-SMGCS);
Part 4: Deployed non-cooperative sensor including its interfaces;
Sub-part 1: Generic requirements for non-cooperative sensor;
Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010
Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>

ETSI - EN 303 213-4-2 - Advanced Surface Movement Guidance and Control System (A-SMGCS);
Part 4: Deployed non-cooperative sensor including its interfaces;
Sub-part 2: Specific requirements for a deployed Surface Movement Radar sensor;
Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010/C 330/02 / 10/2010
Url : http://webapp.etsi.org/workprogram/Report_WorkItem.asp?WKI_ID=37166

ICAO - Doc 9830 - Advanced Surface Movement Guidance and Control Systems (A-SMGCS) Manual - Edition 1 / 12/2004
Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

EUROCONTROL - Advanced Surface Movement, Guidance and Control Systems (A-SMGCS) Implementation Manual - Edition 1.0 / 04/2011
Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>

EUROCONTROL - Functional Requirements for A-SMGCS Implementation Level 2 - Edition 2.1 / 06/2010
Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>

EUROCAE - ED-87B - Minimum Aviation System Performance Specification for Advanced Surface Movement Guidance and Control Systems (A-SMGCS) – Levels 1 & 2- Including Amendment N°1 - January 2009 08/2008
Url : <http://boutique.eurocae.net/catalog/index.php>

EUROCAE - ED-117 - Minimum Operational Performance Specification for Mode S Multilateration Systems for Use in Advanced Surface Movement Guidance and Control Systems (A-SMGCS) 11/2003
Url : <http://boutique.eurocae.net/catalog/index.php>

EUROCAE - ED-116 - Minimum Operational Performance Specification for Surface Movement Radar Sensor Systems for Use in A-SMGCS 01/2004
Url : <http://boutique.eurocae.net/catalog/index.php>

ATM Master Plan relationship : [\[CTE-S04b\]-Airport Multilateration \(MLAT\)](#)

Finalisation criteria : 1 - Equipment that meets agreed performance requirements and specifications of A-SMGCS Level 2 has been installed.

AOP04.2-INT01	Coordinate amendments to the related ICAO documentation to include A-SMGCS Level 2 procedures	From:	By:
		01/11/2004	31/12/2017

Action by : **EUROCONTROL Agency**

Description & purpose : The incorporation of A-SMGCS Level 2 procedures (including phraseology) into ICAO documentation.

Derogations : None

ATM Master Plan relationship : [\[CTE-S04b\]-Airport Multilateration \(MLAT\)](#)

Finalisation criteria : 1 - Proposed procedures have been adopted by ICAO and published in ICAO documents (i.e. Doc. 4444, and/or Doc. 7030).

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PCP		Active					APT	
AOP05		Implement Airport Collaborative Decision Making (CDM)						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 2 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates.

Implement Airport CDM (A-CDM) to enhance the operational efficiency of airports and improve their integration into the Air Traffic Management Network (ATMN) while maintaining or improving the safety levels. These objectives are achievable by increasing the information sharing between the local ANSP, airport operator, aircraft operators, ground handlers, the NM and other airport service providers; and improving the cooperation between these partners to enhance the predictability of events and optimise the utilisation of resources.

The Airport CDM concept is built on the following elements:

- The foundations for Airport CDM are Information Sharing and the Milestone Approach. They consist in collaborative information sharing and monitoring of the progress of a flight from the initial planning to the take off. Those two elements allow the airport partners to achieve a common situational awareness and predict the forthcoming events for each flight.

- Variable Taxi Time Calculation, Collaborative Pre-Departure Sequencing and CDM in Adverse Conditions allow the airport partners to further improve the local management of airport operations, whatever the situation at the airport.

- Once A-CDM has been implemented locally, the link with the ATMN can be strengthened through the exchange of flight update messages between the CDM airport and the NM. This last building block of the A-CDM concept facilitates the flow and capacity management, helps reduce uncertainty and increases efficiency at the network level.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Applicability Area(s) & Timescale(s)

Applicability Area

See list in ESSIP Plan - Part I Section 4

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2004

Applicability Area

Full operational capability

31/12/2016

Applicability Area

References

European ATM Master Plan relationship

OI step -	[AO-0501]-Improved Operations in Adverse Conditions through Airport Collaborative Decision Making							
Enablers -	PRO-204a	PRO-204b	PRO-204c	PRO-204d				
OI step -	[AO-0601]-Improved Turn-Round Process through Collaborative Decision Making							
Enablers -	AIRPORT-3 1	CDM-01	PRO-213a	PRO-213b				
OI step -	[AO-0602]-Collaborative Pre-departure Sequencing							
Enablers -	CDM-01	PRO-214a	PRO-214b					
OI step -	[AO-0603]-Improved De-icing Operation through Collaborative Decision Making							
Enablers -	AIRPORT-3 1	CDM-01	PRO-073	PRO-075 ENV02				
Legend:	WXYZ-001	Covered by SLoA(s) in this objective		WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan

AOP05	Implement Airport Collaborative Decision Making (CDM)
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Applicable legislation

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
AOP05-ASP01	Define and agree performance objectives and KPIs at local level, specific to ANSP in accordance with A-CDM Manual guidelines	01/01/2004	31/01/2013
AOP05-ASP02	Define and implement local Air Navigation Service (ANS) procedures for information sharing through Letters of Agreement (LoAs) and/or Memorandum of Understanding (MoU) in accordance with A-CDM Manual guidelines	01/01/2004	31/01/2013
AOP05-ASP03	Define and implement local procedures for turnaround processes in accordance with CDM manual guidelines	01/01/2004	31/12/2016
AOP05-ASP04	Continually review and measure airport performance in accordance with Airport CDM Manual guidelines	01/01/2004	31/01/2013
AOP05-ASP05	Define and implement variable taxi-time and predeparture sequencing procedure according to airport CDM Manual guidelines	01/06/2006	31/12/2016
AOP05-ASP06	Define and implement procedures for CDM in adverse conditions, including the de-icing according to airport CDM Manual guidelines	01/01/2012	31/12/2016
AOP05-APO01	Define and agree performance objectives and KPIs at local level specific to airport operations in accordance with A-CDM Manual guidelines	01/01/2004	31/01/2013
AOP05-APO02	Define and implement local airport operations procedures for information sharing through Letters of Agreement (LoAs) and/or Memorandum of Understanding (MoU) in accordance with A-CDM Manual guidelines	01/01/2004	31/01/2013
AOP05-APO03	Define and implement local procedures for turnaround processes in accordance with CDM manual guidelines (baseline CDM)	01/01/2004	31/12/2016
AOP05-APO04	Continually review and measure airport performance in accordance with Airport CDM Manual guidelines	01/01/2004	31/01/2013
AOP05-APO05	Define and implement the exchange of messages, Flight Update Message (FUM) and Departure Planning Information (DPI) between NMOC and the airport in accordance with A-CDM Manual guidelines	01/03/2005	31/01/2014
AOP05-APO06	Define and implement procedures for CDM in adverse conditions including the de-icing according to airport CDM Manual guidelines	01/06/2006	31/12/2016
AOP05-USE01	Define and agree performance objectives and KPIs at local level, specific to aircraft operators, in accordance with A-CDM Manual guidelines	01/01/2004	31/01/2013
AOP05-USE02	Define and implement local aircraft operators procedures for information sharing through LoAs and/or MoU in accordance with A-CDM manual guidelines	01/01/2004	31/01/2013
AOP05-USE03	Define and implement local procedures for turnaround processes in accordance with A-CDM manual guidelines	01/01/2004	31/12/2016
AOP05-USE04	Continually review and measure airport performance in accordance with Airport CDM Manual guidelines	01/01/2004	31/01/2013
AOP05-USE05	Define and implement procedures for CDM in adverse conditions including the de-icing according to A-CDM Manual guidelines	01/01/2012	31/12/2016

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

<u>Safety</u> :	The more effective airside and landside operations management, improved situational awareness of all actors and resulting reduced congestion has a positive effect on safety
<u>Capacity</u> :	Enhanced airport capacity through optimal use of airside and landside facilities and services, better use of airport and ATFM slots

AOP05	Implement Airport Collaborative Decision Making (CDM)
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Cost effectiveness : Punctuality improvements for all Stakeholders will reduce operating costs.

The Airport Operations Programme Business case Assessment (Ref no: 04316-01 ed. 1.1., 02.2004, www.eurocontrol.int/airports) performed on the Airport CDM Applications Cluster provides an overall assessment of costs and benefits at the ECAC level.

Airport CDM has been assessed as low in implementation costs and high in return of benefits.

Environment : Reduced noise and emissions due to limiting engine ground running time due to better timed operations

Security : N/A

Detailed SloA descriptions

AOP05-ASP01	Define and agree performance objectives and KPIs at local level, specific to ANSP in accordance with A-CDM Manual guidelines	From:	By:
		01/01/2004	31/01/2013

Action by : ANS Providers

Description & purpose : Agree and define specific performance objectives and KPIs through a local A-CDM committee, in co-operation with other stakeholders involved.

Derogations : None

Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009

Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php

EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012

Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>

ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
- Ver. 1.1.1 - OJ 2010C168/04 / 06/2010

Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>

EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008

Url : <http://boutique.eurocae.net/catalog/index.php>

EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008

Url : <http://boutique.eurocae.net/catalog/index.php>

EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008

Url : <http://boutique.eurocae.net/catalog/index.php>

Finalisation criteria : 1 - List of performance objectives and KPIs has been agreed.

AOP05-ASP02	Define and implement local Air Navigation Service (ANS) procedures for information sharing through Letters of Agreement (LoAs) and/or Memorandum of Understanding (MoU) in accordance with A-CDM Manual guidelines	From:	By:
		01/01/2004	31/01/2013

Action by : ANS Providers

Description & purpose : Agree, define and implement local procedures for information sharing and information management systems based on A-CDM Implementation Manual, in co-operation with other stakeholders involved.

Derogations : None

Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009

Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php

EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012

Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>

ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
- Ver. 1.1.1 - OJ 2010C168/04 / 06/2010

Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>

EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008

Url : <http://boutique.eurocae.net/catalog/index.php>

EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008

Url : <http://boutique.eurocae.net/catalog/index.php>

EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008

Url : <http://boutique.eurocae.net/catalog/index.php>

ATM Master Plan relationship : [\[AIRPORT-31\]-Airport CDM \(levels 1, 2 & 3\)](#)

Finalisation criteria : 1 - Agreed LoA or MoU between the Airport CDM Partners has been signed.

AOP05	Implement Airport Collaborative Decision Making (CDM)
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AOP05-ASP03	Define and implement local procedures for turnaround processes in accordance with CDM manual guidelines	From:	By:
		01/01/2004	31/12/2016

Action by : **ANS Providers**

Description & purpose : Define and implement local procedures for turnaround processes (milestone approach) based on A-CDM Implementation Manual and through LoAs.

Derogations : None

Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
 Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
 EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
 Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
 ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>

ATM Master Plan relationship : [\[PRO-213a\]-CDM information sharing Airport Procedures for turn-around](#)

Finalisation criteria : [1 - Agreed LoA or MoU between the A-CDM Partners has been signed.](#)

AOP05-ASP04	Continually review and measure airport performance in accordance with Airport CDM Manual guidelines	From:	By:
		01/01/2004	31/01/2013

Action by : **ANS Providers**

Description & purpose : Measure performance (KPIs) according to agreed success criteria, and quantify the benefits at local airport after implementation and through a local A-CDM committee.

Derogations : None

Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
 Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
 EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
 Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
 ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>

Finalisation criteria : [1 - Results/benefits at airport have been published.](#)

AOP05-ASP05	Define and implement variable taxi-time and predeparture sequencing procedure according to airport CDM Manual guidelines	From:	By:
		01/06/2006	31/12/2016

Action by : **ANS Providers**

Description & purpose : Agree, define and implement local procedures for pre-departure sequencing taking into account preferences based on A-CDM Implementation Manual, in co-operation with other stakeholders involved .

Derogations : None

AOP05	Implement Airport Collaborative Decision Making (CDM)
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Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
 Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
 EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
 Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
 ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
ATM Master Plan relationship : [\[PRO-214a\]-Airport CDM Procedures for pre-departure sequencing](#)
Finalisation criteria : 1 - Procedure has been published in the AIP.

AOP05-ASP06	Define and implement procedures for CDM in adverse conditions, including the de-icing according to airport CDM Manual guidelines	From:	By:
		01/01/2012	31/12/2016

Action by : **ANS Providers**
Description & purpose : Agree, define and implement local CDM procedures to manage adverse conditions based on A-CDM Implementation Manual, in co-operation with other stakeholders involved.
Derogations : None
Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
 Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
 EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
 Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
 ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
ATM Master Plan relationship : [\[PRO-073\]-Airport Procedures to maximise throughput of de-icing stands](#)
[\[PRO-204b\]-Collaborative Procedures \(ATC\) for improving Airport Operations in Adverse Conditions](#)
Finalisation criteria : 1 - LoA or MoU between the Airport CDM Partners has been agreed.
 2 - CDM procedures for the management of adverse conditions, including de-icing, have been established.

AOP05-APO01	Define and agree performance objectives and KPIs at local level specific to airport operations in accordance with A-CDM Manual guidelines	From:	By:
		01/01/2004	31/01/2013

Action by : **Airport Operators**
Description & purpose : Agree and define specific performance objectives and KPIs through a local A-CDM committee, in co-operation with other stakeholders involved.
Derogations : None

AOP05	Implement Airport Collaborative Decision Making (CDM)
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Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
 Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
 EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
 Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
 ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
Finalisation criteria : 1 - List of performance objectives and KPIs has been agreed.

AOP05-APO02	Define and implement local airport operations procedures for information sharing through Letters of Agreement (LoAs) and/or Memorandum of Understanding (MoU) in accordance with A-CDM Manual guidelines	From:	By:
		01/01/2004	31/01/2013

Action by : **Airport Operators**
Description & purpose : Agree, define and implement local procedures for information sharing and information management systems based on A-CDM Implementation Manual, in co-operation with other stakeholders involved.
Derogations : None
Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
 Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
 EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
 Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
 ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
ATM Master Plan relationship : [\[AIRPORT-31\]-Airport CDM \(levels 1, 2 & 3\)](#)
Finalisation criteria : 1 - LoA or MoU between the A-CDM Partners has been agreed.
 2 - Information sharing has been implemented.

AOP05-APO03	Define and implement local procedures for turnaround processes in accordance with CDM manual guidelines (baseline CDM)	From:	By:
		01/01/2004	31/12/2016

Action by : **Airport Operators**
Description & purpose : Define and implement local procedures for turnaround processes (milestone approach) based on A-CDM Implementation Manual and through LoAs.
Derogations : None

AOP05	Implement Airport Collaborative Decision Making (CDM)
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Supporting material(s) : ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
- Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
Url : <http://boutique.eurocae.net/catalog/index.php>
EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
Url : <http://boutique.eurocae.net/catalog/index.php>
EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
Url : <http://boutique.eurocae.net/catalog/index.php>
EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
ATM Master Plan relationship : [\[PRO-213a\]-CDM information sharing Airport Procedures for turn-around](#)
Finalisation criteria : 1 - LoA or MoU between the A-CDM Partners has been agreed.

AOP05-APO04	Continually review and measure airport performance in accordance with Airport CDM Manual guidelines	From:	By:
		01/01/2004	31/01/2013

Action by : **Airport Operators**
Description & purpose : Measure performance (KPIs) according to agreed success criteria, and quantify the benefits at local airport after implementation and through a local A-CDM committee.
Derogations : None
Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
- Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
Url : <http://boutique.eurocae.net/catalog/index.php>
EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
Url : <http://boutique.eurocae.net/catalog/index.php>
EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
Url : <http://boutique.eurocae.net/catalog/index.php>
Finalisation criteria : 1 - Results/benefits at airport have been published.

AOP05-APO05	Define and implement the exchange of messages, Flight Update Message (FUM) and Departure Planning Information (DPI) between NMOC and the airport in accordance with A-CDM Manual guidelines	From:	By:
		01/03/2005	31/01/2014

Action by : **Airport Operators**
Description & purpose : Agree, define and implement local procedures for exchange of messages (FUMs and DPIs) between NM and the airport based on A-CDM Implementation Manual, in co-operation with other stakeholders involved.
Derogations : None

AOP05	Implement Airport Collaborative Decision Making (CDM)
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Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
 Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
 EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
 Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
 ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
ATM Master Plan relationship : [\[PRO-214a\]-Airport CDM Procedures for pre-departure sequencing](#)
Finalisation criteria :
 1 - LoA or MoU between the A-CDM Partners and the NM has been agreed.
 2 - Exchange of messages has been implemented.

AOP05-APO06	Define and implement procedures for CDM in adverse conditions including the de-icing according to airport CDM Manual guidelines	From:	By:
		01/06/2006	31/12/2016

Action by : **Airport Operators**
Description & purpose : Agree, define and implement local CDM procedures to manage adverse conditions based on A-CDM Implementation Manual, in co-operation with other stakeholders involved.
Derogations : None
Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
 Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
 EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
 Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
 ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
ATM Master Plan relationship : [\[PRO-073\]-Airport Procedures to maximise throughput of de-icing stands](#)
[\[PRO-204a\]-Collaborative Procedures \(Airport\) for improving Airport Operations in Adverse Conditions](#)
Finalisation criteria :
 1 - LoA or MoU between the A-CDM partners has been agreed.
 2 - CDM procedures for the management of adverse conditions, including de-icing, have been established.

AOP05-USE01	Define and agree performance objectives and KPIs at local level, specific to aircraft operators, in accordance with A-CDM Manual guidelines	From:	By:
		01/01/2004	31/01/2013

Action by : **Airspace Users**
Description & purpose : Agree and define specific performance objectives and KPIs at local level, in co-operation with airport and ANSP.
Derogations : None

AOP05	Implement Airport Collaborative Decision Making (CDM)
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Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
 Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
 EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
 Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
 ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
Finalisation criteria : 1 - List of performance objectives and KPIs have been agreed with ANSP and AO.

AOP05-USE02	Define and implement local aircraft operators procedures for information sharing through LoAs and/or MoU in accordance with A-CDM manual guidelines	From:	By:
		01/01/2004	31/01/2013

Action by : **Airspace Users**
Description & purpose : Agree, define and implement local procedures for information sharing and information management systems based on A-CDM Implementation Manual, in co-operation with other stakeholders involved.
Derogations : None
Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
 Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
 EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
 Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
 ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
ATM Master Plan relationship : [\[AIRPORT-31\]-Airport CDM \(levels 1, 2 & 3\)](#)
Finalisation criteria : 1 - LoA or MoU between the A-CDM partners has been agreed.

AOP05-USE03	Define and implement local procedures for turnaround processes in accordance with A-CDM manual guidelines	From:	By:
		01/01/2004	31/12/2016

Action by : **Airspace Users**
Description & purpose : Define and implement local procedures for turnaround processes (milestone approach) based on A-CDM Implementation Manual and through LoAs.
Derogations : None

AOP05	Implement Airport Collaborative Decision Making (CDM)
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Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
 Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
 EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
 Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
 ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
ATM Master Plan relationship : [\[PRO-213b\]-CDM information sharing Airline Procedures for turn-around](#)
Finalisation criteria : 1 - LoA or MoU between the A-CDM partners has been agreed.

AOP05-USE04	Continually review and measure airport performance in accordance with Airport CDM Manual guidelines	From:	By:
		01/01/2004	31/01/2013

Action by : **Airspace Users**
Description & purpose : Measure performance (KPIs) according to agreed success criteria and quantify the benefits at local airport after implementation and through a local A-CDM committee.
Derogations : None
Supporting material(s) : EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009
 Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php
 EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012
 Url : <http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4>
 ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004
 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010
 Url : <http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp>
 EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
Finalisation criteria : 1 - Results/benefits at airport have been published.

AOP05-USE05	Define and implement procedures for CDM in adverse conditions including the de-icing according to A-CDM Manual guidelines	From:	By:
		01/01/2012	31/12/2016

Action by : **Airspace Users**
Description & purpose : Agree, define and implement local CDM procedures to manage adverse conditions based on A-CDM Implementation Manual, in co-operation with other stakeholders involved.
Derogations : None

AOP05	Implement Airport Collaborative Decision Making (CDM)
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<u>Supporting material(s)</u> :	<p>EUROCONTROL - Airport CDM Functional Requirements Document - 4.0 / 05/2009 Url : http://www.euro-cdm.org/library_eurocontrol_implementation.php</p> <p>EUROCONTROL - Airport CDM Implementation Manual - Edition 4.0 / 04/2012 Url : http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4</p> <p>ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010 Url : http://webapp.etsi.org/workprogram/SimpleSearch/QueryForm.asp</p> <p>EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>[PRO-204c]-Collaborative Procedures (Airlines) for improving Airport Operations in Adverse Conditions</p>
<u>ATM Master Plan relationship</u> :	
<u>Finalisation criteria</u> :	<p>1 - LoA or MoU between the A-CDM partners has been agreed.</p> <p>2 - CDM procedures for the management of adverse conditions, including de-icing, have been established.</p>

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PCP	Active					APT	
AOP10	Time Based Separation						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

This objective is functionally related to ATM Functionality 2 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, and is bound to its deployment target dates.

Time-Based Separation (TBS) consists in the separation of aircraft in sequence on the approach to a runway using time intervals instead of distances. It may be applied during final approach by allowing equivalent distance information to be displayed to the controller taking account of prevailing wind conditions. Radar separation minima and Wake Turbulence Separation parameters shall be integrated to provide guidance to the air traffic controller to enable time-based spacing of aircraft during final approach that considers the effect of headwind.

A TBS system that provides in real-time the separation to apply between two aircraft needs to be fed by:

- the aircraft sequence to anticipate aircraft specific speed management and to define the time separation required for a given wake category pair, and;
- the wind profile, approximately 10 minutes before landing, to define the separation on final approach.

These require respectively the development of an easily usable sequencing tool and a now casting technology based upon merging wind profile measurement and heuristic techniques.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

See list in ESSIP Plan - Part I Section 4

Timescales:

Initial operational capability
Full operational capability

From:

01/01/2015

By:

31/12/2023

Applicable to:

Applicability Area
Applicability Area

References

European ATM Master Plan relationship

OI step -	[AO-0303]-Time Based Separation for Final Approach - full concept								
Enablers -	AERODRO ME-ATC-17	APP ATC 156							
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler			WXYZ-003	Not covered in the ESSIP Plan	

Applicable legislation

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
AOP10-REG01	Publish TBS operations procedures in national aeronautical information publications	01/01/2015	31/12/2023
AOP10-ASP01	Ensure AMAN system is compatible with TBS support tool	01/01/2015	31/12/2023
AOP10-ASP02	Modify CWP to integrate TBS Support tool with safety nets	01/01/2015	31/12/2023
AOP10-ASP03	Local MET info with actual glide-slope wind conditions to be provided into TBS Support tool	01/01/2015	31/12/2023
AOP10-ASP04	TBS Support tool to provide automatic monitoring and alerting of non-conformant behaviours, infringements, wrong aircraft	01/01/2015	31/12/2023
AOP10-ASP05	Implement procedures for TBS operations	01/01/2015	31/12/2023

AOP10	Time Based Separation
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AOP10-ASP06	Train controllers (Tower and Approach) on TBS operations	01/01/2015	31/12/2023
AOP10-USE01	Train flight crews on TBS operations	01/01/2015	31/12/2023

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	N/A
Capacity :	Improved aircraft landing rates
Cost effectiveness :	N/A
Environment :	Reduced emissions due to reduced holding times and stack entry to touchdown times
Security :	N/A

Detailed SloA descriptions

AOP10-REG01	Publish TBS operations procedures in national aeronautical information publications	From:	By:
		01/01/2015	31/12/2023

Action by : **National Supervisory Authorities (NSAs)**

Description & purpose : Publish TBS operations procedures in national aeronautical information publications

Derogations : None

Supporting material(s) : SJU - SESAR Joint Undertaking ID D05 OCD and OSED - S1 (TBS) - Ed. 00.00.06

Finalisation criteria : 1 - TBS operations procedures are published in national aeronautical information publications.

AOP10-ASP01	Ensure AMAN system is compatible with TBS support tool	From:	By:
		01/01/2015	31/12/2023

Action by : **ANS Providers**

Description & purpose : Ensure that the flight data processing and AMAN systems are compatible with the TBS support tool for the visualisation of the final approach separation or spacing, and are able to switch between time and distance based wake turbulence radar separation rules. Switching from TBS to Distance Based Separation (DBS) is necessary to cover contingency and other locally-driven requirements.
The TBS support tool and associated CWP shall also calculate headwind independent time based separation to be used by the Arrival manager between arriving aircraft and display it on controller displays to support reduced, time-based separation for aircraft on final approach.

Derogations : None

Supporting material(s) : SJU - SESAR Joint Undertaking ID D05 OCD and OSED - S1 (TBS) - Ed. 00.00.06
[\[AERODROME-ATC-17\]-Airport ATC tool to Support Time-Based Separation in Final Approach](#)
[\[APP ATC 156\]-ATC System to Support Time-Based Separation in Final Approach](#)

Finalisation criteria : 1 - FDPS and AMAN system are compatible with the TBS support tool
2 - CWP is modified to display headwind independent time based separation
3 - TBS support tool is able to calculate headwind independent time based separation

AOP10-ASP02	Modify CWP to integrate TBS Support tool with safety nets	From:	By:
		01/01/2015	31/12/2023

Action by : **ANS Providers**

Description & purpose : Modify the controller working position (CWP) to integrate the new TBS support tool with safety nets to support the air traffic controller, in order to calculate TBS distance respecting minimum radar separation using actual glide-slope wind conditions.

Derogations : None

Supporting material(s) : SJU - SESAR Joint Undertaking ID D05 OCD and OSED - S1 (TBS) - Ed. 00.00.06

Finalisation criteria : 1 - CWP is modified to integrate the new TBS support tool with safety nets.

AOP10-ASP03	Local MET info with actual glide-slope wind conditions to be provided into TBS Support tool	From:	By:
		01/01/2015	31/12/2023

Action by : **ANS Providers**

Description & purpose : To feed local meteorological (MET) information providing actual glide slope wind conditions to the TBS support tool.

Derogations : None

Supporting material(s) : SJU - SESAR Joint Undertaking ID D05 OCD and OSED - S1 (TBS) - Ed. 00.00.06

AOP10	Time Based Separation
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Finalisation criteria : [1 - Local meteorological information providing actual glide slope wind conditions is fed into the TBS support tool](#)

AOP10-ASP04	TBS Support tool to provide automatic monitoring and alerting of non-conformant behaviours, infringements, wrong aircraft	From:	By:
		01/01/2015	31/12/2023

Action by : **ANS Providers**

Description & purpose : To ensure that the TBS support tool provides automatic monitoring and alerting on non-conformant final approach airspeed behaviour, automatic monitoring and alerting of separation infringement, automatic monitoring and alerting for the wrong aircraft being turned on to a separation indicator.

Derogations : None

Supporting material(s) : SJU - SESAR Joint Undertaking ID D05 OCD and OSED - S1 (TBS) - Ed. 00.00.06

Finalisation criteria : [1 - TBS support tool provides automatic monitoring and alerting](#)

AOP10-ASP05	Implement procedures for TBS operations	From:	By:
		01/01/2015	31/12/2023

Action by : **ANS Providers**

Description & purpose : Implement procedures and practices to be used by the final approach controller for TBS operations.

Derogations : None

Supporting material(s) : SJU - SESAR Joint Undertaking ID D05 OCD and OSED - S1 (TBS) - Ed. 00.00.06

Finalisation criteria : [1 - Procedures for TBS operations are implemented operationally](#)

AOP10-ASP06	Train controllers (Tower and Approach) on TBS operations	From:	By:
		01/01/2015	31/12/2023

Action by : **ANS Providers**

Description & purpose : Train Tower and Approach controllers on TBS operations.
The final approach controller will be required to adopt procedures and practices to ensure that the variations in the distance spacing changes and time spacing changes on final approach are consistently managed.

Derogations : None

Supporting material(s) : SJU - SESAR Joint Undertaking ID D05 OCD and OSED - S1 (TBS) - Ed. 00.00.06

Finalisation criteria : [1 - Final approach controllers are trained for TBS procedures and practices.](#)

AOP10-USE01	Train flight crews on TBS operations	From:	By:
		01/01/2015	31/12/2023

Action by : **ANS Providers**

Description & purpose : Train flight crews on TBS operations
The flight deck will be required to adopt procedures and practices to ensure that the variations in the distance spacing changes and time spacing changes on final approach are consistently managed.

Derogations : None

Supporting material(s) : SJU - SESAR Joint Undertaking ID D05 OCD and OSED - S1 (TBS) - Ed. 00.00.06

Finalisation criteria : [1 - Flight crews are trained to TBS operations](#)

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PCP		Active					APT	
AOP11		Initial Airport Operations Plan						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 2 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, and is bound to its deployment target dates.

The Airport element that reflects the operational status of the Airport and therefore facilitates Demand and Capacity Balancing is the Airport Operations Plan (AOP). The Airport Operations Plan connects the relevant stakeholders, notably the Airspace Users, Flight Operations Centre (FOC). It contains data and information relating to the different status of planning phases and is in the format of a rolling plan, which naturally evolves over time.

The Airport Operations Plan is a single, common and collaboratively agreed rolling plan available to all airport stakeholders whose purpose is to provide common situational awareness and to form the basis upon which stakeholder decisions relating to process optimization can be made.

Roles and responsibilities are extensively detailed in Deliverable D07 - OFA 05.01.01 Operational Service and Environment Definition - Edition: 00.03.00.

Note: The data sharing between the Airport Operations Plan and the Network Operations Plan is addressed by objective FCM05.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

See list in ESSIP Plan - Part I Section 4

Timescales:

From:

By:

Applicable to:

Initial Operational Capability

01/01/2015

Applicability Area

Full Operational Capability

31/12/2021

Applicability Area

References

European ATM Master Plan relationship

OI step -	[AO-0801-A]-Collaborative Airport Planning Interface								
Enablers -	AIRPORT-0 3	AIRPORT-3 1 AOP05	AIRPORT-3 8 FCM05	AIRPORT-4 1	AOC-ATM-1 3	HUM-007	HUM-008	HUM-009	
	HUM-010	HUM-011	HUM-012	HUM-013	NIMS-14b FCM05	PRO-028 FCM05	SWIM-APS- 03a FCM05	SWIM-APS- 04a	
	SWIM-INFR- 05a	SWIM-NET- 01a	SWIM-SUPT- -01a	SWIM-SUPT- -03a	SWIM-SUPT- -05a				

Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan
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Applicable legislation

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
AOP11-ASP01	Provide the required information to the AOP	01/01/2015	31/12/2021
AOP11-APO01	Set up the and manage Airport Operational Plan	01/01/2015	31/12/2021
AOP11-APO02	Provide the required information to the AOP	01/01/2015	31/12/2021
AOP11-APO03	Train all relevant personnel	01/01/2015	31/12/2021

AOP11	Initial Airport Operations Plan
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AOP11-USE01	Provide the required information to the AOP	01/01/2015	31/12/2021
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Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	The more effective airside and landside operations management, improved situational awareness of all actors and resulting reduced congestion has a positive effect on safety
Capacity :	Enhanced airport capacity through optimal use of airside and landside facilities and services, better use of airport and ATFM slots
Cost effectiveness :	Punctuality improvements for all Stakeholders will reduce operating costs
Environment :	Reduced noise and emissions due to limiting engine ground running time due to better timed operations
Security :	TBD

Detailed SloA descriptions

AOP11-ASP01	Provide the required information to the AOP	From:	By:
		01/01/2015	31/12/2021

Action by :	ANS Providers
Description & purpose :	Provide and maintain AOP elements (core and supporting) which are under the responsibility of the ANSP, based on the local agreements. This information may include available Airspace Capacity, other Constraining factors (e.g. adjacent airports, military training areas, etc.)
Derogations :	None
Finalisation criteria :	1 - The AOP information under its responsibility is provided and maintained, ensuring the appropriate quality

AOP11-APO01	Set up the and manage Airport Operational Plan	From:	By:
		01/01/2015	31/12/2021

Action by :	Airport Operators
Description & purpose :	<p>Set up an AOP containing the following categories of information:</p> <ul style="list-style-type: none"> - Traffic demand - Airport capabilities - Airport operational context <p>The information available in the AOP should be separated in two AOP content blocks to distinguish between information fields to be implemented at every airport (core information) and the set of information that can be included depending on local agreements (supporting information).</p> <p>The information requested in the AOP will be provided accorded to various sources. However, at each airport it must be established through local agreement which actor is the best positioned to provide each AOP content field. Those information sources can be the different airport stakeholders.</p>
Derogations :	None
Supporting material(s) :	SJU - SESAR JU ID D07 - OFA 05.01.01 Operational Service and Environment Definition - 00.03.00
ATM Master Plan relationship :	[AIRPORT-41]-Airport Operations Centre Support Tools
Finalisation criteria :	<p>1 - Core information elements have been implemented</p> <p>2 - Local agreements have been established for the provision of AOP information</p> <p>3 - The supporting information has been agreed by the concerned stakeholders</p> <p>4 - All the stakeholders relevant to the AOP have been identified</p>

AOP11-APO02	Provide the required information to the AOP	From:	By:
		01/01/2015	31/12/2021

Action by :	Airport Operators
Description & purpose :	<p>Provide and maintain and AOP elements (core and supporting) which are under the responsibility of the Airport Operator, based on the local agreements. This information includes (but is not limited to):</p> <ul style="list-style-type: none"> - Possible airport configurations - Unforeseen / Temporary aerodrome constraints - Restrictions regarding aerodrome resources. - Information sharing between airport partners - Airport usage and any restriction rule. - Operational capacity of airport resources. - Airport resources availability and allocation plan. <p>This SLoA also covers other stakeholders active in the airport environment (e.g. Ground Handling Agents) which may feed the AOP according with the local agreements.</p>
Derogations :	None

AOP11	Initial Airport Operations Plan
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Supporting material(s) : SJU - SESAR JU ID D07 - OFA 05.01.01 Operational Service and Environment Definition - 00.03.00
ATM Master Plan relationship : [\[AIRPORT-03\]-Airports Operation Plan \(AOP\) management tool](#)

Finalisation criteria : 1 - According with the locally allocated roles and responsibilities, the AOP information under its responsibility is provided and maintained, ensuring the appropriate quality

AOP11-APO03	Train all relevant personnel	From:	By:
		01/01/2015	31/12/2021

Action by : **Airport Operators**

Description & purpose : All relevant personnel having roles and responsibilities with regard the AOP have to be trained in order to adequately fulfil their respective roles as agreed locally.

Derogations : None

Supporting material(s) : SJU - SESAR JU ID D07 - OFA 05.01.01 Operational Service and Environment Definition - 00.03.00
ATM Master Plan relationship : [\[HUM-007\]-New communication and interaction patterns between stakeholders of airport operations linked to collaborative rolling AOP/NOP management.](#)
[\[HUM-008\]-New role of APOC supervisor](#)
[\[HUM-009\]-New role of APOC representative from Airport Operator](#)
[\[HUM-010\]-New role of APOC representative from Ground Handling Agent](#)
[\[HUM-011\]-New role of APOC representative from Airspace User](#)
[\[HUM-012\]-New role of APOC representative from ANSP](#)
[\[HUM-013\]-Tasks transfer from AOP stakeholders to APAMS](#)

Finalisation criteria : 1 - The personnel has been trained

AOP11-USE01	Provide the required information to the AOP	From:	By:
		01/01/2015	31/12/2021

Action by : **Airspace Users**

Description & purpose : The airspace users shall update the AOP with information within its sphere of responsibility, notably with regard the information relating to the planning of their Business Trajectories and about the inbound and outbound flights connected by a turn-round process.

Derogations : None

Supporting material(s) : SJU - SESAR JU ID D07 - OFA 05.01.01 Operational Service and Environment Definition - 00.03.00
ATM Master Plan relationship : [\[AOC-ATM-13\]-Sharing of updated data for CDM process between the AOC/WOC ATM systems and ATM world](#)

Finalisation criteria : 1 - The AOP information under its responsibility is provided and maintained, ensuring the appropriate quality

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PCP		Active					APT	
AOP12		Improve runway and airfield safety with ATC clearances monitoring						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 2 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, and is bound to its deployment target dates.

Improve runway and airfield safety with ATC clearances monitoring (i.e.: 'Airport safety nets' in PCP terminology) consists of the detection and alerting of conflicting ATC clearances to aircraft and deviation of vehicles and aircraft from their instructions, procedures or routing which may potentially put the vehicles and aircraft at risk of a collision.

The scope of this objective includes the Runway and Airfield Surface Movement area. ATC support tools at the aerodrome shall provide the detection of Conflicting ATC Clearances as well as deviations from ATC instructions, procedures or routes and shall be performed by the ATC system based on the knowledge of data including the clearances given to aircraft and vehicles by the air traffic controller, the assigned runway and holding point. The air traffic controller shall input all clearances given to aircraft or vehicles into the ATC system using a digital system, such as the EFS. Different types of conflicting clearances shall be identified (for example Line-Up vs. Take-Off). Some may only be based on the air traffic controller input; others may in addition use other data such as A-SMGCS surveillance data. 'Airport Safety Nets' tools shall alert air traffic controllers when aircraft and vehicles deviate from ATC instructions, procedures or routes. The detection of Conflicting ATC Clearances shall aim to provide an early prediction of situations that if not corrected would end up in hazardous situations that would be detected in turn by the runway incursion monitoring system (RIMS) if in operation. A-SMGCS level 2 (covered by ESSIP Objective AOP04.2) is seen as a pre-requisite for the deployment of Airport Safety Nets.

Note: Safety nets have been defined for and through regulation/specifications for other environments and RWY environment partly. If the term 'Airport safety net' is not consistent with those definitions, it will however be used in this objective for consistency with PCP terminology. Actually, this objective is affecting the safety nets and controller support tools envelopes. A-SMGCS Level 2 is a RWY safety net and provides alerts on hazardous situations on the RWY, regardless of whether the a/c have been cleared or not by ATC, which fits perfectly on the safety nets umbrella.

Note: An action has been launched with the SJU to clarify the operational scope of the functionality as well as to improve the consistency of the terminology.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

See list in ESSIP Plan - Part I Section 4

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2015

Applicability Area

Full operational capability

31/12/2020

Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -							
Enablers -	AERODRO ME-ATC-36							
OI step -	[AO-0104-A]-Airport Safety Nets for Controllers in Step 1							
Enablers -	AERODRO ME-ATC-06	AERODRO ME-ATC-07	REG-0200	REG-0201				
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan		

Applicable legislation

AOP12	Improve runway and airfield safety with ATC clearances monitoring
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Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
AOP12-ASP01	Install required 'Airport Safety Nets'	01/01/2015	31/12/2020
AOP12-ASP02	Train aerodrome control staff on the functionality of 'Airport Safety Nets'	01/01/2015	31/12/2020
AOP12-ASP03	Implement digital systems such as Electronic Flight Strips (EFS)	01/01/2015	31/12/2020
AOP12-APO01	Train all relevant staff on the functionality of 'Airport Safety Nets'	01/01/2015	31/12/2020
AOP12-USE01	Train Pilots on the functionality of 'Airport Safety Nets'	01/01/2015	31/12/2020

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	The more effective airside and landside operations management, improved situational awareness of all actors and resulting reduced congestion has a positive effect on safety
Capacity :	Enhanced airport capacity through optimal use of airside and landside facilities and services, better use of airport and ATFM slots
Cost effectiveness :	Punctuality improvements for all Stakeholders will reduce operating costs
Environment :	Reduced noise and emissions due to limiting engine ground running time due to better timed operations
Security :	TBD

Detailed SLoA descriptions

AOP12-ASP01	Install required 'Airport Safety Nets'	From:	By:
		01/01/2015	31/12/2020

Action by :	ANS Providers
Description & purpose :	Deploy appropriate systems, constituents and associated procedures allowing the detection and alerting of conflicting ATC clearances to aircraft and deviation of vehicles and aircraft from their instructions, procedures or routing which may potentially put the vehicles and aircraft at risk of a collision. This deployment is considered as an enhancement of A-SMGCS level 2 (ESSIP Objective AOP04.2)
Derogations :	None
Supporting material(s) :	EUROCONTROL - Functional Requirements for A-SMGCS Implementation Level 2 - Edition 2.1 / 06/2010 Url : https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs
ATM Master Plan relationship :	[AERODROME-ATC-06]-Surface movement control workstation equipped with tools for conflicting ATC clearances detection and alerting for Runway operations [AERODROME-ATC-07]-Surface movement control workstation equipped with tools for detection and alerting of non-conformance to ATC instructions or procedures for surface movements, including apron and taxiways
Finalisation criteria :	1 - 'Airport Safety Nets' functionality has been deployed

AOP12-ASP02	Train aerodrome control staff on the functionality of 'Airport Safety Nets'	From:	By:
		01/01/2015	31/12/2020

Action by :	ANS Providers
Description & purpose :	Train aerodrome controllers on the 'Airport Safety Nets' systems and procedures (including phraseology) in accordance with agreed training requirements.
Derogations :	None
Supporting material(s) :	EUROCONTROL - Functional Requirements for A-SMGCS Implementation Level 2 - Edition 2.1 / 06/2010 Url : https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs
Finalisation criteria :	1 - Controllers training in accordance with agreed training requirements and programme has been completed

AOP12-ASP03	Implement digital systems such as Electronic Flight Strips (EFS)	From:	By:
		01/01/2015	31/12/2020

AOP12	Improve runway and airfield safety with ATC clearances monitoring
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Action by : **ANS Providers**

Description & purpose : Implement a digital system, such as Electronic Flights Strips (EFS), allowing the air traffic controller to input all clearances given to aircraft or vehicles into the ATC system. The digital systems, such as EFS, shall have the appropriate interfaces allowing the integration the instructions given by the air traffic controller with other data such as flight plan, surveillance, routing, published routes and procedures.

Derogations : None

Supporting material(s) : EUROCONTROL - Integrated Tower Working Position Functional Requirements - V3.0 / 03/2009
 Url : https://www.eurocontrol.int/eec/gallery/content/public/document/eec/report/2009/010_ITWP_functional_spec.pdf
[\[AERODROME-ATC-36\]-Airport surveillance data processing and distribution upgraded to store and forward flight plan data](#)

ATM Master Plan relationship :

Finalisation criteria : 1 - Digital systems such as EFS have been implemented, documented and in operational use

AOP12-APO01	Train all relevant staff on the functionality of 'Airport Safety Nets'	From:	By:
		01/01/2015	31/12/2020

Action by : **Airport Operators**

Description & purpose : Train all relevant staff (e.g. vehicle drivers) on the 'Airport Safety Nets' systems and procedures (including phraseology) in accordance with agreed training requirements.

Derogations : None

Supporting material(s) : EUROCONTROL - Functional Requirements for A-SMGCS Implementation Level 2 - Edition 2.1 / 06/2010
 Url : <https://www.eurocontrol.int/articles/advanced-surface-movement-guidance-and-control-systems-smgcs>

Finalisation criteria : 1 - Staff training in accordance with agreed training requirements and programme has been completed

AOP12-USE01	Train Pilots on the functionality of 'Airport Safety Nets'	From:	By:
		01/01/2015	31/12/2020

Action by : **Airspace Users**

Description & purpose : Train Pilots on the 'Airport Safety Nets' systems and procedures (including phraseology) in accordance with agreed training requirements

Derogations : None

Finalisation criteria : 1 - Pilots training in accordance with agreed training requirements and programme has been completed

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PCP		Active					ECAC	
ATC02.5		Implement ground based safety nets - Area Proximity Warning - level 2						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 3 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, and is bound to its deployment target dates.

Implement and make operational use of the Area Proximity Warning (APW) ground based safety tool in En-Route airspace, applicable TMA's and Military ATC units providing surveillance services.

Area Proximity Warning (APW) is a ground based safety net which uses surveillance data and flight path prediction to warn the controller when an aircraft is, or is predicted to be, flying into a volume of notified airspace, such as controlled airspace, danger areas, prohibited areas and restricted areas. APW is intended to function in the short term

Terrain and traffic characteristics can lead to a significant safety risk that can be mitigated by this tool.

An explanation of the difference between Level 1 and 2 is described below.

Before starting first operations, air traffic controllers must receive training, aimed at creating an appropriate level of trust in the concerned safety net. The time-criticality of alerts and the need for immediate attention or action must be well understood, but also the situations in which safety nets are less effective.

Safety nets performance must be monitored and regularly analysed, not only to improve the safety nets but also to identify other safety improvement opportunities. For example, "hot spots" could be identified and removed by making changes to airspace structure or procedures.

In order to avoid the "Cry Wolf" syndrome, the number of nuisance and false alerts must be reduced to a minimum. Air traffic controllers should be encouraged to report unexpected and unwanted safety nets behaviour and feedback should always be provided.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Military ATC authorities are invited to consider implementation of APW level 2 when providing ATS surveillance services to GAT.

Existing draft EUROCONTROL Specification for APW could be used as guidance material (ref. supporting material of individual SLoAs).

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2009

Full operational capability

31/12/2016

Applicability Area

Applicability Area

References

European ATM Master Plan relationship

OI step -	[CM-0801]-Ground Based Safety Nets (TMA, En Route)								
Enablers -	CTE-S01 AOP04.1	CTE-S01a AOP04.1	ER APP ATC 133	PRO-059 SAF10	PRO-219				
Legend:	WXYZ-001	Covered by SLoA(s) in this objective		WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan	

Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

ATC02.5	Implement ground based safety nets - Area Proximity Warning - level 2
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Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
ATC02.5-REG01	Approve EUROCONTROL Specification for APW	DELETED	
ATC02.5-ASP01	Implement the APW function	01/01/2009	31/12/2016
ATC02.5-ASP02	Align ATCO training with the use of APW ground-based safety tools	01/01/2009	31/12/2016
ATC02.5-INT01	Amend ICAO documentation if required	DELETED	
ATC02.5-AGY01	Produce EUROCONTROL Specification for APW and related guidance material	DELETED	

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	The systematic presentation of imminent and actual unauthorized penetrations into airspace volumes to controllers ahead of their occurrence, as provided by APW, is a major safety assurance tool.
Capacity :	N/A
Cost effectiveness :	Standardisation of APW enables cost-effective use of scarce resources and is in particular a critical success factor for smaller ASP.
Environment :	N/A
Security :	N/A

Detailed SLoA descriptions

ATC02.5-ASP01	Implement the APW function	From:	By:
		01/01/2009	31/12/2016

Action by :	ANS Providers
Description & purpose :	Put into service ground-based safety tool systems and associated procedures supporting the APW function in En-Route airspace, applicable TMAs and Military ATC units providing surveillance services.
Derogations :	None
Supporting material(s) :	EUROCONTROL - SPEC 124 - EUROCONTROL Specification for Area Proximity Warning - Edition 0.5 / 05/2009 Url : http://www.eurocontrol.int/articles/resources#field-tabs-tab-3 EUROCONTROL - Guide - Safety Nets Ensuring Effectiveness - 21 May 2011 Url : https://www.eurocontrol.int/sites/default/files/publication/files/safety-nets-guide-21-05-2011.pdf
ATM Master Plan relationship :	[ER APP ATC 133]-Upgrade Ground Safety Nets to provide Area Penetration Warning (APW), Minimum Safe Altitude Warning (MSAW) and Approach Path Monitoring to Controller Workstations.
Finalisation criteria :	1 - Ground systems have been upgraded to support the APW function. 2 - The technical file (TF) with evidences of compliance and the EC declaration of verification of systems (DoV) has been delivered to the competent National Supervisory Authority (NSA). 3 - APW function ready for operational use.

ATC02.5-ASP02	Align ATCO training with the use of APW ground-based safety tools	From:	By:
		01/01/2009	31/12/2016

Action by :	ANS Providers
Description & purpose :	Train operational staff in the use of APW. The tasks to be done are as follows: - Develop a training package (material); - Update the training plans; - Determine staff population to be trained; - Apply the training plans.
Derogations :	None
Supporting material(s) :	EUROCONTROL - SPEC 124 - EUROCONTROL Specification for Area Proximity Warning - Edition 0.5 / 05/2009 Url : http://www.eurocontrol.int/articles/resources#field-tabs-tab-3 EUROCONTROL - Guide - Safety Nets Ensuring Effectiveness - 21 May 2011 Url : https://www.eurocontrol.int/sites/default/files/publication/files/safety-nets-guide-21-05-2011.pdf
Finalisation criteria :	1 - The training plans have been updated and a training package has been developed by the ANSP for the use of APW functions.

SESAR	Active						ECAC
ATC02.6	Implement ground based safety nets - Minimum Safe Altitude Warning - level 2						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

Implement and make operational use of the MSAW ground based safety net.

Minimum Safe Altitude Warning (MSAW) is intended to warn the air traffic controller (ATCO) about the increased risk of controlled flight into terrain by generating, in a timely manner, an alert of aircraft proximity to terrain or obstacles.

Terrain and traffic characteristics can lead to a significant safety risk that can be mitigated by this tool.

An explanation of the difference between Level 1 and 2 is described below.

Before starting first operations, air traffic controllers must receive training, aimed at creating an appropriate level of trust in the concerned safety net. The time-criticality of alerts and the need for immediate attention or action must be well understood, but also the situations in which safety nets are less effective.

Safety nets performance must be monitored and regularly analysed, not only to improve the safety nets but also to identify other safety improvement opportunities. For example, "hot spots" could be identified and removed by making changes to airspace structure or procedures.

In order to avoid the "Cry Wolf" syndrome, the number of nuisance and false alerts must be reduced to a minimum. Air traffic controllers should be encouraged to report unexpected and unwanted safety nets behaviour and feedback should always be provided.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Military ATC authorities are invited to consider implementation of MSAW level 2 when providing ATS surveillance services to GAT

Existing draft EUROCONTROL Specification for MSAW could be used as guidance material (ref. supporting material of individual SLoAs)

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States except: Greece, United Kingdom

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2009

Full operational capability

31/12/2016

Applicability Area

Applicability Area

References

European ATM Master Plan relationship

OI step -	[CM-0801]-Ground Based Safety Nets (TMA, En Route)							
Enablers -	CTE-S01 AOP04.1	CTE-S01a AOP04.1	ER APP ATC 133	PRO-059 SAF10	PRO-219			
Legend:	WXYZ-001	Covered by SLoA(s) in this objective		WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan

Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
ATC02.6-REG01	Approve EUROCONTROL Specification for MSAW	DELETED	

ATC02.6	Implement ground based safety nets - Minimum Safe Altitude Warning - level 2		
ATC02.6-ASP01	Implement the MSAW function	01/01/2009	31/12/2016
ATC02.6-ASP02	Align ATCO training with the use of MSAW ground-based safety tools	01/01/2009	31/12/2016
ATC02.6-INT01	Amend ICAO documentation if required	DELETED	
ATC02.6-AGY01	Produce a EUROCONTROL Specification for MSAW	DELETED	

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	The systematic presentation of possible infringements of minimum safe altitude to controllers ahead of their occurrence, as provided by MSAW, is a major safety contribution.
Capacity :	N/A
Cost effectiveness :	Standardisation of MSAW enables cost-effective use of resources and is in particular a critical success factor for smaller ANSP.
Environment :	N/A
Security :	N/A

Detailed SLoA descriptions

ATC02.6-ASP01	Implement the MSAW function	From:	By:
		01/01/2009	31/12/2016

Action by :	ANS Providers
Description & purpose :	Put into service ground-based safety tool systems and associated procedures supporting the MSAW function.
Derogations :	None
Supporting material(s) :	EUROCONTROL - SPEC-126 - EUROCONTROL Specification for Minimum Safe Altitude Warning - Edition 0.9 / 09/2009 Url : http://www.eurocontrol.int/sites/default/files/content/documents/nm/safety/eurocontrol-specification-for-minimum-safe-altitude-warning-updated-edition-0-9-dated-19-may-2009.pdf EUROCONTROL - Guide - Safety Nets Ensuring Effectiveness - 21 May 2011 Url : https://www.eurocontrol.int/sites/default/files/publication/files/safety-nets-guide-21-05-2011.pdf EUROCONTROL - GUID-127 - EUROCONTROL Guidance Material for Minimum Safe Altitude Warning - Edition 1.0 - 1.0 / 05/2009 Url : http://www.eurocontrol.int/articles/resources#field-tabs-tab-1
ATM Master Plan relationship :	[ER APP ATC 133]-Upgrade Ground Safety Nets to provide Area Penetration Warning (APW), Minimum Safe Altitude Warning (MSAW) and Approach Path Monitoring to Controller Workstations.
Finalisation criteria :	1 - Ground systems have been upgraded to support the MSAW function. 2 - The technical file (TF) with evidences of compliance and the EC declaration of verification of systems (DoV) has been delivered to the competent National Supervisory Authority (NSA). 3 - MSAW function for operational use.

ATC02.6-ASP02	Align ATCO training with the use of MSAW ground-based safety tools	From:	By:
		01/01/2009	31/12/2016

Action by :	ANS Providers
Description & purpose :	Train operational staff in the use of MSAW. The tasks to be done are as follows: - Develop a training package (material); - Update the training plans; - Determine staff population to be trained; - Apply the training plans.
Derogations :	None
Supporting material(s) :	EUROCONTROL - SPEC-126 - EUROCONTROL Specification for Minimum Safe Altitude Warning - Edition 0.9 / 09/2009 Url : http://www.eurocontrol.int/sites/default/files/content/documents/nm/safety/eurocontrol-specification-for-minimum-safe-altitude-warning-updated-edition-0-9-dated-19-may-2009.pdf EUROCONTROL - Guide - Safety Nets Ensuring Effectiveness - 21 May 2011 Url : https://www.eurocontrol.int/sites/default/files/publication/files/safety-nets-guide-21-05-2011.pdf
Finalisation criteria :	1 - The training plans have been updated and a training package has been developed by the ANSP for the use of MSAW functions.

SESAR	Active						ECAC
ATC02.7	Implement ground based safety nets - Approach Path Monitor - level 2						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

Implement and make operational use of the Approach Path Monitor (APM) ground based safety net.

An approach path monitor (APM) is a ground based Safety Net intended to warn the controller about increased risk of controlled flight into terrain accidents by generating, in a timely manner, an alert of aircraft proximity to terrain or obstacles during final approach.

Terrain and traffic characteristics can lead to a significant safety risk that can be mitigated by this tool.

An explanation of the difference between Level 1 and 2 is described below.

Before starting first operations, air traffic controllers must receive training, aimed at creating an appropriate level of trust in the concerned safety net. The time-criticality of alerts and the need for immediate attention or action must be well understood, but also the situations in which safety nets are less effective.

Safety nets performance must be monitored and regularly analysed, not only to improve the safety nets but also to identify other safety improvement opportunities. For example, "hot spots" could be identified and removed by making changes to airspace structure or procedures.

In order to avoid the "Cry Wolf" syndrome, the number of nuisance and false alerts must be reduced to a minimum. Air traffic controllers should be encouraged to report unexpected and unwanted safety nets behaviour and feedback should always be provided.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Military ATC units are invited to consider implementation of APM level 2 when providing ATS surveillance services to GAT

Existing draft EUROCONTROL Specification for APM could be used as guidance material (ref. supporting material of individual SLoAs)

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States except: Georgia, Greece, Slovak Republic

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2009

Full operational capability

31/12/2016

Applicability Area

Applicability Area

References

European ATM Master Plan relationship

OI step -	[CM-0801]-Ground Based Safety Nets (TMA, En Route)							
Enablers -	CTE-S01 AOP04.1	CTE-S01a AOP04.1	ER APP ATC 133	PRO-059 SAF10	PRO-219			
Legend:	WXYZ-001	Covered by SLoA(s) in this objective		WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan

Applicable legislation

-none-

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
ATC02.7-REG01	Approve EUROCONTROL Specification for APM	DELETED	
ATC02.7-ASP01	Implement the APM function	01/01/2009	31/12/2016

ATC02.7	Implement ground based safety nets - Approach Path Monitor - level 2		
ATC02.7-ASP02	Align ATCO training with the use of APM ground-based safety tools	01/01/2009	31/12/2016
ATC02.7-INT01	Amend ICAO documentation if required	DELETED	
ATC02.7-AGY01	Produce EUROCONTROL Specification for APM and related guidance material	DELETED	

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	The systematic presentation of deviations from the glide path to controllers, as provided by APM, is a major safety contribution.
Capacity :	N/A
Cost effectiveness :	Standardisation of APM enables cost-effective use of resources and is in particular a critical success factor for smaller ANSP.
Environment :	N/A
Security :	N/A

Detailed SLoA descriptions

ATC02.7-ASP01	Implement the APM function	From:	By:
		01/01/2009	31/12/2016

Action by :	ANS Providers
Description & purpose :	Put into service ground-based safety tool systems and associated procedures supporting the APM function
Derogations :	None
Supporting material(s) :	EUROCONTROL - GUID-129 - EUROCONTROL Guidance Material for Approach Path Monitor - Edition 1.0 - 1.0 / 05/2009 Url : http://www.eurocontrol.int/articles/resources#field-tabs-tab-2 EUROCONTROL - SPEC 128 - EUROCONTROL Specification for Approach Path Monitor - Edition 0.5 / 05/2009 Url : http://www.eurocontrol.int/sites/default/files/content/documents/nm/safety/eurocontrol-specification-for-approach-path-monitor-updated-edition-0-5-dated-19-may-2009.pdf EUROCONTROL - Guide - Safety Nets Ensuring Effectiveness - 21 May 2011 Url : https://www.eurocontrol.int/sites/default/files/publication/files/safety-nets-guide-21-05-2011.pdf
ATM Master Plan relationship :	[ER APP ATC 133]-Upgrade Ground Safety Nets to provide Area Penetration Warning (APW), Minimum Safe Altitude Warning (MSAW) and Approach Path Monitoring to Controller Workstations.
Finalisation criteria :	1 - Ground systems have been upgraded to support the APM function. 2 - The technical file (TF) with evidences of compliance and the EC declaration of verification of systems (DoV) has been delivered to the competent National Supervisory Authority (NSA). 3 - APM function is in operational use.

ATC02.7-ASP02	Align ATCO training with the use of APM ground-based safety tools	From:	By:
		01/01/2009	31/12/2016

Action by :	ANS Providers
Description & purpose :	Train operational staff in the use of APM. The tasks to be done are as follows: - Develop a training package (material); - Update the training plans; - Determine staff population to be trained; - Apply the training plans.
Derogations :	None
Supporting material(s) :	EUROCONTROL - SPEC 128 - EUROCONTROL Specification for Approach Path Monitor - Edition 0.5 / 05/2009 Url : http://www.eurocontrol.int/sites/default/files/content/documents/nm/safety/eurocontrol-specification-for-approach-path-monitor-updated-edition-0-5-dated-19-may-2009.pdf EUROCONTROL - Guide - Safety Nets Ensuring Effectiveness - 21 May 2011 Url : https://www.eurocontrol.int/sites/default/files/publication/files/safety-nets-guide-21-05-2011.pdf
Finalisation criteria :	1 - The training plans have been updated and a training package has been developed by the ANSP for the use of APM functions.

PCP		Active					Multi-N	
ATC07.1		Implement arrival management tools						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 1 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates

Implement Basic Arrival Manager (AMAN) tools to improve sequencing and metering of arrival aircraft in selected TMAs and airports.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Applicability Area(s) & Timescale(s)

Applicability Area

For the full list of airports (and associated TMAs) where the objective is being implemented, see list in ESSIP Plan - Part I Section 4)

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2007

Applicability Area

Full operational capability

31/12/2015

Applicability Area

References

European ATM Master Plan relationship

OI step -	[TS-0102]-Basic Arrival Management Supporting TMA Improvements (incl. CDA, P-RNAV)								
Enablers -	AERODRO ME-ATC-08	ER APP ATC 128	PRO-049	PRO-050					
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan		

Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
ATC07.1-ASP01	Implement initial basic arrival management tools	01/12/1998	31/12/2015
ATC07.1-ASP02	Implement initial basic AMAN procedures	01/01/2005	31/12/2015
ATC07.1-ASP03	Adapt TMA organisation to accommodate use of basic AMAN	01/01/2005	31/12/2015
ATC07.1-ASP04	Implement basic AMAN functions	01/01/2007	31/12/2015

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

<u>Safety</u> :	Maintained or improved.
<u>Capacity</u> :	Improved airport/TMA capacity.
<u>Cost effectiveness</u> :	Reduced costs through reduction in delays.
<u>Environment</u> :	Reduced holding and low level vectoring has a positive environmental effect in terms of noise and fuel usage.
<u>Security</u> :	N/A

ATC07.1	Implement arrival management tools
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Detailed SloA descriptions

ATC07.1-ASP01	Implement initial basic arrival management tools	From:	By:
		01/12/1998	31/12/2015

Action by : **ANS Providers**
Description & purpose : Implement initial basic arrival management tools
Derogations : None
Supporting material(s) : EUROCONTROL - Arrival Manager - Implementation Guidelines and Lessons Learned Edition 0.1 12/2010
 Url : <http://www.eurocontrol.int/articles/fasti-documents>
Finalisation criteria : 1 - Function has been implemented, documented and is in operational use.

ATC07.1-ASP02	Implement initial basic AMAN procedures	From:	By:
		01/01/2005	31/12/2015

Action by : **ANS Providers**
Description & purpose : Define, validate and implement ATC procedures for operational use of basic AMAN tools.
Derogations : None
Supporting material(s) : EUROCONTROL - Arrival Manager - Implementation Guidelines and Lessons Learned Edition 0.1 12/2010
 Url : <http://www.eurocontrol.int/articles/fasti-documents>
ATM Master Plan relationship : [\[PRO-049\]-ATC Procedures to make use of AMAN tool including assigning responsibility for issuing times](#)
[\[PRO-050\]-ATC Procedures to increase the use of CDA during busier time periods using AMAN information](#)
Finalisation criteria : 1 - Procedures have been implemented, documented and are in operational use.

ATC07.1-ASP03	Adapt TMA organisation to accommodate use of basic AMAN	From:	By:
		01/01/2005	31/12/2015

Action by : **ANS Providers**
Description & purpose : Adapt TMA organisation, where necessary, to accommodate the use of basic AMAN.
Derogations : None
Supporting material(s) : EUROCONTROL - Arrival Manager - Implementation Guidelines and Lessons Learned Edition 0.1 12/2010
 Url : <http://www.eurocontrol.int/articles/fasti-documents>
Finalisation criteria : 1 - TMA organisation is already compliant to basic AMAN use, or has been adapted accordingly.

ATC07.1-ASP04	Implement basic AMAN functions	From:	By:
		01/01/2007	31/12/2015

Action by : **ANS Providers**
Description & purpose : Prepare and adapt ground ATC systems to support and implement basic AMAN functions.
Derogations : None
Supporting material(s) : EUROCONTROL - Arrival Manager - Implementation Guidelines and Lessons Learned Edition 0.1 12/2010
 Url : <http://www.eurocontrol.int/articles/fasti-documents>
ATM Master Plan relationship : [\[ER APP ATC 128\]-Introduce Basic AMAN](#)
Finalisation criteria : 1 - ATC systems are already compliant to basic AMAN use, or have been adapted accordingly.

PCP		Active					ECAC	
ATC12.1		Implement automated support for conflict detection, resolution support information and conformance monitoring						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 3 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, and is bound to its deployment target dates.

The Implementation of Free Route Airspace (FRA) needs to be supported by Conflict Detection Tools (CDT), Resolution Support Information and Conformance Monitoring.

The Conflict Detection tools (CDT) include the trajectory based Medium Conflict Detection Tool (MTCD) or/and Tactical Controller Tool (TCT).

The decision on whether to implement either one or both tools (MTCD and TCT) is left to the individual ANSP organisation as it depends on local conditions and systems in use.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2015

Applicability Area

Full operational capability

31/12/2021

Applicability Area

References

European ATM Master Plan relationship

OI step -	[CM-0202]-Automated Assistance to ATC Planning for Preventing Conflicts in En Route Airspace							
Enablers -	ER APP ATC 129	PRO-046b						
OI step -	[CM-0203]-Automated Flight Conformance Monitoring							
Enablers -	CTE-S01a AOP04.1	CTE-S03	CTE-S03a	CTE-S04	CTE-S04a	CTE-S04b AOP04.1, AOP04.2	ER APP ATC 130	PRO-046b
OI step -	[CM-0205]-Conflict Detection and Resolution in En Route using trajectory data in Predefined and User Preferred Routes environments							
Enablers -	ER ATC 157							
OI step -	[CM-0207-A]-Automated Ground Based Flight Conformance Monitoring in En Route in Step 1							
Enablers -	CTE-S03b AOP04.1, AOP04.2	ER ATC 91						
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan	

Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
ATC12.1-ASP01	Implement MTCD and resolution support functions and associated procedures	01/01/2015	31/12/2021

ATC12.1	Implement automated support for conflict detection, resolution support information and conformance monitoring
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ATC12.1-ASP02	Implement TCT and associated procedures	01/01/2015	31/12/2021
ATC12.1-ASP03	Implement MONA functions	01/01/2015	31/12/2021
ATC12.1-ASP04	Perform ATCO training for the use of CDT (MTCD and or TCT), resolution support and MONA related functions	01/01/2015	31/12/2021
ATC12.1-ASP05	Develop safety assessment for the changes	01/01/2015	31/12/2021

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Early and systematic conflict detection and conformance monitoring enabled by ground based automated tools will reduce the need for tactical interventions, conformance monitoring reduces the risk of the impact of controllers and pilots errors. Possibility to maintain high level of safety with an increase in capacity due to a reduction of controller workload per aircraft.
Capacity :	Reduction of tactical controller workload, and better sector team productivity, compared to the conventional systems without automated support will open potential for capacity up to 15%.
Cost effectiveness :	Early conflict detection will enable smoother flight patterns, without frequent and sudden control interventions. This will have a moderate influence on airline costs. Moderate benefits for ANSPs due to better deployment of the ATCO workforce, reduced workload per aircraft and workload distribution.
Environment :	N/A.
Security :	N/A

Detailed SloA descriptions

ATC12.1-ASP01	Implement MTCD and resolution support functions and associated procedures	From:	By:
		01/01/2015	31/12/2021

Action by :	ANS Providers
Description & purpose :	<p>Deploy the MTCD related to :</p> <ul style="list-style-type: none"> * Detection conflicts and risks <ul style="list-style-type: none"> - between aircraft; - between aircraft and reserved airspace or area (such as Holding stack area), upon activation or de-activation - Including posting detection to the sector responsible for acting on it, * Resolution support information which includes conflict probe and passive conflict resolution advisor(e.g. presentation of context traffic) <p>as appropriate and in accordance with the ANSPs Concept of Operation and identified needs.</p> <p>Adapt the operational procedures and working methods to support the MTCD deployment.</p>
Derogations :	None
Supporting material(s) :	<p>EUROCONTROL - SPEC 139 - EUROCONTROL Specification for Medium-Term Conflict Detection - Edition 1.0 / 07/2010 Url : http://www.eurocontrol.int/articles/fasti-documents</p> <p>EUROCONTROL - SPEC 143 - EUROCONTROL Specification for Trajectory Prediction - Edition 1.0 / 07/2010 Url : http://www.eurocontrol.int/articles/fasti-documents</p> <p>EUROCONTROL - FASTI - Operational Performance Requirements Analysis for the Conflict Detection Tool - Final Draft - 2 / 12/2012 Url : http://www.eurocontrol.int/articles/fasti-documents</p> <p>[ER APP ATC 129]-Upgrade FDP and provide Controller Tools to provide assistance to ATC Planning for Preventing Conflicts in En Route Airspace</p> <p>[ER ATC 157]-ATC System Support for Medium-Term Conflict Detection and Resolution in Enroute Airspace</p> <p>[PRO-046b]-ATC Procedures for Using Advanced System Assistance to Medium Term Conflict Detection and Resolution</p>
ATM Master Plan relationship :	
Finalisation criteria :	1 - MTCD and resolution support functions have been implemented documented and is in operational use.

ATC12.1-ASP02	Implement TCT and associated procedures	From:	By:
		01/01/2015	31/12/2021

Action by :	ANS Providers
Description & purpose :	<p>Deploy the Tactical Controller Tool (TCT) to :</p> <ul style="list-style-type: none"> - Detection conflicts between state vector trajectories(extended STCA); - Detection conflicts between state vector trajectories and tactical trajectories; - Detection conflicts between tactical trajectories; <p>as appropriate and in accordance with the ANSPs Concept of Operation and identified needs.</p> <p>Adapt the operational procedures and working methods to support the TCT deployment.</p>

ATC12.1	Implement automated support for conflict detection, resolution support information and conformance monitoring
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Derogations : None

Supporting material(s) : EUROCONTROL - TCT RTS Final report - 0.3 / 04/2009
 Url : <http://www.eurocontrol.int/sites/default/files/article/content/documents/nm/fasti-tct-rt-2009.pdf>

Finalisation criteria : 1 - TCT functions have been implemented documented and is in operational use.

ATC12.1-ASP03	Implement MONA functions	From:	By:
		01/01/2015	31/12/2021

Action by : **ANS Providers**

Description & purpose : Deploy MONA functions :
 - Lateral deviation
 - Longitudinal deviation
 - Vertical deviation
 - CFL deviation
 - Aircraft Derived Data (ADD) deviations
 as appropriate and in accordance with the ANSPs Concept of Operation and identified needs.
 Adapt the operational procedures and working methods to support the MONA deployment

Derogations : None

Supporting material(s) : EUROCONTROL - SPEC 142 - EUROCONTROL Specification for Monitoring Aids - Edition 1.0 / 07/2010
 Url : <http://www.eurocontrol.int/articles/fasti-documents>
 EUROCONTROL - SPEC 143 - EUROCONTROL Specification for Trajectory Prediction - Edition 1.0 / 07/2010
 Url : <http://www.eurocontrol.int/articles/fasti-documents>

ATM Master Plan relationship : [\[ER APP ATC 130\]-Upgrade FDP and provide Controller Tools to provide Controller with warnings if aircraft deviate from a clearance or plan](#)
[\[ER ATC 91\]-ATC tools in support of RNP \(e.g. RNP1, A-RNP\) for En Route](#)
[\[PRO-046b\]-ATC Procedures for Using Advanced System Assistance to Medium Term Conflict Detection and Resolution](#)

Finalisation criteria : 1 - Conformance Monitoring function has been implemented, documented and is in operational use.

ATC12.1-ASP04	Perform ATCO training for the use of CDT (MTCD and or TCT), resolution support and MONA related functions	From:	By:
		01/01/2015	31/12/2021

Action by : **ANS Providers**

Description & purpose : Perform ATCO training in line with EUROCONTROL Specifications and guidelines.

Derogations : None

Supporting material(s) : EUROCONTROL - SPEC 139 - EUROCONTROL Specification for Medium-Term Conflict Detection - Edition 1.0 / 07/2010
 Url : <http://www.eurocontrol.int/articles/fasti-documents>
 EUROCONTROL - Good Practice Guidelines for First ATC Support Tools Implementation (FASTI) with a Focus on Human Factors and Managing the Transition - Edition 1.0 / 06/2007
 Url : <http://www.eurocontrol.int/articles/fasti-documents>
 EUROCONTROL - FASTI - FASTI Specific Human Factors Guidelines for MTCD, MONA and SYSCO 06/2007
 Url : <http://www.eurocontrol.int/articles/fasti-documents>
 EUROCONTROL - FASTI - Completing the FASTI Safety Case: Guidance for Service Providers - 1.0 / 01/2009
 Url : <http://www.eurocontrol.int/articles/fasti-documents>

Finalisation criteria : 1 - ATCOs have been trained for the use of CDT (MTCD and/or TCT), resolution support information and MONA.

ATC12.1-ASP05	Develop safety assessment for the changes	From:	By:
		01/01/2015	31/12/2021

Action by : **ANS Providers**

Description & purpose : Develop safety assessment of the changes, notably ATC systems and procedures that will implement Conflict Detection Tools, resolution support function and conformance monitoring.

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 a safety assessment report 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 a fully validated/recognised method.

Derogations : None

ATC12.1	Implement automated support for conflict detection, resolution support information and conformance monitoring
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Supporting material(s) : EUROCONTROL - FASTI - Completing the FASTI Safety Case: Guidance for Service Providers - 1.0 / 01/2009
 Url : <http://www.eurocontrol.int/articles/fasti-documents>
 EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006
 Url : <http://www.eurocontrol.int/articles/safety-assessment-methodology-sam>
 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 - Safety Assessment Made Easier (SAME), Part 1 - Edition 1.0 / 01/2010
 Url : <http://www.eurocontrol.int/articles/safety-assessment-methodology-sam>

Finalisation criteria : 1 - The safety assessment report including safety arguments for the changes has been delivered to the NSA and a notification of acceptance was received.

PCP	Active					Multi-N		
ATC15	Implement, in En-Route operations, information exchange mechanisms, tools and procedures in support of Basic AMAN operations							
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionalities 1 and 4 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to their deployment target dates.

Implement, in En-Route operations in selected ACCs, information exchange mechanisms, tools and procedures in support of Basic AMAN operations in adjacent ACCs and/or subjacent TMAs (including, where relevant, support for AMAN operations involving airports located in adjacent ATSUs).

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All EU States except: Cyprus, Greece, Lithuania, Malta, Slovak Republic, Slovenia.

Plus: Bosnia and Herzegovina, Maastricht UAC, Norway, Switzerland, Turkey

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2012

Applicability Area

Full operational capability

31/12/2017

Applicability Area

References

European ATM Master Plan relationship

OI step -	[TS-0305]-Arrival Management Extended to En Route Airspace							
Enablers -	ER APP ATC 111	HUM-TS-03 05	PRO-052					
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan	

Applicable legislation

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
ATC15-REG01	Conduct safety oversight of the changes	DELETED	
ATC15-REG02	Approve the procedures for operation of AMAN tools in en route sectors supporting AMAN in adjacent/subjacent areas.	DELETED	
ATC15-ASP01	Develop safety assessment for the changes	01/01/2012	31/12/2017
ATC15-ASP02	Adapt the ATC systems that will implement arrival management functionality in En-Route sectors in support of AMAN operations in adjacent/subjacent TMAs	01/01/2012	31/12/2017
ATC15-ASP03	Implement ATC procedures in En-Route airspace/sectors that will implement AMAN information and functionality	01/01/2012	31/12/2017
ATC15-ASP04	Train operational and technical staff and update Training Plans	01/01/2012	31/12/2017
ATC15-ASP05	Revise and publish Aeronautical Information documents	DELETED	

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

ATC15	Implement, in En-Route operations, information exchange mechanisms, tools and procedures in support of Basic AMAN operations
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Expected performance benefits

Safety :	Maintained or improved.
Capacity :	Improved airport/TMA capacity.
Cost effectiveness :	Reduced costs through reduction in delays, reduction in low-level holding operations and reduction in low-level tactical vectoring for delay purposes.
Environment :	Reduction in holding and in low-level vectoring, by applying delay management at an early stage of flight, has a positive environmental effect in terms of noise and fuel usage.
Security :	N/A

Detailed SloA descriptions

ATC15-ASP01	Develop safety assessment for the changes	From:	By:
		01/01/2012	31/12/2017

Action by :	ANS Providers
Description & purpose :	<p>Develop safety assessment of the changes, notably ATC systems and procedures that will implement arrival management functionality in En-Route sectors and associated procedures.</p> <p>The tasks to be done are as follows:</p> <ul style="list-style-type: none"> - Conduct hazard identification, risk assessment in order to define safety objectives and safety requirements mitigating the risks; - Develop safety assessment; - Deliver a safety assessment report to the NSA, if new standards are applicable or if the severity class of identified risks is 1 or 2. <p>This safety assessment shall be based on fully validated/recognised method.</p>
Derogations :	None
Supporting material(s) :	<p>EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006 Url : http://www.eurocontrol.int/articles/safety-assessment-methodology-sam</p> <p>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</p> <p>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/LexUriServ/LexUriServ.do?uri=OJ:L:2011:271:0023:0041:EN:PDF</p> <p>EUROCONTROL - Safety Assessment Made Easier (SAME), Part 1 - Edition 1.0 / 01/2010 Url : http://www.eurocontrol.int/articles/safety-assessment-methodology-sam</p>
Finalisation criteria :	1 - The safety assessment report including safety arguments for the changes has been delivered to the NSA and a notification of acceptance was received.

ATC15-ASP02	Adapt the ATC systems that will implement arrival management functionality in En-Route sectors in support of AMAN operations in adjacent/subjacent TMAs	From:	By:
		01/01/2012	31/12/2017

Action by :	ANS Providers
Description & purpose :	Implement, in selected ATC systems, the necessary functionality and information exchanges to support the use of AMAN information in En-Route sectors requiring data exchange generated from AMAN systems and operations in adjacent/subjacent TMAs.
Derogations :	None
Supporting material(s) :	<p>EUROCONTROL - AMAN Information Extension to En Route Sectors - Concept of Operations - Edition 1.0 / 06/2009 Url : http://www.eurocontrol.int/articles/fasti-documents</p> <p>[ER APP ATC 111]-Enhance AMAN to provide arrival sequence time information into En Route decision making.</p>
ATM Master Plan relationship :	
Finalisation criteria :	<p>1 - ATC systems are either:</p> <ul style="list-style-type: none"> - Already compliant to AMAN use in En-Route; or - have functionality implemented to support the necessary exchange of information needed to support AMAN operations in En-Route airspace that is interfacing with AMANs in adjacent/subjacent areas. <p>2 - ANSPs have described the level of system support and functionality with direct reference to the relevant complexity level as defined in the -AMAN Information Extension to En-Route Sectors- Concept - documentation.</p>

ATC15	Implement, in En-Route operations, information exchange mechanisms, tools and procedures in support of Basic AMAN operations
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ATC15-ASP03	Implement ATC procedures in En-Route airspace/sectors that will implement AMAN information and functionality	From:	By:
		01/01/2012	31/12/2017

Action by : **ANS Providers**

Description & purpose : Define, validate and implement the necessary ATC procedures in selected En-Route airspace/sectors, to support the use of AMAN information in En-Route sectors that are interfacing with AMAN systems operating in adjacent/subjacent TMAs.

Derogations : None

Supporting material(s) : EUROCONTROL - AMAN Information Extension to En Route Sectors - Concept of Operations - Edition 1.0 / 06/2009
 Url : <http://www.eurocontrol.int/articles/fasti-documents>
[\[PRO-052\]-ATC Procedures for extending sequencing for TMA into the enroute sectors](#)

ATM Master Plan relationship :

Finalisation criteria :
 1 - Procedures have been implemented, documented and are in operational use.
 2 - ANSPs have defined, validated and implemented procedures directly related to the relevant complexity level chosen (ref. SLoA ATC15-ASP02), as defined in the AMAN Information Extension to En-Route Sectors Concept documentation.

ATC15-ASP04	Train operational and technical staff and update Training Plans	From:	By:
		01/01/2012	31/12/2017

Action by : **ANS Providers**

Description & purpose : Train operational staff in the use of ATC procedures in En-Route airspace/sectors that will implement AMAN information and functionality in support of AMAN in adjacent/subjacent TMAs.

The tasks to be done are as follows:
 - Develop a training package (material);
 - Update the training plans;
 - Determine staff population to be trained;
 - Apply the training plans.

Derogations : None

Finalisation criteria :
 1 - The training plans have been updated and a training package has been developed by the ANSP.
 2 - All concerned personnel have been trained.

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SESAR	Active						ECAC	
ATC16	Implement ACAS II compliant with TCAS II change 7.1							
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This implementation objective is aligned to Regulation (EU) No 1332/2011 of 16 December 2011 laying down common airspace usage requirements and operating procedures for airborne collision avoidance.

This objective is applicable to all flights performed by turbine-powered aeroplanes, regardless of State of Registry:

- with MTOW > 5700 kg, or
- authorised to carry more than 19 passengers; or
- any other aeroplane equipped on a voluntary basis with ACAS II.

This objective is not applicable to unmanned aircraft systems

Regulation (EU) No 1332/2011 applies as of 01 March 2012. By way of derogation, for aircraft with individual certificate of airworthiness issued before 1 March 2012, the provisions in Regulation (EU) No 1332/2011 shall apply as of 1st December 2015.

For ACAS II (with 7.0 logic), Military Authorities of ECAC Member States previously agreed on a voluntary installation programme on military transport type aircraft from 01 January 2005. Germany made ACAS II mandatory within its airspace from 01 January 2000 for all aircraft including military transport type aircraft (DE AIC IFR 8 - 23 DEC 04).

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/03/2012

Applicability Area

Full operational capability

31/12/2015

Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -							
Enablers -	PRO-AC-21							

Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan
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Applicable legislation

Commission Regulation (EU) No 1332/2011 of 16 December 2011 laying down common airspace usage requirements and operating procedures for airborne collision avoidance

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
ATC16-REG01	Supervise compliance with regulatory provisions	01/03/2012	31/12/2015
ATC16-REG02	Provide airworthiness certification	01/03/2012	31/12/2015
ATC16-REG03	Deliver operational approval for ACAS II version 7.1 equipped aircraft	01/03/2012	31/12/2015
ATC16-ASP01	Train controllers		01/03/2012
ATC16-ASP02	Establish ACAS II (TCAS II version 7.1) performance monitoring		01/03/2012
ATC16-MIL01	Equip and put into service transport-type aircraft with ACAS II (TCAS II version 7.1) capability	01/03/2012	31/12/2015

ATC16	Implement ACAS II compliant with TCAS II change 7.1
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ATC16-MIL02	Train aircrews of tactical aircraft (not ACAS II equipped)		31/03/2012
ATC16-USE01	Obtain airworthiness certification for ACAS II version 7.1 equipped aircraft	01/03/2012	31/12/2015
ATC16-USE02	Obtain operational approval for ACAS II version 7.1 equipped aircraft	01/03/2012	31/12/2015

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Improve ATM safety by reducing incidence of mid-air collisions between aircraft.
Capacity :	N/A
Cost effectiveness :	N/A
Environment :	N/A
Security :	N/A

Detailed SLoA descriptions

ATC16-REG01	Supervise compliance with regulatory provisions	From:	By:
		01/03/2012	31/12/2015

Action by :	State Authorities
Description & purpose :	Supervise compliance with regulatory provisions for ACAS II (TCAS II version 7.1). The tasks to be done are as follows: - Ensure that all concerned aircraft in the State of Registry under its oversight are equipped with certified ACAS II equipment; - Ensure that these ACAS II equipment have received airworthiness certificate, in compliance with applicable EASA certification material; - Ensure that all concerned aircraft operators in the State of Registry under its oversight have received an operational approval in compliance with applicable EASA material.
Derogations :	None
Supporting material(s) :	ICAO - Doc 9863 - Airborne Collision Avoidance System (ACAS) Manual - Edition 2 / 01/2012 Url : http://www.icao.int/publications/Pages/catalogue.aspx EASA - AMC 20-15 - Airworthiness Certification Considerations for the Airborne Collision Avoidance System (ACAS II) with optional Hybrid Surveillance - ED Decision 2011/001/R / 03/2011 Url : http://www.easa.europa.eu/system/files/dfu/Annex II - AMC 20-15.pdf ICAO - Annex 10, Volume IV - Aeronautical Telecommunications, Volume IV - Surveillance and Collision Avoidance Systems - 4th Edition Url : http://store1.icao.int/ EUROCAE - ED-181 - Guidance for the Development of Airborne Collision Avoidance Systems 09/2010 Url : http://boutique.eurocae.net/catalog/index.php EASA - ETSO-C119c - Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS II - ED Decision 2009/015/R / 12/2009 Url : http://easa.europa.eu/system/files/dfu/ws_prod-g-doc-Agency_Mesures-Agency_Decisions-2009-cs_etso_5-Annex-II---E_TSO.pdf
Finalisation criteria :	1 - Evidence on the status of compliance with regulatory provisions for ACAS II (TCAS 7.1) for aircraft and aircraft operators in the State of Registry under the NSA oversight has been provided.

ATC16-REG02	Provide airworthiness certification	From:	By:
		01/03/2012	31/12/2015

Action by :	State Authorities
Description & purpose :	Provide airworthiness certification to all concerned aircraft in the State of Registry under its responsibility, which are equipped with ACAS II equipment compliant with applicable airworthiness requirements.
Derogations :	None

ATC16	Implement ACAS II compliant with TCAS II change 7.1
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<u>Supporting material(s)</u> :	ICAO - Annex 10, Volume IV - Aeronautical Telecommunications, Volume IV - Surveillance and Collision Avoidance Systems - 4th Edition Url : http://store1.icao.int/ ICAO - Doc 9863 - Airborne Collision Avoidance System (ACAS) Manual - Edition 2 / 01/2012 Url : http://www.icao.int/publications/Pages/catalogue.aspx EASA - AMC 20-15 - Airworthiness Certification Considerations for the Airborne Collision Avoidance System (ACAS II) with optional Hybrid Surveillance - ED Decision 2011/001/R / 03/2011 Url : http://www.easa.europa.eu/system/files/dfu/Annex II - AMC 20-15.pdf EUROCAE - ED-181 - Guidance for the Development of Airborne Collision Avoidance Systems 09/2010 Url : http://boutique.eurocae.net/catalog/index.php EUROCAE - ED-143 Change 1 - Minimum Operational Performance Standards For Traffic Alert and Collision Avoidance 04/2009 Url : http://boutique.eurocae.net/catalog/index.php EASA - ETSO-C119c - Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS II - ED Decision 2009/015/R / 12/2009 Url : http://easa.europa.eu/system/files/dfu/ws_prod-g-doc-Agency_Mesures-Agency_Decisions-2009-cs_etso_5-Annex-II--E_TSO.pdf EUROCAE - ED-143 - Volume I : Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance System II (TCAS II) Volume II : TCAS II Collision Avoidance System (CAS) Requirements Specification- Attachment A to Volume II 09/2008 Url : http://boutique.eurocae.net/catalog/index.php
<u>Finalisation criteria</u> :	1 - Airworthiness certification for ACAS II (TCAS 7.1) aircraft in the State of Registry under its responsibility has been provided.

ATC16-REG03	Deliver operational approval for ACAS II version 7.1 equipped aircraft	From:	By:
		01/03/2012	31/12/2015

<u>Action by</u> :	State Authorities
<u>Description & purpose</u> :	Deliver operational approval for ACAS II version 7.1 equipped aircraft. The tasks to be done are as follows: - Instruction of the certification application file delivered by the applicant in accordance with the appropriate certification process; - Approval of pertinent training programs, checklists, operations manuals or training manuals, maintenance programs, minimum equipment lists or other pertinent documents or document revisions applicable to that operator. The requirements for certification and operation of ACAS II within the EU Member States, Norway and Switzerland are covered in EU-OPS 1.
<u>Derogations</u> :	None
<u>Supporting material(s)</u> :	EUROCAE - ED-181 - Guidance for the Development of Airborne Collision Avoidance Systems 09/2010 Url : http://boutique.eurocae.net/catalog/index.php EUROCAE - ED-143 Change 1 - Minimum Operational Performance Standards For Traffic Alert and Collision Avoidance 04/2009 Url : http://boutique.eurocae.net/catalog/index.php RTCA - DO-185B - Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance System II (TCAS II) 08/2006 Url : http://www.rtca.org/store_list.asp RTCA - DO-185B-Change 1 - Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance System II (TCAS II) - Change 1 01/2007 Url : http://www.rtca.org/store_list.asp RTCA - DO-185A - Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance System II (TCAS II) Airborne Equipment 12/1997 Url : http://www.rtca.org/store_list.asp EUROCAE - ED-143 - Volume I : Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance System II (TCAS II) Volume II : TCAS II Collision Avoidance System (CAS) Requirements Specification- Attachment A to Volume II 09/2008 Url : http://boutique.eurocae.net/catalog/index.php
<u>Finalisation criteria</u> :	1 - Operational approval to aircraft operators having submitted an application has been delivered.

ATC16-ASP01	Train controllers	From:	By:
			01/03/2012

Action by : **ANS Providers**

ATC16	Implement ACAS II compliant with TCAS II change 7.1
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Description & purpose : Train air traffic control staff in ACAS II (TCAS II version 7.1) procedures for the provision of air traffic control services.

The tasks to be done are as follows:

- Update existing training package (material) to ACAS II - TCAS II version 7.1;
- Develop training plan;
- Determine staff population to be trained;
- Apply the training plan.

Derogations : None

Supporting material(s) : EASA - AMC 20-15 - Airworthiness Certification Considerations for the Airborne Collision Avoidance System (ACAS II) with optional Hybrid Surveillance - ED Decision 2011/001/R / 03/2011

Url : <http://www.easa.europa.eu/system/files/dfu/Annex II - AMC 20-15.pdf>

EASA - ETSO-C119c - Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS II - ED Decision 2009/015/R / 12/2009

Url :

http://easa.europa.eu/system/files/dfu/ws_prod-g-doc-Agency_Mesures-Agency_Decisions-2009-cs_etso_5-Annex-II---E_TSO.pdf

EUROCONTROL - ACAS training material

Url : <https://www.eurocontrol.int/articles/acas-ii-training>

ICAO - Annex 10, Volume IV - Aeronautical Telecommunications, Volume IV - Surveillance and Collision Avoidance Systems - 4th Edition

Url : <http://store1.icao.int/>

ICAO - Doc 9863 - Airborne Collision Avoidance System (ACAS) Manual - Edition 2 / 01/2012

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

Finalisation criteria : 1 - The training plan and package has been developed by the ANSP.

2 - All concerned personnel have been trained.

ATC16-ASP02	Establish ACAS II (TCAS II version 7.1) performance monitoring	From:	By:
			01/03/2012

Action by : **ANS Providers**

Description & purpose : Establish a monitoring of the performance of ACAS in the ATC environment, as described in PANS-ATM (Procedures for Air Navigation Services - ICAO Doc. 4444 Fifteenth Edition 2007-ATM/501)

Derogations : None

Supporting material(s) : ICAO - Doc 9863 - Airborne Collision Avoidance System (ACAS) Manual - Edition 2 / 01/2012

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

EUROCAE - ED-143 Change 1 - Minimum Operational Performance Standards For Traffic Alert and Collision Avoidance 04/2009

Url : <http://boutique.eurocae.net/catalog/index.php>

EASA - ETSO-C119c - Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS II - ED Decision 2009/015/R / 12/2009

Url :

http://easa.europa.eu/system/files/dfu/ws_prod-g-doc-Agency_Mesures-Agency_Decisions-2009-cs_etso_5-Annex-II---E_TSO.pdf

EUROCAE - ED-143 - Volume I : Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance System II (TCAS II)

Volume II : TCAS II Collision Avoidance System (CAS) Requirements Specification- Attachment A to Volume II 09/2008

Url : <http://boutique.eurocae.net/catalog/index.php>

Finalisation criteria : 1 - A monitoring system of the performance of ACAS in the ATC environment, by means of regular incident occurrence reporting, investigation and analysis, has been put in place.

ATC16-MIL01	Equip and put into service transport-type aircraft with ACAS II (TCAS II version 7.1) capability	From:	By:
		01/03/2012	31/12/2015

Action by : **Military Authorities**

Description & purpose : Equip and put into service ACAS II (TCAS II version 7.1) in military fixed-wing turbine engine transport-type aircraft as specified in EASA ETSO C-119c.

Note :Where TCAS has been mandated or States have been agreed on a voluntary installation for transport type military aircraft, as well as for any future fitment to military airframes, TCAS implementation should be carried out with due regard to the TCAS version 7.1.

Derogations : None

ATC16	Implement ACAS II compliant with TCAS II change 7.1
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Supporting material(s) : EUROCAE - ED-181 - Guidance for the Development of Airborne Collision Avoidance Systems 09/2010
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-143 Change 1 - Minimum Operational Performance Standards For Traffic Alert and Collision Avoidance 04/2009
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-143 - Volume I : Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance System II (TCAS II)
 Volume II : TCAS II Collision Avoidance System (CAS) Requirements Specification- Attachment A to Volume II 09/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
Finalisation criteria : 1 - Transport-type aircraft have been equipped with ACAS II (TCAS II Version 7.1) compliant equipment.

ATC16-MIL02	Train aircrews of tactical aircraft (not ACAS II equipped)	From:	By:
			31/03/2012

Action by : **Military Authorities**
Description & purpose : Train aircrews of tactical aircraft (not ACAS II equipped) on the implications of ACAS operations, when operating in the airspace environment.
Derogations : None
Supporting material(s) : ICAO - Annex 10, Volume IV - Aeronautical Telecommunications, Volume IV - Surveillance and Collision Avoidance Systems - 4th Edition
 Url : <http://store1.icao.int/>
 ICAO - Doc 9863 - Airborne Collision Avoidance System (ACAS) Manual - Edition 2 / 01/2012
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
Finalisation criteria : 1 - The training plan and package has been developed by the Military Authority.
 2 - All concerned personnel have been trained.

ATC16-USE01	Obtain airworthiness certification for ACAS II version 7.1 equipped aircraft	From:	By:
		01/03/2012	31/12/2015

Action by : **Airspace Users**
Description & purpose : Provide a certification application case to the competent authority for the state of registry of the aircraft to obtain airworthiness certification for their airframes equipped with ACAS II equipment.
Derogations : None
Supporting material(s) : EUROCAE - ED-181 - Guidance for the Development of Airborne Collision Avoidance Systems 09/2010
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-143 Change 1 - Minimum Operational Performance Standards For Traffic Alert and Collision Avoidance 04/2009
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EASA - ETSO-C119c - Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS II - ED Decision 2009/015/R / 12/2009
 Url : http://easa.europa.eu/system/files/dfu/ws_prod-g-doc-Agency_Mesures-Agency_Decisions-2009-cs_ets_5-Annex-II---E_TSO.pdf
 EUROCAE - ED-143 - Volume I : Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance System II (TCAS II)
 Volume II : TCAS II Collision Avoidance System (CAS) Requirements Specification- Attachment A to Volume II 09/2008
 Url : <http://boutique.eurocae.net/catalog/index.php>
Finalisation criteria : 1 - Aircraft operators have received airworthiness certificate by the Competent Authorities, for ACAS II version 7.1 equipped aircraft.

ATC16-USE02	Obtain operational approval for ACAS II version 7.1 equipped aircraft	From:	By:
		01/03/2012	31/12/2015

Action by : **Airspace Users**
Description & purpose : In order to obtain operational approval by the Competent authority of the State from which they hold an Air Operator Certificate, operators must provide evidence which pertains to:
 - Changes to training and maintenance programmes;
 - Changes to manuals, operational procedures, minimum equipment lists; and
 - Other areas necessary for safe and effective TCAS use and the qualification of aircrews through the approved training programmes.
Derogations : None

ATC16	Implement ACAS II compliant with TCAS II change 7.1
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<u>Supporting material(s) :</u>	<p>EASA - AMC 20-15 - Airworthiness Certification Considerations for the Airborne Collision Avoidance System (ACAS II) with optional Hybrid Surveillance - ED Decision 2011/001/R / 03/2011 Url : http://www.easa.europa.eu/system/files/dfu/Annex II - AMC 20-15.pdf</p> <p>EUROCAE - ED-181 - Guidance for the Development of Airborne Collision Avoidance Systems 09/2010 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>EUROCAE - ED-143 Change 1 - Minimum Operational Performance Standards For Traffic Alert and Collision Avoidance 04/2009 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>RTCA - DO-185B - Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance System II (TCAS II) 08/2006 Url : http://www.rtca.org/store_list.asp</p> <p>RTCA - DO-185B-Change 1 - Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance System II (TCAS II) - Change 1 01/2007 Url : http://www.rtca.org/store_list.asp</p> <p>EASA - ETSO-C119c - Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS II - ED Decision 2009/015/R / 12/2009 Url : http://easa.europa.eu/system/files/dfu/ws_prod-g-doc-Agency_Mesures-Agency_Decisions-2009-cs_etso_5-Annex-II---ETSO.pdf</p> <p>EUROCAE - ED-143 - Volume I : Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance System II (TCAS II) Volume II : TCAS II Collision Avoidance System (CAS) Requirements Specification- Attachment A to Volume II 09/2008 Url : http://boutique.eurocae.net/catalog/index.php</p> <p>[PRO-AC-21]-Cockpit procedure for AP/FD TCAS</p>
<u>ATM Master Plan relationship :</u>	
<u>Finalisation criteria :</u>	<p>1 - Aircraft operators have received operational approval by the Competent Authorities, for ACAS II version 7.1 equipped aircraft.</p>

PCP		Active					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

This objective is functionally related to ATM Functionalities 3 and 5 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to their deployment target dates.

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.

The new ESSIP objective ATC17 complements the (mandatory) requirements of basic notification, coordination and transfer functionalities which are already covered in ESSIP objective ITY- COTR and regulated by Commission Regulation (EC) No 1032/2006.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States except: Slovak Republic

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 relationship

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	Covered by SLoA(s) in another objective	WXYZ-003	Not covered in the ESSIP Plan	
			zzz	ESSIP objective covering the enabler			

Applicable legislation

Commission Regulation (EC) No 1032/2006 of 06 July 2006 laying down requirements for the exchange of flight data for the purpose of notification,

ATC17	Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer
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coordination and transfer of flights between air traffic control units.

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
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 SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Reduction of human error.
Capacity :	Reduction of controller workload.
Cost effectiveness :	More efficient planning and operational decision making.
Environment :	N/A
Security :	N/A

Detailed SLoA descriptions

ATC17-ASP01	Develop safety assessment for the changes	From:	By:
		01/01/2013	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.

Derogations : None

Supporting material(s) : 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>

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/LexUriServ/LexUriServ.do?uri=OJ:L:2011:271:0023:0041:EN:PDF>

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 procedure (specifically PAC and COD)	From:	By:
		01/01/2013	31/12/2018

Action by : **ANS Providers**

ATC17	Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer
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<u>Description & purpose</u> :	When bilaterally agreed between ANSPs, upgrade and put into service ATC system to support the Basic procedure, specifically Preliminary Activation Message (PAC) and, if applicable, SSR Code Assignment Message (COD).
<u>Derogations</u> :	None
<u>Supporting material(s)</u> :	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 EUROCONTROL - System Supported Coordination (SYSCO) Implementation Guidelines - Edition 2.0 / 03/2011 Url : http://www.eurocontrol.int/articles/fasti-documents
<u>Finalisation criteria</u> :	1 - Ground systems have been upgraded with the functions to support Basic procedure, as identified by the individual administration from the following list: - PAC, COD. 2 - The technical file (TF) with evidences of compliance and the EC declaration of verification of systems (DoV) has been delivered to the competent National Supervisory Authority (NSA). 3 - The functions to support Basic procedure, as identified by the individual administration from the following list: - PAC, COD; have been documented and are in operational use with all partners in the applicability area.

ATC17-ASP03	Upgrade and put into service ATC system to support electronic dialogue procedure in Transfer of communication process	From:	By:
		01/01/2013	31/12/2018

<u>Action by</u> :	ANS Providers
<u>Description & purpose</u> :	When bilaterally agreed between ANSPs, upgrade and put into service ATC system to support electronic dialogue procedure in Transfer of communication process using OLDI.
<u>Derogations</u> :	None
<u>Supporting material(s)</u> :	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 EUROCONTROL - System Supported Coordination (SYSCO) Implementation Guidelines - Edition 2.0 / 03/2011 Url : http://www.eurocontrol.int/articles/fasti-documents
<u>Finalisation criteria</u> :	1 - Ground systems have been upgraded with the functions to support electronic dialogue procedure in Transfer of communication process using OLDI messages, as identified by the individual administration from the following list: - ROF, COF, TIM, HOP, MAS and SDM. 2 - The technical file (TF) with evidences of compliance and the EC declaration of verification of systems (DoV) has been delivered to the competent National Supervisory Authority (NSA). 3 - The functions to support the transfer and communication process as identified by the individual administration from the following list: - ROF, COF, TIM, HOP, MAS and SDM. have been documented and are in operational use.

ATC17-ASP04	Upgrade and put into service ATC system to support electronic dialogue procedure in Coordination process	From:	By:
		01/01/2013	31/12/2018

<u>Action by</u> :	ANS Providers
<u>Description & purpose</u> :	When bilaterally agreed between ANSPs, upgrade and put into service ATC system to support electronic dialogue procedure in Coordination process using OLDI.
<u>Derogations</u> :	None
<u>Supporting material(s)</u> :	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 EUROCONTROL - System Supported Coordination (SYSCO) Implementation Guidelines - Edition 2.0 / 03/2011 Url : http://www.eurocontrol.int/articles/fasti-documents [PRO-048]-ATC Procedures to implement screen to screen coordination for transfer of control conditions
<u>ATM Master Plan relationship</u> :	
<u>Finalisation criteria</u> :	1 - Ground systems have been upgraded with the functions to support electronic dialogue procedure in Coordination process using OLDI messages, as identified by the individual administration from the following list: - RAP, RRV, CDN, ACP, RJC and SBY. 2 - The technical file (TF) with evidences of compliance and the EC declaration of verification of systems (DoV) has been delivered to the competent National Supervisory Authority (NSA). 3 - The functions to support the coordination process as identified by the individual administration from the following list: - RAP, RRV, CDN, ACP, RJC and SBY; have been documented and are in operational use with all partners in the applicability area.

ATC17-ASP05	Train ATC staff for applying electronic dialogue procedure	From:	By:
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ATC17	Electronic Dialogue as Automated Assistance to Controller during Coordination and Transfer
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		01/01/2013	31/12/2018
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Action by :

ANS Providers

Description & purpose : Train operational staff in the use of electronic dialogue procedure. The tasks to be done are as follows:

- Develop a training package (material);
- Update the training plans;
- Determine staff population to be trained;
- Apply the training plans.

Derogations :

None

Supporting material(s) :

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>

EUROCONTROL - System Supported Coordination (SYSCO) Implementation Guidelines - Edition 2.0 / 03/2011

Url : <http://www.eurocontrol.int/articles/fasti-documents>

Finalisation criteria :

1 - The training plans have been updated and a training package has been developed by the ANSP for the use of electronic dialogue procedure

SESAR	Active					ECAC	
COM10	Migrate from AFTN to AMHS						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

The purpose of this objective is to enable EATM Network-wide support of a specific profile of the Extended level of service of the ATSMHS (ATS Message Handling Service), as defined by ICAO. An initial transition step supporting migration from the AFTN to the Basic ATSMHS level of service is foreseen.

AFTN, complemented in Europe by the CIDIN, has provided an effective store-and-forward messaging service for the conveyance of text messages, using character-oriented procedures, for many years. However AFTN / CIDIN technology is now becoming obsolescent, and is not sufficiently flexible to support future messaging requirements. It is intended that existing AFTN and CIDIN users and systems will transition to more modern technology, using the ATSMHS application, defined by ICAO to replace the AFTN telegraphic style of working with a store-and-forward Message Handling System based on international Standards and providing enhanced functionality.

This implementation objective makes use of the EUROCONTROL Specification 0136, Edition number 2.0 "EUROCONTROL specification on the Air Traffic Services Message Handling System (AMHS)" recognised as Community Specification in the Official Journal of the European Union (ref. OJ C 323, 31.12.2009, p. 24), to help the ground ATS Messaging systems of the EATM Network to meet the essential requirements for interoperability mandated by Commission Regulation (EC) No 552/2004. In application of Article 4 of Commission Regulation (EC) No 552/2004, compliance with the essential requirements for interoperability shall be presumed for AMHS systems, together with the associated procedures, that meet the AMHS Community Specification.

For global AMHS address management ICAO has strongly recommended the use of the ATS Messaging Management Centre (AMC) implemented by EUROCONTROL under the aegis of the ICAO EUR Office (Paris) to every ICAO Contracting State worldwide, as soon as there is an AMHS project or implementation in that State.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/12/2011

Applicability Area

Full operational capability

31/12/2014

Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -							
Enablers -	CTE-C06c							
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan		

Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
COM10-ASP01	Implement AMHS capability (Basic ATSMHS) and gateway facilities to AFTN	01/01/2002	31/12/2011
COM10-ASP02	Implement regional boundary gateways	01/01/2002	31/12/2011
COM10-ASP03	Enhance AMHS capability (Extended ATSMHS)	01/01/2012	31/12/2014
COM10-ASP04	Ensure the conformity of AMHS systems and associated procedures	01/01/2002	31/12/2014

COM10	Migrate from AFTN to AMHS
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COM10-ASP05	Organise personnel awareness and training	01/01/2002	31/12/2014
COM10-ASP06	Participate in AMC activities for ATS Messaging Management	01/01/2007	31/12/2014
COM10-IND01	Ensure the conformity of AMHS systems	01/01/2002	31/12/2014
COM10-AGY01	Provide AMC (ATS Messaging Management Centre) Service	01/01/2007	31/12/2014
COM10-AGY02	Implement AMHS capability (Basic ATSMHS) and gateway facilities to AFTN	FINALISED	
COM10-AGY03	Enhance AMHS capability (Extended ATSMHS)	01/01/2012	31/12/2014
COM10-AGY04	Develop further relevant elements of the Extended ATSMHS in AMHS Community Specification	01/01/2010	31/12/2011
COM10-AGY05	Implement AMHS-Community Specification compliance testing methodology and tools	01/01/2010	31/12/2011
COM10-AGY06	Support personnel training	01/01/2002	31/12/2014

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Benefits resulting from the application of a harmonised set of safety requirements
Capacity :	No or marginal benefits
Cost effectiveness :	Use of de-facto COTS messaging systems will reduce the cost of messaging services and support any kind of message format including the exchange of new binary data.
Environment :	No or marginal benefits
Security :	Within the Extended ATSMHS, AMHS security services, when implemented, may help to protect against safety hazards such as accidental or deliberate message corruption and can provide protection against undetected misdelivery.

Detailed SLoA descriptions

COM10-ASP01	Implement AMHS capability (Basic ATSMHS) and gateway facilities to AFTN	From:	By:
		01/01/2002	31/12/2011

Action by :	ANS Providers
Description & purpose :	Upgrade existing COM centres to provide AMHS capability and/or AFTN gateway facilities
Derogations :	None
Supporting material(s) :	ICAO - EUR-Doc 021 - ATS Messaging Management Manual - Edition 10 / 04/2014 Url : http://www.icao.int/EURNAT/Pages/EUR-and-NAT-Documents.aspx?RootFolder=%2FEURNAT%2FEUR%20and%20NAT%20Documents%2FEUR%20Documents%2F021%20%2D%20ATS%20Messaging%20Management%20Manual&FolderCTID=0x012000DAF95319EADD9946B510C5D7B595637D00AA5EB47B299B9A4BAD1968B24E18655C&View=%7b2666E7DD-5F4E-4E64-B16A-CF142A1E5BC9%7d ICAO - EUR-Doc 020 - EUR AMHS Manual - Edition 9 / 04/2014 Url : http://www.icao.int/EURNAT/Pages/EUR-and-NAT-Documents.aspx?RootFolder=%2FEURNAT%2FEUR%20and%20NAT%20Documents%2FEUR%20Documents%2F020%20%2D%20EUR%20AMHS%20Manual&FolderCTID=0x012000DAF95319EADD9946B510C5D7B595637D00AA5EB47B299B9A4BAD1968B24E18655C&View=%7b2666E7DD-5F4E-4E64-B16A-CF142A1E5BC9%7d EUROCONTROL - SPEC 136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.0 - OJ 2009/C 323/06 / 09/2009 Url : https://www.eurocontrol.int/articles/air-traffic-services-message-handling-system-amhs-specification ICAO - Doc 9880-Part II - Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols - Part II - Ground-Ground Applications - Air Traffic Services Message Handling Services (ATSMHS) - Edition 1 / 12/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx [CTE-C06c]-AMHS
ATM Master Plan relationship :	
Finalisation criteria :	1 - AMHS capability has been implemented, documented and in operational service.

COM10	Migrate from AFTN to AMHS
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COM10-ASP02	Implement regional boundary gateways	From:	By:
		01/01/2002	31/12/2011

Action by : **ANS Providers**

Description & purpose : Provide interfaces between the EUR AMHS and non-European AFTN as well as interfaces to AMHS networks outside the EUR Region. This action is applicable to ANSPs in ICAO EUR Region Boundary States.

Derogations : None

Supporting material(s) : ICAO - EUR-Doc 021 - ATS Messaging Management Manual - Edition 10 / 04/2014

Url :

<http://www.icao.int/EURNAT/Pages/EUR-and-NAT-Documents.aspx?RootFolder=%2FEURNAT%2FEUR%20and%20NAT%20Documents%2FEUR%20Documents%2F021%20%2D%20ATS%20Messaging%20Management%20Manual&FolderCTID=0x012000DAF95319EADD9946B510C5D7B595637D00AA5EB47B299B9A4BAD1968B24E18655C&View=%7b2666E7DD-5F4E-4E64-B16A-CF142A1E5BC9%7d>

ICAO - EUR-Doc 020 - EUR AMHS Manual - Edition 9 / 04/2014

Url :

<http://www.icao.int/EURNAT/Pages/EUR-and-NAT-Documents.aspx?RootFolder=%2FEURNAT%2FEUR%20and%20NAT%20Documents%2FEUR%20Documents%2F020%20%2D%20EUR%20AMHS%20Manual&FolderCTID=0x012000DAF95319EADD9946B510C5D7B595637D00AA5EB47B299B9A4BAD1968B24E18655C&View=%7b2666E7DD-5F4E-4E64-B16A-CF142A1E5BC9%7d>

EUROCONTROL - SPEC 136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.0 - OJ 2009/C 323/06 / 09/2009

Url : <https://www.eurocontrol.int/articles/air-traffic-services-message-handling-system-amhs-specification>

ICAO - Doc 9880-Part II - Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols - Part II - Ground-Ground Applications - Air Traffic Services Message Handling Services (ATSMHS) - Edition 1 / 12/2010

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

Finalisation criteria : 1 - Seamless cross-boundary operation of the ground ATS Messaging part of the AFS.

COM10-ASP03	Enhance AMHS capability (Extended ATSMHS)	From:	By:
		01/01/2012	31/12/2014

Action by : **ANS Providers**

Description & purpose : Upgrade the AMHS capability in existing COM centres to provide the Extended ATSMHS in accordance with the profile specified in the AMHS Community Specification.

Derogations : None

Supporting material(s) : ICAO - EUR-Doc 020 - EUR AMHS Manual - Edition 9 / 04/2014

Url :

<http://www.icao.int/EURNAT/Pages/EUR-and-NAT-Documents.aspx?RootFolder=%2FEURNAT%2FEUR%20and%20NAT%20Documents%2FEUR%20Documents%2F020%20%2D%20EUR%20AMHS%20Manual&FolderCTID=0x012000DAF95319EADD9946B510C5D7B595637D00AA5EB47B299B9A4BAD1968B24E18655C&View=%7b2666E7DD-5F4E-4E64-B16A-CF142A1E5BC9%7d>

EUROCONTROL - SPEC 136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.0 - OJ 2009/C 323/06 / 09/2009

Url : <https://www.eurocontrol.int/articles/air-traffic-services-message-handling-system-amhs-specification>

ICAO - Doc 9880-Part II - Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols - Part II - Ground-Ground Applications - Air Traffic Services Message Handling Services (ATSMHS) - Edition 1 / 12/2010

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

Finalisation criteria : 1 - Extended ATSMHS capability has been implemented, documented and in operational service.

COM10-ASP04	Ensure the conformity of AMHS systems and associated procedures	From:	By:
		01/01/2002	31/12/2014

Action by : **ANS Providers**

Description & purpose : Ensure that the AMHS systems and associated procedures comply with the AMHS Community Specification

Derogations : None

Supporting material(s) : ICAO - Doc 9880-Part IV - Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols - Part IV - Directory Services, Security and Systems Management - Edition 1 / 12/2010

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

EUROCONTROL - SPEC 136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.0 - OJ 2009/C 323/06 / 09/2009

Url : <https://www.eurocontrol.int/articles/air-traffic-services-message-handling-system-amhs-specification>

Finalisation criteria : 1 - EC declaration of verification has been provided.

COM10	Migrate from AFTN to AMHS
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COM10-ASP05	Organise personnel awareness and training	From:	By:
		01/01/2002	31/12/2014

<u>Action by :</u>	ANS Providers
<u>Description & purpose :</u>	Develop and maintain operations manuals and train personnel accordingly to ensure that: <ul style="list-style-type: none"> - All COM Centre personnel are adequately trained to AMHS technology; - An AMHS "expertise cell" is available in every COM Centre implementing AMHS; - All ANSP personnel involved in ATS Messaging Management (AMC activities) is adequately trained.
<u>Derogations :</u>	None
<u>Supporting material(s) :</u>	ICAO - EUR-Doc 021 - ATS Messaging Management Manual - Edition 10 / 04/2014 Url : http://www.icao.int/EURNAT/Pages/EUR-and-NAT-Documents.aspx?RootFolder=%2FEURNAT%2FEUR%20and%20NAT%20Documents%2FEUR%20Documents%2F021%20%2D%20ATS%20Messaging%20Management%20Manual&FolderCTID=0x012000DAF95319EADD9946B510C5D7B595637D00AA5EB47B299B9A4BAD1968B24E18655C&View=%7b2666E7DD-5F4E-4E64-B16A-CF142A1E5BC9%7d ICAO - EUR-Doc 020 - EUR AMHS Manual - Edition 9 / 04/2014 Url : http://www.icao.int/EURNAT/Pages/EUR-and-NAT-Documents.aspx?RootFolder=%2FEURNAT%2FEUR%20and%20NAT%20Documents%2FEUR%20Documents%2F020%20%2D%20EUR%20AMHS%20Manual&FolderCTID=0x012000DAF95319EADD9946B510C5D7B595637D00AA5EB47B299B9A4BAD1968B24E18655C&View=%7b2666E7DD-5F4E-4E64-B16A-CF142A1E5BC9%7d EUROCONTROL - SPEC 136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.0 - OJ 2009/C 323/06 / 09/2009 Url : https://www.eurocontrol.int/articles/air-traffic-services-message-handling-system-amhs-specification EUROCONTROL - IANS-COM-AMHS Course Url : https://trainingzone.eurocontrol.int
<u>Finalisation criteria :</u>	1 - All COM Centre personnel have been adequately trained to AMHS technology. 2 - An AMHS "expertise cell" has been established in every COM Centre implementing AMHS. 3 - All ANSP personnel involved in ATS Messaging Management (AMC activities) has been adequately trained.

COM10-ASP06	Participate in AMC activities for ATS Messaging Management	From:	By:
		01/01/2007	31/12/2014

<u>Action by :</u>	ANS Providers
<u>Description & purpose :</u>	Use the services of the ATS Messaging Management Centre (AMC) for AMHS off-line management
<u>Derogations :</u>	None
<u>Supporting material(s) :</u>	ICAO - EUR-Doc 021 - ATS Messaging Management Manual - Edition 10 / 04/2014 Url : http://www.icao.int/EURNAT/Pages/EUR-and-NAT-Documents.aspx?RootFolder=%2FEURNAT%2FEUR%20and%20NAT%20Documents%2FEUR%20Documents%2F021%20%2D%20ATS%20Messaging%20Management%20Manual&FolderCTID=0x012000DAF95319EADD9946B510C5D7B595637D00AA5EB47B299B9A4BAD1968B24E18655C&View=%7b2666E7DD-5F4E-4E64-B16A-CF142A1E5BC9%7d
<u>Finalisation criteria :</u>	1 - AMC Procedures for Cooperating COM Centres (CCC) operators have been implemented as defined in the ATS Messaging Management Manual.

COM10-IND01	Ensure the conformity of AMHS systems	From:	By:
		01/01/2002	31/12/2014

<u>Action by :</u>	Industry
<u>Description & purpose :</u>	AMHS system manufacturers to ensure that the available AMHS systems comply with the AMHS Community Specification.
<u>Derogations :</u>	None
<u>Supporting material(s) :</u>	EUROCONTROL - SPEC 136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.0 - OJ 2009/C 323/06 / 09/2009 Url : https://www.eurocontrol.int/articles/air-traffic-services-message-handling-system-amhs-specification ICAO - Doc 9880-Part IV - Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols - Part IV - Directory Services, Security and Systems Management - Edition 1 / 12/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx
<u>Finalisation criteria :</u>	1 - Test reports have been completed in accordance with AMHS Community Specification and testing methodology and tools ensured by the EUROCONTROL Agency. 2 - An EC declaration of conformity has been provided.

COM10	Migrate from AFTN to AMHS
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COM10-AGY01	Provide AMC (ATS Messaging Management Centre) Service	From:	By:
		01/01/2007	31/12/2014

Action by : **EUROCONTROL Agency**

Description & purpose : Provide AMHS off-line network management service defined in the ATS Messaging Management Manual (ICAO EUR Doc 021)

Derogations : None

Supporting material(s) : ICAO - EUR-Doc 021 - ATS Messaging Management Manual - Edition 10 / 04/2014

Url :

<http://www.icao.int/EURNAT/Pages/EUR-and-NAT-Documents.aspx?RootFolder=%2FEURNAT%2FEUR%20and%20NAT%20Documents%2FEUR%20Documents%2F021%20%2D%20ATS%20Messaging%20Management%20Manual&FolderCTID=0x012000DAF95319EADD9946B510C5D7B595637D00AA5EB47B299B9A4BAD1968B24E18655C&View=%7b2666E7DD-5F4E-4E64-B16A-CF142A1E5BC9%7d>

Finalisation criteria : 1 - Positive indication in AMC user's satisfaction surveys

COM10-AGY03	Enhance AMHS capability (Extended ATSMHS)	From:	By:
		01/01/2012	31/12/2014

Action by : **EUROCONTROL Agency**

Description & purpose : Upgrade the AMHS capability in existing CFMU COM centres to provide the Extended ATSMHS in accordance with the profile specified in the AMHS Community Specification

Derogations : None

Supporting material(s) : EUROCONTROL - SPEC 136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.0 - OJ 2009/C 323/06 / 09/2009

Url : <https://www.eurocontrol.int/articles/air-traffic-services-message-handling-system-amhs-specification>

ICAO - Doc 9880-Part II - Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols - Part II - Ground-Ground Applications - Air Traffic Services Message Handling Services (ATSMHS) - Edition 1 / 12/2010

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

Finalisation criteria : 1 - Extended ATSMHS capability has been implemented and put in operational service.

COM10-AGY04	Develop further relevant elements of the Extended ATSMHS in AMHS Community Specification	From:	By:
		01/01/2010	31/12/2011

Action by : **EUROCONTROL Agency**

Description & purpose : Developed additional requirements regarding functionality of the relevant elements of the Extended ATSMHS and complete AMHS Community specification accordingly.
This refers to a set of testing requirements, conformance, interoperability and pre-operational tests covering the Extended ATSMHS.

Derogations : None

Supporting material(s) : EUROCONTROL - SPEC 136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.0 - OJ 2009/C 323/06 / 09/2009

Url : <https://www.eurocontrol.int/articles/air-traffic-services-message-handling-system-amhs-specification>

Finalisation criteria : 1 - AMHS Community Specification has been updated with the relevant elements of the Extended ATSMHS.

COM10-AGY05	Implement AMHS-Community Specification compliance testing methodology and tools	From:	By:
		01/01/2010	31/12/2011

Action by : **EUROCONTROL Agency**

Description & purpose : Take measures to ensure availability of test tools with adequate functionality with regard to AMHS Community Specification (particularly regarding Extended ATSMHS)
Develop and implement testing methodology enabling Industry manufacturers and ANS Providers to execute AMHS Community Specification conformance tests

Derogations : None

Supporting material(s) : EUROCONTROL - SPEC 136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.0 - OJ 2009/C 323/06 / 09/2009

Url : <https://www.eurocontrol.int/articles/air-traffic-services-message-handling-system-amhs-specification>

Finalisation criteria : 1 - Test tool has been made available.

COM10	Migrate from AFTN to AMHS
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COM10-AGY06	Support personnel training	From:	By:
		01/01/2002	31/12/2014

Action by : **EUROCONTROL Agency**
Description & purpose : Support AMHS training of personnel in ANS Providers, including operational procedures
Derogations : None
Finalisation criteria : 1 - Most people working in AFTN/CIDIN environment have been trained on AMHS before 2011.

SESAR		Active					ECAC	
COM11		Implementation of Voice over Internet Protocol (VoIP) in ATM						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

Within pre-SWIM evolutions and preparation of SWIM implementation, the purpose of this ESSIP implementation objective is to ensure that all ECAC States implement ATM-VoIP, which provides the appropriate signalisation required for ATM voice communication.

The initiative covers inter centre (encompassing all type of ATM Units) voice communication and the links with the ground radio stations

Inter centres voice communications are currently mainly performed via analogue circuits. In 2003, to implement digital communications, the ATS-QSIG protocol has been chosen to replace part of these communications. At present and in order to follow the evolution of the communication technologies, VoIP is identified as being the medium term standard for ground telephony and ground segment of the Air-Ground voice. Industry has already developed a standard for ATM-VoIP. The standard shall still be validated as part of SESAR JU WP15.2.10, but several ANSPs expressed their wish to migrate quickly to ATM-VoIP for ground telephony and the ground segment of the Air-Ground voice.

Furthermore, a number of Telecommunication Service Providers (TELCO-s) are planning to phase out analogue and digital 64k circuits that support current analogue and digital ATM voice services. It is expected that current services will begin to be phased out in a number of the ECAC States. A replacement of current analogue and digital ATM voice services with a common standard is therefore strongly needed at European level.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2013

Applicability Area

Full operational capability

31/12/2020

Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -							
Enablers -	CTE-C05a							
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan		

Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
COM11-REG01	Conduct safety oversight of the changes	DELETED	
COM11-ASP01	Develop safety assessment for the changes	01/01/2012	31/12/2018
COM11-ASP02	Notify to the Regulator the planned means & date of Initial and Full Operational Capability	01/01/2012	31/12/2012
COM11-ASP03	Upgrade and put into service Voice Communication Systems to support VoIP inter-centre telephony	01/01/2013	31/12/2020
COM11-ASP04	Upgrade and put into service Voice Communication Systems to support VoIP links to the ground radio stations	01/01/2013	31/12/2020

COM11	Implementation of Voice over Internet Protocol (VoIP) in ATM
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Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Maintained or improved by providing enhanced signalisation functions.
Capacity :	Maintained or improved by providing enhanced signalisation functions. Prerequisite of dynamic sectorisation through dynamic allocation of voice resources.
Cost effectiveness :	Reduced costs by reusing Internet off the shelf technologies that can be based on standard hardware.
Environment :	Enabler for dynamic sectorisations in Functional Block of Airspace (FAB).
Security :	N/A

Detailed SLoA descriptions

COM11-ASP01	Develop safety assessment for the changes	From:	By:
		01/01/2012	31/12/2018

Action by :	ANS Providers
Description & purpose :	<p>Develop safety assessment of the changes, notably upgrades of voice communication systems to support VoIP both for inter-centre telephony and AG radio communication. The tasks to be done are as follows:</p> <ul style="list-style-type: none"> - 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. <p>This safety assessment shall be based on fully validated/recognised method.</p>
Derogations :	None
Supporting material(s) :	<p>EUROCONTROL - EAM 4 - ESARR 4 - Risk Assessment and Mitigation in ATM - Edition 1.0 / 04/2001</p> <p>Url : http://www.eurocontrol.int/articles/esarr-4-risk-assessment-and-mitigation-atm</p> <p>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</p> <p>Url : http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:271:0023:0041:EN:PDF</p>
Finalisation criteria :	1 - The Safety argument for all changes, generated by the deployment of VoIP, has been delivered by the ANSP to the NSA.

COM11-ASP02	Notify to the Regulator the planned means & date of Initial and Full Operational Capability	From:	By:
		01/01/2012	31/12/2012

Action by :	ANS Providers
Description & purpose :	<p>Notify their National Regulator their plan to migrate to VoIP. In this respect they will have to:</p> <ul style="list-style-type: none"> - Prepare internal business and safety cases for their National Regulator; - Stipulate the target date for Initial Operational Capability and foreseen date for Full operational Capability.
Derogations :	None
Supporting material(s) :	<p>EUROCAE - ED-137B - Interoperability Standards for VoIP ATM Components (Volume 1: Radio - Volume 2: Telephone - Volume 3: European Legacy Telephone Interworking - Volume 4: Recording - Volume 5: Supervision) 01/2012</p> <p>Url : http://boutique.eurocae.net/catalog/index.php</p> <p>EUROCAE - ED-138 - Network Requirements and Performances for Voice over Internet Protocol (VoIP) Air Traffic Management (ATM) Systems (Part 1: Network Specification – Part 2: Network Design Guideline) - 28.02.2009</p> <p>Url : http://boutique.eurocae.net/catalog/index.php</p> <p>EUROCAE - ED-136 - Voice over Internet Protocol (VoIP) Air Traffic Management (ATM) System Operational and Technical Requirements 02/2009</p> <p>Url : http://boutique.eurocae.net/catalog/index.php</p>
Finalisation criteria :	1 - The National Regulator has been informed by the ANSP of the planned means & date of Initial and Full Operational Capability.

COM11-ASP03	Upgrade and put into service Voice Communication Systems to support VoIP inter-centre telephony	From:	By:
		01/01/2013	31/12/2020

Action by :	ANS Providers
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COM11	Implementation of Voice over Internet Protocol (VoIP) in ATM
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Description & purpose : Upgrade and put into service voice communication systems which support VoIP inter-centre telephony which will enable the deployment of system enablers listed in -References- section. The tasks to be done are as follows:

- Define requirements which fit with operational/technical context and are based on relevant standards;
- Upgrade voice communication systems to comply with defined requirements;
- Implement or purchase IP network services to enable international communication exchange on IPS based protocol;
- Purchase and install VCS equipment and/or gateways able to support VoIP in ATM;
- Implement the necessary IPv4/IPv6 translation device if required;
- Test voice required connectivity and performance;
- Update VoIP addressing information in the EUROCONTROL AGVN web-database;
- Verify compliance with Interoperability Regulation(s);
- Integrate upgraded voice communication systems into the EATM Network;
- Put into service upgraded voice communication systems.

The upgraded voice communication systems and their HMI shall enable the operators to perform the inter-centre communication using VoIP telephony at all types of ATS units.

Report yearly the actual achieved performance for implemented VoIP in ATM to the EUROCONTROL Agency.

Derogations : None

Supporting material(s) : EUROCONTROL - SIP v ATS-QSIG Gateway Interworking Test Specification - Edition 2 / 12/2013
 Url : <https://www.eurocontrol.int/articles/atm-voice-0>
 EUROCONTROL - Guidelines on Conformity Assessment for the Interoperability Regulation of the Single European Sky - Edition 3.0 / 02/2012
 Url : <http://www.eurocontrol.int/publications/conformity-assessment-guidelines>
 EUROCONTROL - SIP v ATS-R2 Gateway Interworking Test Specification - Edition 2 / 12/2013
 Url : <https://www.eurocontrol.int/articles/atm-voice-0>
 EUROCONTROL - VOTER - Edition 2.7 / 02/2014
 Url : <https://www.eurocontrol.int/articles/atm-voice-0>
 EUROCONTROL - VoIP in ATM Cross-Reference Matrix - Edition 2.0 / 12/2013
 Url : <https://www.eurocontrol.int/articles/atm-voice-0>
 EUROCONTROL - VoIP in ATM Telephony Test case specification - Edition 2 / 12/2013
 Url : <https://www.eurocontrol.int/articles/atm-voice-0>

ATM Master Plan relationship :

Finalisation criteria : 1 - Voice communications systems have been upgraded.
 2 - The technical file (TF) with evidences of compliance and the EC declaration of verification of systems (DoV) has been delivered to the competent National Supervisory Authority (NSA).
 3 - Upgraded voice communication systems have been put into service.

COM11-ASP04	Upgrade and put into service Voice Communication Systems to support VoIP links to the ground radio stations	From:	By:
		01/01/2013	31/12/2020

Action by : **ANS Providers**

Description & purpose : Upgrade and put into service voice communication systems which support VoIP links to the ground radio stations which will enable the deployment of system enablers listed in -References- section. The tasks to be done are as follows:

- Define requirements which fit with operational/technical context and are based on relevant standards;
- Upgrade voice communication systems to comply with defined requirements;
- Implement or purchase IP network services to enable international communication exchange on IPS based protocol;
- Purchase and install VCS and GRS equipment and/or gateways able to support VoIP in ATM;
- Implement the necessary IPv4/IPv6 translation device if required;
- Test voice required connectivity and performance including AG ground segment voice application;
- Updating VoIP addressing information in the EUROCONTROL AGVN web-database;
- Verify compliance with Interoperability Regulation(s);
- Integrate upgraded voice communication systems into the EATM Network;
- Put into service upgraded voice communication systems.

The upgraded voice communication systems shall enable the operators to perform AG radio communication using VoIP links between VCS and ground radio stations.

Report yearly the actual achieved performance for implemented VoIP in ATM to the EUROCONTROL Agency.

Derogations : None

COM11	Implementation of Voice over Internet Protocol (VoIP) in ATM
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<u>Supporting material(s)</u> :	<p>EUROCONTROL - Guidelines on Conformity Assessment for the Interoperability Regulation of the Single European Sky - Edition 3.0 / 02/2012</p> <p>Url : http://www.eurocontrol.int/publications/conformity-assessment-guidelines</p> <p>EUROCONTROL - VOTER - Edition 2.7 / 02/2014</p> <p>Url : https://www.eurocontrol.int/articles/atm-voice-0</p> <p>EUROCONTROL - VoIP in ATM Cross-Reference Matrix - Edition 2.0 / 12/2013</p> <p>Url : https://www.eurocontrol.int/articles/atm-voice-0</p> <p>EUROCONTROL - VoIP in ATM Telephony Test case specification - Edition 2 / 12/2013</p> <p>Url : https://www.eurocontrol.int/articles/atm-voice-0</p>
<u>Finalisation criteria</u> :	<p>1 - Voice communications systems upgraded.</p> <p>2 - The technical file (TF) with evidences of compliance and the EC declaration of verification of systems (DoV) has been delivered to the competent National Supervisory Authority (NSA).</p> <p>3 - Upgraded voice communication systems put into service.</p>

SESAR		Active					APT	
ENV01		Implement Continuous Descent Operations (CDO) techniques for environmental improvements						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

When applied at an airport, CDO offers a flexible and simple continuous descent approach technique that does not adversely affect safety and capacity and will produce a number of environmental and cost benefits including reductions to fuel burn, gaseous emissions and noise impact.

(1). Since the publication of ICAO Doc 9931, the term Continuous Descent Operations (CDO) has generally replaced the term CDA (Continuous Descent Approach).

Note: (2). In principle, it is not required to implement CDO on a 24/7 basis, but is preferable, wherever possible. Depending on National legislation and/or National court decisions and/or local constraints at airports, a limited introduction, for example during night time, is considered equally valid.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

See list in ESSIP Plan - Part I Section 4

Timescales:

Initial operational capability
Full operational capability

From:

01/07/2007

By:

31/12/2013

Applicable to:

Applicability Area
Applicability Area

References

European ATM Master Plan relationship

OI step -	[AOM-0701]-Continuous Descent Approach (CDA)						
	Enablers -						
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002	Covered by SLoA(s) in another objective	WXYZ-003	Not covered in the ESSIP Plan	
			zzz	ESSIP objective covering the enabler			

Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

EC Directive 2002/30/EC, dated 20.03.2002 on the establishment of rules and procedures with regard to the introduction of noise-related operating restrictions at Community airports.

EC Directive 2002/49/EC, dated 25.06.2002 relating to the assessment and management of environmental noise.

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
ENV01-ASP01	Coordinate activities and implement rules and procedures for the application of CDO techniques whenever practicable in Approach Control Service in close co-operation with aircraft operators	01/07/2007	31/12/2013
ENV01-ASP02	Train controllers in the application of CDO techniques whenever practicable	01/07/2007	31/12/2013
ENV01-APO01	Support CDO measures; implement monitoring of performance and feedback to ANSP and users where equipment is available. Provide the main link with the local community	01/07/2007	31/12/2013
ENV01-USE01	Include CDO techniques in the aircrew training manual and support its implementation wherever possible	01/07/2007	31/12/2013

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

ENV01	Implement Continuous Descent Operations (CDO) techniques for environmental improvements
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Safety :	Prevention of local rules and local procedures proliferation
Capacity :	Alleviating, avoiding and complying with environmental restrictions that may result in a capacity constraint at an airport.
Cost effectiveness :	Reduction of fuel burn and potentially reduced mitigation costs reduced social costs from adverse impacts and improved indirect/induced capacity related economic benefits. CDO is a low cost measure with no equipment upgrade needed.
Environment :	Reduction of fuel, noise and atmospheric emissions due to lower drag and thrust facilitated by this initiative. Indications are a reduction of around 40% fuel for the segments for flights affected, and 5-6 dB for noise
Security :	N/A

Detailed SloA descriptions

ENV01-ASP01	Coordinate activities and implement rules and procedures for the application of CDO techniques whenever practicable in Approach Control Service in close co-operation with aircraft operators	From:	By:
		01/07/2007	31/12/2013

Action by :	ANS Providers
Description & purpose :	Provide the tactical and operational situational awareness support to allow aircrew to apply CDO.
Derogations :	None
Supporting material(s) :	EUROCONTROL - European Joint Industry CDA Action Plan Url : http://www.eurocontrol.int/publications/european-joint-industry-cda-action-plan ICAO - Doc 9931 - Continuous Descent Operations (CDO) Manual - Edition 1 / 12/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx
Finalisation criteria :	1 - CDO procedures have been published in the local/State AIP.

ENV01-ASP02	Train controllers in the application of CDO techniques whenever practicable	From:	By:
		01/07/2007	31/12/2013

Action by :	ANS Providers
Description & purpose :	Train controllers in the application of CDO.
Derogations :	None
Supporting material(s) :	ICAO - Doc 9931 - Continuous Descent Operations (CDO) Manual - Edition 1 / 12/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx EUROCONTROL - European Joint Industry CDA Action Plan Url : http://www.eurocontrol.int/publications/european-joint-industry-cda-action-plan EUROCONTROL - IANS-ENV-INTRO-Introduction to Environment -e-learning training course 12/2012 Url : https://trainingzone.eurocontrol.int/
Finalisation criteria :	1 - Approach Controllers have been suitably trained in the CDO techniques.

ENV01-APO01	Support CDO measures, implement monitoring of performance and feedback to ANSP and users where equipment is available. Provide the main link with the local community	From:	By:
		01/07/2007	31/12/2013

Action by :	Airport Operators
Description & purpose :	In partnership with ANSPs and airlines select the most appropriate form of CDO from guidance material, to support activities and to report performance feedback to allow continual improvement.
Derogations :	None
Supporting material(s) :	ICAO - Doc 9931 - Continuous Descent Operations (CDO) Manual - Edition 1 / 12/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx EUROCONTROL - European Joint Industry CDA Action Plan Url : http://www.eurocontrol.int/publications/european-joint-industry-cda-action-plan
Finalisation criteria :	1 - CDO procedures have been published in the local/State AIP.

ENV01-USE01	Include CDO techniques in the aircrew training manual and support its implementation wherever possible	From:	By:
		01/07/2007	31/12/2013

Action by :	Airspace Users
Description & purpose :	Provide suitable training, ensure awareness and encourage application of CDO techniques.
Derogations :	None

ENV01	Implement Continuous Descent Operations (CDO) techniques for environmental improvements
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Supporting material(s) : ICAO - Doc 9931 - Continuous Descent Operations (CDO) Manual - Edition 1 / 12/2010
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 EUROCONTROL - European Joint Industry CDA Action Plan
 Url : <http://www.eurocontrol.int/publications/european-joint-industry-cda-action-plan>
 EUROCONTROL - IANS-ENV-INTRO-Introduction to Environment -e-learning training course 12/2012
 Url : <https://trainingzone.eurocontrol.int/>

Finalisation criteria : 1 - CDO techniques have been integrated in the aircrew training manual.

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SESAR		Active					APT	
ENV02		Implement Collaborative Environmental Management (CEM) at Airports						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

Formal working partnership arrangements between ANSP, Airport and Aircraft Operators will be established at individual airports to enable :

- the minimisation of noise and atmospheric emissions (including fuel burn); and
 - the management of aircraft and airfield de-icing resulting from combined aircraft operations at the terminal airspace and ground.
- These formal working arrangements will enable understanding and awareness of interdependencies and facilitate jointly agreed solutions for environmental improvements.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

See list in ESSIP Plan - Part I Section 4

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/09/2004

Applicability Area

Full operational capability

31/12/2016

Applicability Area

References

European ATM Master Plan relationship

OI step -	[AO-0703]-Aircraft Environmental Impact Management and Mitigation at and around Airports								
Enablers -	A/C-53	ENV-05	ENV-06	ENV-08	ENV-17	PRO-AC-53	PRO-ENV-1 2a	PRO-ENV-1 2b	
	PRO-ENV-1 3a	PRO-ENV-1 3b	PRO-190						

OI step -	[AO-0705]-Reduced Water Pollution								
Enablers -	AIRPORT-3 4	ENV-06	ENV-17	PRO-075					

OI step -	[AO-0706]-(Local) Monitoring of Environmental Performance								
Enablers -	AIRPORT-3 4	ENV-06	ENV-07	ENV-17					

Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan
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Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

Regulation (EU) 598/2014 of the European Parliament and of the Council of 16 April 2014 on the establishment of rules and procedures with regard to the introduction of noise-related operating restrictions at Union airports within a Balanced Approach and repealing Directive 2002/30/EC.

EC Directive 2002/30/EC, dated 20.03.2002 on the establishment of rules and procedures with regard to the introduction of noise-related operating restrictions at Community airports.

EC Directive 2002/49/EC, dated 25.06.2002 relating to the assessment and management of environmental noise.

EC Directive 2008/50/EC, dated 21.05.2008 on ambient air quality and cleaner air for Europe.

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
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ENV02	Implement Collaborative Environmental Management (CEM) at Airports		
ENV02-ASP01	Participate actively in formal working partnership arrangements with the Airport and Aircraft Operators to manage and control environmental impacts of air traffic procedures in and around the airport.	01/01/2009	31/12/2015
ENV02-ASP02	Train controllers in the environmental impacts of aircraft operations	01/01/2009	31/12/2016
ENV02-APO01	Initiate and participate actively in the formal working partnership arrangements with the ANSP and Aircraft Operators to minimise the environmental impact of air traffic procedures	01/01/2009	31/12/2015
ENV02-APO02	Ensure appropriate and relevant performance information availability at Airports	01/01/2009	31/12/2016
ENV02-APO03	Ensure appropriate Airport policy and procedures and, if required, relevant infrastructures needed to manage and mitigate pollution due to de-icing activities	01/01/2012	31/12/2016
ENV02-APO04	Train airport operational staff in the environmental impacts of aircraft operations	01/01/2012	31/12/2016
ENV02-USE01	Participate actively in the formal working partnership arrangements with the ANSP and Airport to manage and control the environmental impact of aircraft operations.	01/01/2009	31/12/2015
ENV02-AGY01	Provide assistance and guidelines to assist airports in setting up formal partnership arrangements between ATSP, Airport and Aircraft Operators for achieving control of environmental impact mitigation	FINALISED	

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Prevention of the risk of uncoordinated procedures design.
Capacity :	Alleviating or preventing environmental restrictions that may result in capacity constraints at airports.
Cost effectiveness :	Reduction of fuel burn and CO2, improved management efficiency, reduced social costs from adverse impacts and improved indirect/induced capacity related economic benefits. Improves awareness and understanding of interdependencies that can facilitate cost effective solutions. Overall benefits of ESAO identified within APR BCA document, CEM is fundamental to the achievement of these benefits.
Environment :	Reduction of fuel use, noise, emissions and de-icing water pollution resulting from a structured collaborative approach that jointly identifies effective operational solutions for implementation.
Security :	N/A

Detailed SLoA descriptions

ENV02-ASP01	Participate actively in formal working partnership arrangements with the Airport and Aircraft Operators to manage and control environmental impacts of air traffic procedures in and around the airport.	From:	By:
		01/01/2009	31/12/2015

Action by : **ANS Providers**

Description & purpose : Enter into formal CEM working arrangements. At the same time provide proactive practical support to minimise environmental impact and secure or safeguard ATM capacity in supporting compliance to the relevant legislation. Participation in CEM should be endorsed and supported by senior management. The purpose of CEM is to facilitate collaboration between the key operational stakeholders at airports to address the environmental impacts caused by their combined air traffic operations. The CEM working arrangements can provide timely and accurate operational or environmental information that is relevant to locally identified and jointly agreed issues. These can include aircraft noise, de-icing, fuel use and atmospheric emissions or any other ATM related environmental imperative that is locally important.
Note: Awareness and understanding of interdependencies. Jointly agreed environmental objectives, solutions and delivery plan, new procedures and trials, provision of data.

Derogations : None

ENV02	Implement Collaborative Environmental Management (CEM) at Airports
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<u>Supporting material(s)</u> :	ICAO - Doc 9889 - Airport Air Quality Manual - Edition 1 / 01/2012 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9184-Part 2 - Airport Planning Manual - Part 2 - Land Use and Environmental Control - Edition 3 / 03/2009 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statement of continuing ICAO policies and practices related to environmental protection - General provisions, noise and local air quality 10/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9993 - Continuous Climb Operations (CCO) Manual - Edition 1 / 11/2013 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition / 12/1995 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9829 - Guidance on the Balanced Approach to Aircraft Noise Management - Edition 2 / 10/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : http://www.icao.int/publications/Pages/catalogue.aspx EUROCONTROL - SPEC-156 - EUROCONTROL Specification for Collaborative Environmental Management (CEM) - 1.0 Url : http://www.eurocontrol.int/sites/default/files/content/documents/single-sky/specifications/20140908-cem-spec-v1.0.pdf <u>ATM Master Plan relationship</u> : [ENV-05]-Guidance for community relations at airports [ENV-06]-Central environmental guidance web-portal [ENV-08]-Commonly agreed assessment methods [PRO-ENV-12b]-Exploiting new ATM and aircraft capabilities to optimise the aircraft noise footprint at airports (Airports) [PRO-ENV-13b]-Airport Procedures for exploiting new ATM and aircraft capabilities with a view to optimising atmospheric emissions from aircraft operations [PRO-190]-ATC Procedures for Managing Environmental Noise Capacity <u>Finalisation criteria</u> : 1 - A Local Memorandum of Understanding (MoU) or Memorandum of Cooperation (MoC) along with a Terms of Reference (TOR) document detailing the working arrangement or document of similar authority covering the implementation of CEM officially signed by the key operational stakeholders
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ENV02-ASP02	Train controllers in the environmental impacts of aircraft operations	From:	By:
		01/01/2009	31/12/2016

<u>Action by</u> :	ANS Providers
<u>Description & purpose</u> :	Provide a regular training course in accordance with demand. This should include potentially aircraft noise, aircraft and airfield de-icing, aircraft fuel use and atmospheric emissions or any other ATM related environment imperative locally planned.
<u>Deroptions</u> :	None
<u>Supporting material(s)</u> :	ICAO - Doc 9889 - Airport Air Quality Manual - Edition 1 / 01/2012 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9184-Part 2 - Airport Planning Manual - Part 2 - Land Use and Environmental Control - Edition 3 / 03/2009 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statement of continuing ICAO policies and practices related to environmental protection - General provisions, noise and local air quality 10/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9993 - Continuous Climb Operations (CCO) Manual - Edition 1 / 11/2013 Url : http://www.icao.int/publications/Pages/catalogue.aspx EUROCONTROL - SPEC-156 - EUROCONTROL Specification for Collaborative Environmental Management (CEM) - 1.0 Url : http://www.eurocontrol.int/sites/default/files/content/documents/single-sky/specifications/20140908-cem-spec-v1.0.pdf ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition / 12/1995 Url : http://www.icao.int/publications/Pages/catalogue.aspx EUROCONTROL - Environmental Awareness Training Package Url : https://trainingzone.eurocontrol.int/env-catalogue.htm EUROCONTROL - European Joint Industry CDA Action Plan Url : http://www.eurocontrol.int/publications/european-joint-industry-cda-action-plan ICAO - Doc 9829 - Guidance on the Balanced Approach to Aircraft Noise Management - Edition 2 / 10/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : http://www.icao.int/publications/Pages/catalogue.aspx

ENV02	Implement Collaborative Environmental Management (CEM) at Airports
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Finalisation criteria : 1 - Continuous or refresher controller awareness training on the environmental impacts of aircraft operations has been implemented.

ENV02-APO01	Initiate and participate actively in the formal working partnership arrangements with the ANSP and Aircraft Operators to minimise the environmental impact of air traffic procedures	From:	By:
		01/01/2009	31/12/2015

Action by : **Airport Operators**

Description & purpose : Initiate and promulgate formal CEM partnership working arrangements with key operational stakeholders in order to facilitate understanding and awareness of interdependencies and enable collaborative solutions at airports to address the environmental impacts caused by combined air traffic operations. At the same time provide proactive practical mutual support to each other to minimise environmental impacts and secure or safeguard ATM capacity whilst facilitating compliance to relevant legislation. This can include aircraft noise, de-icing, fuel use and atmospheric emissions or any other ATM related environment impact that is identified locally as important and planned to be covered by CEM. CEM working arrangements should be endorsed and supported by senior management.

Note: Awareness and understanding of interdependencies. Jointly agreed environmental objectives, solutions and delivery plan, new procedures and trials, provision of data.

Derogations : None

Supporting material(s) : ICAO - Doc 9889 - Airport Air Quality Manual - Edition 1 / 01/2012

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

ICAO - Doc 9184-Part 2 - Airport Planning Manual - Part 2 - Land Use and Environmental Control - Edition 3 / 03/2009

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statement of continuing ICAO policies and practices related to environmental protection - General provisions, noise and local air quality 10/2010

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

ICAO - Doc 9993 - Continuous Climb Operations (CCO) Manual - Edition 1 / 11/2013

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

EUROCONTROL - SPEC-156 - EUROCONTROL Specification for Collaborative Environmental Management (CEM) - 1.0

Url :

<http://www.eurocontrol.int/sites/default/files/content/documents/single-sky/specifications/20140908-cem-spec-v1.0.pdf>

ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition / 12/1995

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

ICAO - Doc 9829 - Guidance on the Balanced Approach to Aircraft Noise Management - Edition 2 / 10/2010

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

ATM Master Plan relationship : [\[PRO-ENV-12b\]-Exploiting new ATM and aircraft capabilities to optimise the aircraft noise footprint at airports \(Airports\)](#)

Finalisation criteria : 1 - A Local Memorandum of Understanding (MoU) or Memorandum of Cooperation (MoC) along with a Terms of Reference (TOR) document detailing the working arrangement or document of similar authority covering the implementation of CEM officially signed by the key operational stakeholders

ENV02-APO02	Ensure appropriate and relevant performance information availability at Airports	From:	By:
		01/01/2009	31/12/2016

Action by : **Airport Operators**

Description & purpose : In accordance with locally agreed CEM priorities, ensure the availability of timely, accurate and relevant environmental information. This may entail investment in appropriate environmental monitoring or modelling systems at Airports in order to record and monitor locally significant environmental impacts that could include noise, emissions, air quality, etc. This data availability is essential in support of the continuous performance improvement process. In particular, it should be possible to determine the amount of airport related versus external pollution.

Derogations : None

ENV02	Implement Collaborative Environmental Management (CEM) at Airports
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<u>Supporting material(s)</u> :	ICAO - Doc 9889 - Airport Air Quality Manual - Edition 1 / 01/2012 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9184-Part 2 - Airport Planning Manual - Part 2 - Land Use and Environmental Control - Edition 3 / 03/2009 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statement of continuing ICAO policies and practices related to environmental protection - General provisions, noise and local air quality 10/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9993 - Continuous Climb Operations (CCO) Manual - Edition 1 / 11/2013 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition / 12/1995 Url : http://www.icao.int/publications/Pages/catalogue.aspx EUROCONTROL - European Joint Industry CDA Action Plan Url : http://www.eurocontrol.int/publications/european-joint-industry-cda-action-plan ICAO - Doc 9829 - Guidance on the Balanced Approach to Aircraft Noise Management - Edition 2 / 10/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : http://www.icao.int/publications/Pages/catalogue.aspx EUROCONTROL - SPEC-156 - EUROCONTROL Specification for Collaborative Environmental Management (CEM) - 1.0 Url : http://www.eurocontrol.int/sites/default/files/content/documents/single-sky/specifications/20140908-cem-spec-v1.0.pdf [AIRPORT-34]-Airport equipped with (real time) environmental monitoring systems [ENV-05]-Guidance for community relations at airports [ENV-06]-Central environmental guidance web-portal [ENV-07]-(Local) monitoring of environmental performance [ENV-08]-Commonly agreed assessment methods
<u>ATM Master Plan relationship</u> :	
<u>Finalisation criteria</u> :	1 - Environmental monitoring or information systems have been implemented and deliver the relevant performance data on time.

ENV02-APO03	Ensure appropriate Airport policy and procedures and, if required, relevant infrastructures needed to manage and mitigate pollution due to de-icing activities	From: 01/01/2012	By: 31/12/2016
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<u>Action by</u> :	Airport Operators
<u>Description & purpose</u> :	Develop policy, procedures and technical applications in collaboration with airlines and ANSPs to manage and control the pollution of ground and surface water coming from de-icing activities. When required, ensure the implementation of relevant mitigation infrastructure for collection, disposal and possible treatment of fluids.
<u>Derogations</u> :	None
<u>Supporting material(s)</u> :	ICAO - Doc 9889 - Airport Air Quality Manual - Edition 1 / 01/2012 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9184-Part 2 - Airport Planning Manual - Part 2 - Land Use and Environmental Control - Edition 3 / 03/2009 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statement of continuing ICAO policies and practices related to environmental protection - General provisions, noise and local air quality 10/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9993 - Continuous Climb Operations (CCO) Manual - Edition 1 / 11/2013 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition / 12/1995 Url : http://www.icao.int/publications/Pages/catalogue.aspx EUROCONTROL - European Joint Industry CDA Action Plan Url : http://www.eurocontrol.int/publications/european-joint-industry-cda-action-plan ICAO - Doc 9829 - Guidance on the Balanced Approach to Aircraft Noise Management - Edition 2 / 10/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : http://www.icao.int/publications/Pages/catalogue.aspx EUROCONTROL - SPEC-156 - EUROCONTROL Specification for Collaborative Environmental Management (CEM) - 1.0 Url : http://www.eurocontrol.int/sites/default/files/content/documents/single-sky/specifications/20140908-cem-spec-v1.0.pdf [PRO-075]-Airport infrastructure and procedures governing de-icing to isolate surface water systems, collect and dispose of run-off, use the least harmful chemical, reduce the quantities required, reduce delays and increase recovered volumes of fluid
<u>ATM Master Plan relationship</u> :	

ENV02	Implement Collaborative Environmental Management (CEM) at Airports
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Finalisation criteria : 1 - Information and procedures on de-icing pollution mitigation has been agreed and is published locally and accessible.
2 - Relevant infrastructure has been implemented, when and where required.

ENV02-APO04	Train airport operational staff in the environmental impacts of aircraft operations	From:	By:
		01/01/2012	31/12/2016

Action by : **Airport Operators**

Description & purpose : Provide a regular training course. Identify and ensure that all relevant operational staff is covered. The course should include where relevant aircraft noise, aircraft and airfield de-icing, aircraft fuel use and atmospheric emissions or any other locally identified environmental impact.

Derogations : None

Supporting material(s) : ICAO - Doc 9889 - Airport Air Quality Manual - Edition 1 / 01/2012
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 ICAO - Doc 9184-Part 2 - Airport Planning Manual - Part 2 - Land Use and Environmental Control - Edition 3 / 03/2009
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statement of continuing ICAO policies and practices related to environmental protection - General provisions, noise and local air quality 10/2010
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 ICAO - Doc 9993 - Continuous Climb Operations (CCO) Manual - Edition 1 / 11/2013
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition / 12/1995
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 EUROCONTROL - Environmental Awareness Training Package
 Url : <https://trainingzone.eurocontrol.int/env-catalogue.htm>
 EUROCONTROL - European Joint Industry CDA Action Plan
 Url : <http://www.eurocontrol.int/publications/european-joint-industry-cda-action-plan>
 ICAO - Doc 9829 - Guidance on the Balanced Approach to Aircraft Noise Management - Edition 2 / 10/2010
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 EUROCONTROL - SPEC-156 - EUROCONTROL Specification for Collaborative Environmental Management (CEM) - 1.0
 Url : <http://www.eurocontrol.int/sites/default/files/content/documents/single-sky/specifications/20140908-cem-spec-v1.0.pdf>

Finalisation criteria : 1 - Airport Operational staff awareness training on the environmental impacts of aircraft operations has been implemented and completed.

ENV02-USE01	Participate actively in the formal working partnership arrangements with the ANSP and Airport to manage and control the environmental impact of aircraft operations.	From:	By:
		01/01/2009	31/12/2015

Action by : **Airspace Users**

Description & purpose : Enter into formal CEM working arrangements. At the same time provide proactive practical mutual support to minimise environmental impact and secure or safeguard ATM capacity in supporting compliance to the relevant legislation. Provide timely and accurate operational or environmental information that is relevant to locally identified and jointly agreed CEM priorities. Participation in CEM should be endorsed and supported by senior management. The purpose of CEM is to facilitate understanding and awareness of interdependencies and find collaborative solutions amongst the key operational stakeholders at airports to address the environmental impacts caused by combined air traffic operations. The environmental impact may include aircraft noise, de-icing, fuel use and atmospheric emissions or any other ATM related environmental impact that is locally important.

Note: Awareness and understanding of interdependencies. Jointly agreed environmental objectives, solutions and delivery plan, new procedures and trials, provision of data.

Derogations : None

ENV02	Implement Collaborative Environmental Management (CEM) at Airports
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<u>Supporting material(s) :</u>	<p>ICAO - Doc 9889 - Airport Air Quality Manual - Edition 1 / 01/2012 Url : http://www.icao.int/publications/Pages/catalogue.aspx</p> <p>ICAO - Doc 9184-Part 2 - Airport Planning Manual - Part 2 - Land Use and Environmental Control - Edition 3 / 03/2009 Url : http://www.icao.int/publications/Pages/catalogue.aspx</p> <p>ICAO - Doc 9958 - Assembly Resolution A37-18: Consolidated statement of continuing ICAO policies and practices related to environmental protection - General provisions, noise and local air quality 10/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx</p> <p>ICAO - Doc 9993 - Continuous Climb Operations (CCO) Manual - Edition 1 / 11/2013 Url : http://www.icao.int/publications/Pages/catalogue.aspx</p> <p>ICAO - Doc 9646 - Engine Exhaust Emissions Databank - First Edition / 12/1995 Url : http://www.icao.int/publications/Pages/catalogue.aspx</p> <p>ICAO - Doc 9829 - Guidance on the Balanced Approach to Aircraft Noise Management - Edition 2 / 10/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx</p> <p>ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : http://www.icao.int/publications/Pages/catalogue.aspx</p> <p>EUROCONTROL - SPEC-156 - EUROCONTROL Specification for Collaborative Environmental Management (CEM) - 1.0 Url : http://www.eurocontrol.int/sites/default/files/content/documents/single-sky/specifications/20140908-cem-spec-v1.0.pdf</p>
<u>ATM Master Plan relationship :</u>	<p>[ENV-05]-Guidance for community relations at airports</p> <p>[ENV-08]-Commonly agreed assessment methods</p> <p>[PRO-AC-53]-Cockpit Procedure for Noise Abatement Departure Procedure</p> <p>[PRO-ENV-12a]-Exploiting new ATM and aircraft capabilities to optimise the aircraft noise footprint at airports (Airlines)</p> <p>[PRO-ENV-13a]-Airline Procedures for exploiting new ATM and aircraft capabilities with a view to optimising atmospheric emissions from aircraft operations</p>
<u>Finalisation criteria :</u>	<p>1 - A Local Memorandum of Understanding (MoU) or Memorandum of Cooperation (MoC) along with a Terms of Reference (TOR) document detailing the working arrangement or document of similar authority covering the implementation of CEM officially signed by the key operational stakeholders</p>

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PCP	Active						ECAC
FCM01	Implement enhanced tactical flow management services						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

This objective is functionally related to ATM Functionality 2 and 4 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates.

Implement enhanced tactical flow management services based on the introduction of real-time aircraft position and meteorological data to adjust flow regulation.

Out of all Stakeholder Lines of Action that are allocated to ANSPs, the most beneficial ones at European level are those dealing with correlated position data (FCM01-ASP01 & FCM01-ASP02), reception and processing ATFM data from the NM (FCM01-ASP03) and sending of flight activations and estimates to the NM (FCM01-ASP04). Therefore States are invited to complete them as a priority.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/08/2001

Applicability Area

Full operational capability

31/12/2006

Applicability Area

References

European ATM Master Plan relationship

OI step -	[IS-0102]-Improved Management of Flight Plan After Departure								
Enablers -	NIMS-02 FCM03	NIMS-20 FCM06	PRO-005						
Legend:	WXYZ-001	Covered by SLoA(s) in this objective		WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan	

Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
FCM01-ASP01	Supply ETFMS with Basic Correlated Position Data	01/08/2001	31/12/2004
FCM01-ASP02	Supply ETFMS with Standard Correlated Position Data	01/08/2001	31/12/2006
FCM01-ASP03	Receive and process ATFM data from the NM	01/03/1995	31/12/2001
FCM01-ASP04	Inform NM of flight activations and estimates for ATFM purposes	01/03/1995	31/12/1999
FCM01-ASP05	Inform NM of flight activations and additional estimate updates for ATFM purposes	DELETED	
FCM01-ASP06	Inform NM of re-routings inside FDPA for ATFM purposes	01/03/2001	31/12/2006
FCM01-ASP07	Inform NM of aircraft holding for ATFM purposes	01/03/2003	31/12/2006
FCM01-ASP08	Supply NM with Departure Planning Information (DPI)	01/03/2005	04/07/2014

FCM01	Implement enhanced tactical flow management services
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FCM01-AGY01	Implement ETFMS Phase 1A	FINALISED
FCM01-AGY02	Implement ETFMS Phase 1B	FINALISED
FCM01-AGY03	Implement ETFMS Phase 1C	FINALISED
FCM01-AGY04	Implement ETFMS Phase 2	FINALISED

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Reduced unexpected overload situations.
Capacity :	Reduced wasted capacity; reduced delays.
Cost effectiveness :	Reduction of costs induced by delays.
Environment :	N/A
Security :	N/A

Detailed SLoA descriptions

FCM01-ASP01	Supply ETFMS with Basic Correlated Position Data	From:	By:
		01/08/2001	31/12/2004

Action by :	ANS Providers
Description & purpose :	Provide ETFMS with correlated Position Data for all airborne flights inside its Flight Data Processing Area. For the initial implementation of ETFMS, the NM accepts a limited number of existing message formats. Note : The implementation of this SLoA is no longer needed as soon as FCM01-ASP02 has been completed in a given State or ACC.
Specific applicability:	ECAC States, IFR/GAT only.
Derogations :	None
Finalisation criteria :	1 - Reception of CPRs by NM has been ensured.

FCM01-ASP02	Supply ETFMS with Standard Correlated Position Data	From:	By:
		01/08/2001	31/12/2006

Action by :	ANS Providers
Description & purpose :	Provide ETFMS with Correlated Position Data for all airborne flights inside its Flight Data Processing Area in ASTERIX Category 062 format.
Specific applicability:	ECAC States, IFR/GAT only.
Derogations :	None
Finalisation criteria :	1 - Reception of CPRs in ASTERIX Category 062 format by NM has been ensured.

FCM01-ASP03	Receive and process ATFM data from the NM	From:	By:
		01/03/1995	31/12/2001

Action by :	ANS Providers
Description & purpose :	Ensure that all ATFM messages received from the NM are automatically correlated to the ATC Flight Plan data. The ATFM data is automatically presented to the Air Traffic Controllers (as a minimum to the TWR Controllers) on strips or on electronic displays. Note: The SLoA can be considered as not applicable if the amount of IFR/GAT traffic does not justify automation.
Derogations :	None
Finalisation criteria :	1 - Automatic presentation of the ATFM data correlated to flight data to at least TWR controllers has been ensured.

FCM01-ASP04	Inform NM of flight activations and estimates for ATFM purposes	From:	By:
		01/03/1995	31/12/1999

Action by :	ANS Providers
Description & purpose :	Send to NM a First System Activation (FSA) message as evidence of flight activations in the local ATC system. The FSA informs the NM of the actual position of the aircraft (i.e: the actual time of departure or the time and flight level at the FDPA entry co-ordination point).
Specific applicability:	ECAC States, IFR/GAT only.
Derogations :	None
Finalisation criteria :	1 - Reception of FSA messages by NM has been ensured.

FCM01	Implement enhanced tactical flow management services
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FCM01-ASP06	Inform NM of re-routings inside FDPA for ATFM purposes	From:	By:
		01/03/2001	31/12/2006

Action by : **ANS Providers**

Description & purpose : Send an FSA message for flights for a route change which does not affect the exit point and when this information has not already been sent by an AFP message.

Specific applicability: ECAC States, IFR/GAT only.

Derogations : None

Finalisation criteria : 1 - Reception of FSA messages by the NM for route changes has been ensured.

FCM01-ASP07	Inform NM of aircraft holding for ATFM purposes	From:	By:
		01/03/2003	31/12/2006

Action by : **ANS Providers**

Description & purpose : Send an FSA to inform the NM that the flight is holding.

Specific applicability: ECAC States, IFR/GAT only.

Derogations : None

Finalisation criteria : 1 - Reception of FSA messages by the NM for holding of flights has been ensured.

FCM01-ASP08	Supply NM with Departure Planning Information (DPI)	From:	By:
		01/03/2005	04/07/2014

Action by : **ANS Providers**

Description & purpose : Supply the NM/ETFMS with flight data related updates that are only available shortly before departure. The DPI is used to supply the NM with the taxi-time and SID per flight and with the Take-Off Time based upon the departure sequence.
Note: This SLoA is similar to AOP05-APO05 "Define and implement the exchange of messages, Flight Update Message (FUM) and Departure Planning Information (DPIs) between NM and the airport in accordance with Airport CDM manual guidelines". However AOP05-APO05 concerns the full CDM implementation while FCM01-ASP08 is intended for the implementation of "Advanced - Tower" systems.

Specific applicability: Airports that can provide DPI data with the required accuracy, IFR/GAT only.

Derogations : None

Finalisation criteria : 1 - Reception of the DPI messages by NM has been ensured.

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PCP		Active					ECAC	
FCM03		Implement collaborative flight planning						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 4 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates.

Improve the collaboration between the NM, ANS providers, airports and airspace users in flight plan filing, in particular to assist airspace users in filing their flight plans and in re-routings according to the airspace availability and ATFM situation. Improve flight plan distribution to increase consistency of flight plan data amongst all parties involved (NM IFPS/ETFMS, ANS Providers, etc).

The objectives of AFP messages are to:

- Enable NM to provide to the downstream ATC Units with more accurate flight plan information, improving their traffic situation awareness and reducing the workload and disruption caused by last minute updates or missing flight plans
- Update the ETFMS with flight plan information in order to reflect as accurately as possible the current and future trajectory of the flight, providing accurate sector load calculations thus improving the ATFCM performance

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2000

Applicability Area

Full operational capability

31/12/2017

Applicability Area

References

European ATM Master Plan relationship

OI step -	[IS-0102]-Improved Management of Flight Plan After Departure							
	Enablers -	NIMS-02	NIMS-20 FCM06	PRO-005				
Legend:	WXYZ-001	Covered by SLoA(s) in this objective		WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan

Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

Commission Regulation (EC) No 1033/2006 of 4 July 2006 laying down the requirements on procedures for flight plans in the pre-flight phase for the Single European Sky, as amended by Regulation (EC) No 929/2010

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
FCM03-ASP01	Provide flight plan message processing in ICAO format	FINALISED	
FCM03-ASP02	Automatically process FPLs derived from RPLs	FINALISED	
FCM03-ASP03	Provide flight plan message processing in ADEXP format	01/12/1997	31/12/2012
FCM03-ASP04	Processing of APL and ACH messages	FINALISED	
FCM03-ASP05	Automatically provide AFP for missing flight plans	01/03/1998	31/12/2017
FCM03-ASP06	Automatically provide AFP message for change of route	01/03/2003	31/12/2017
FCM03-ASP07	Automatically provide AFP message for a diversion	01/03/2008	31/12/2017
FCM03-ASP08	Automatically provide AFP message for a change of flight rules or flight type	01/03/2003	31/12/2017

FCM03	Implement collaborative flight planning
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FCM03-ASP09	Automatically provide AFP message for a change of requested cruising level	01/03/2003	31/12/2017
FCM03-ASP10	Provide AFP messages in ADEXP format	DELETED	
FCM03-ASP11	Use IFPLID in all messages to ETFMS	DELETED	
FCM03-ASP12	Use IFPLID in exchange of route-charge data	DELETED	
FCM03-ASP13	Automatically provide AFP message for change of aircraft type	01/03/2003	31/12/2017
FCM03-ASP14	Automatically provide AFP message for change of aircraft equipment	01/03/2008	31/12/2017
FCM03-NM01	Integration of Automatic AFP in NM systems	01/01/2010	31/12/2017

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Prevention of overloads.
Capacity :	Better use of the available network capacity.
Cost effectiveness :	Reduction of costs induced by delays.
Environment :	N/A
Security :	N/A

Detailed SLoA descriptions

FCM03-ASP03	Provide flight plan message processing in ADEXP format	From:	By:
		01/12/1997	31/12/2012

Action by : **ANS Providers**

Description & purpose : Receive and automatically process IFPS output of all defined flight plan messages for input into local ATC systems in ADEXP format in line with ICAO State Letter (AN 13/2.1-08/50) - 25 June 2008.
Impact of Flight Plan 2012 changes:
The basic flight plan form and the field composition within the FPL message remains unchanged, but the content of some fields will change.
- changes to indications in Items 10 and 18 (including the use of digits) describing the precise NAV/COM/SUR capabilities of the flight
- the ability to file a FPL up to 5 days (120 hours) before the flight, using the Date of Flight (DOF/) in Item 18
- addition of new Item 18 indicators and changes to the contents of several existing indicators.
- a change to the description of a significant point which may now be described by range and bearing
The field composition within associated messages (CHG, DEP, CNL, ARR, RQP) will change to include the EOBT and Item 18 DOF/ thus ensuring association to the correct FPL.
Note: All national ATC systems that receive flight plan data from IFPS receive and process the data in ADEXP format. The SLoA can be considered as not applicable if the amount of IFR/GAT traffic does not justify automation.

Specific applicability: ECAC States, IFR/GAT only.

Derogations : None

Finalisation criteria : 1 - ATC system is able to receive and process flight plan data from IFPS in ADEXP format.

FCM03-ASP05	Automatically provide AFP for missing flight plans	From:	By:
		01/03/1998	31/12/2017

Action by : **ANS Providers**

Description & purpose : Automatically provide IFPS with updated flight plan information on airborne flights by means of AFP message. Provide the AFP in case an IFR-GAT flight exists but no IFPL has been received from IFPS.
The related AFP message can be sent in either ICAO or ADEXP format.

Specific applicability: ECAC States, IFR/GAT only.

Derogations : None

ATM Master Plan relationship : [\[NIMS-02\]-Provision , reception and processing of collaborative flight plan updates](#)

Finalisation criteria : 1 - Reception of AFP messages by NM has been ensured.

FCM03-ASP06	Automatically provide AFP message for change of route	From:	By:
		01/03/2003	31/12/2017

Action by : **ANS Providers**

FCM03	Implement collaborative flight planning
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Description & purpose : Automatically provide IFPS with updated flight plan information on airborne flights by means of AFP message; provide the AFP in case of a change of route where the exit point from the flight data processing area (FDPA) has changed. The related AFP message must be provided in ADEXP format only.

Specific applicability: [ECAC States, IFR/GAT only.](#)

Derogations : None

ATM Master Plan relationship : [\[NIMS-02\]-Provision , reception and processing of collaborative flight plan updates](#)

Finalisation criteria : 1 - Transmission of AFP messages for route changes by the ANSP has been implemented.

FCM03-ASP07	Automatically provide AFP message for a diversion	From:	By:
		01/03/2008	31/12/2017

Action by : **ANS Providers**

Description & purpose : Automatically provide IFPS with updated flight plan information on airborne flights by means of AFP message; provide the AFP in case of a diversion. The related AFP message must be provided in ADEXP format only.

Specific applicability: [ECAC States, IFR/GAT only.](#)

Derogations : None

ATM Master Plan relationship : [\[NIMS-02\]-Provision , reception and processing of collaborative flight plan updates](#)

Finalisation criteria : 1 - Transmission of AFP messages for diversions by the ANSP has been implemented.

FCM03-ASP08	Automatically provide AFP message for a change of flight rules or flight type	From:	By:
		01/03/2003	31/12/2017

Action by : **ANS Providers**

Description & purpose : Automatically provide IFPS with updated flight plan information on airborne flights by means of AFP message; provide the AFP in case of a change of flight rules from VFR to IFR, or IFR to VFR, or a change of flight type from OAT to GAT, or GAT to OAT.

Specific applicability: [ECAC States, IFR/GAT only.](#)

Derogations : None

ATM Master Plan relationship : [\[NIMS-02\]-Provision , reception and processing of collaborative flight plan updates](#)

Finalisation criteria : 1 - Transmission of AFP messages for changes of flight rules and flight types by the ANSP has been implemented.

FCM03-ASP09	Automatically provide AFP message for a change of requested cruising level	From:	By:
		01/03/2003	31/12/2017

Action by : **ANS Providers**

Description & purpose : Automatically provide IFPS with updated flight plan information on airborne flights by means of AFP message. Provide the AFP in case of a change of requested cruising level. The SLoA refers to a permanent change of a Requested Cruising Level and not to flight level changes allocated on a tactical basis by ATC.

Specific applicability: [ECAC States, IFR/GAT only.](#)

Derogations : None

ATM Master Plan relationship : [\[NIMS-02\]-Provision , reception and processing of collaborative flight plan updates](#)

Finalisation criteria : 1 - Transmission of AFP messages for changes of requested cruising level by the ANSP has been implemented.

FCM03-ASP13	Automatically provide AFP message for change of aircraft type	From:	By:
		01/03/2003	31/12/2017

Action by : **ANS Providers**

Description & purpose : Automatically provide IFPS with updated Flight Plan information on airborne flights by means of AFP message. Provide the AFP in case of a change of aircraft type.

Specific applicability: [ECAC States, IFR/GAT only.](#)

Derogations : None

ATM Master Plan relationship : [\[NIMS-02\]-Provision , reception and processing of collaborative flight plan updates](#)

Finalisation criteria : 1 - Transmission of AFP messages for changes of aircraft type by ANSP has been implemented.

FCM03-ASP14	Automatically provide AFP message for change of aircraft equipment	From:	By:
		01/03/2008	31/12/2017

Action by : **ANS Providers**

FCM03	Implement collaborative flight planning
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Description & purpose : Automatically provide IFPS with updated Flight Plan information on airborne flights by means of AFP message. Provide the AFP in case of a change of aircraft equipment.
The related AFP message must be provided in ADEXP format only.

Specific applicability: [ECAC States, IFR/GAT only.](#)

Derogations : None

ATM Master Plan relationship : [\[NIMS-02\]-Provision , reception and processing of collaborative flight plan updates](#)

Finalisation criteria : 1 - Transmission of AFP messages for changes of aircraft equipment by ANSP has been implemented.

FCM03-NM01	Integration of Automatic AFP in NM systems	From:	By:
		01/01/2010	31/12/2017

Action by : **NM**

Description & purpose : The automatic AFP messages should not be transmitted to IFPS without prior coordination and test validation by NM. NM should ensure the correctness of AFP messages by testing and validate them. If the testing is correct, the received AFP messages from a specific ASTC unit will be integrated in NM systems.

Derogations : None

ATM Master Plan relationship : [\[NIMS-02\]-Provision , reception and processing of collaborative flight plan updates](#)

Finalisation criteria : 1 - Integration of AFP messages in NM systems

PCP	Active					Multi-N	
FCM04	Implementation of Short Term ATFCM Measures - phase 1						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

This objective is functionally related to ATM Functionality 4 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates.

The rigid application of ATFM regulations based on standard capacity thresholds as the pre-dominant 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 (London, Reims, Maastricht), which is labelled STAM phase 1. A more automated version of STAM labelled STAM phase 2 will be released in the next years by SESAR. 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.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Applicability Area(s) & Timescale(s)

Applicability Area

France, Germany, Italy, Poland, Spain, Switzerland

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/09/2013

Applicability Area

Full operational capability

31/12/2015

Applicability Area

References

European ATM Master Plan relationship

OI step -	[DCB-0205]-Short Term ATFCM Measures						
	Enablers -	CTE-C06a	CTE-C06b COM09	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 ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan
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Applicable legislation

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
FCM04-REG01	Review, as appropriate, the safety argument of the changes imposed by the implementation of Short Term ATFCM Measures Phase 1	DELETED	
FCM04-ASP01	Availability of demand-capacity balancing tools via CHMI	01/09/2013	31/12/2015
FCM04-ASP02	Provision of ANSPs sector and traffic occupancy parameters data to NM	01/09/2013	31/12/2015

FCM04	Implementation of Short Term ATFCM Measures - phase 1		
FCM04-ASP03	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.	01/09/2013	31/12/2015
FCM04-ASP04	Develop, and deliver as necessary, a safety assessment of the changes imposed by the implementation of Short Term ATFCM Measures Phase 1	01/09/2013	31/12/2015
FCM04-USE01	Availability of demand-capacity balancing tools	01/09/2013	31/12/2015
FCM04-NM01	Develop and implement demand-capacity balancing tools via CHMI	FINALISED	
FCM04-NM02	Integration of ANSPs sector and traffic occupancy parameters data into NM systems	01/09/2013	31/12/2015

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Some enhancement through reduction in controller workload.
Capacity :	Increased through suppression of flight ATFM regulations thanks to local ATFCM measures with the same ATC sector manning
Cost effectiveness :	Reduction of flight delays.
Environment :	N/A.
Security :	N/A.

Detailed SLoA descriptions

FCM04-ASP01	Availability of demand-capacity balancing tools via CHMI	From:	By:
		01/09/2013	31/12/2015

Action by :	ANS Providers
Description & purpose :	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).
Derogations :	None
Supporting material(s) :	EUROCONTROL - ATFCM Operations Manual - 19.1 / 04/2015 Url : https://www.eurocontrol.int/tags/atfcm DYNAMIC DCB-Reducing traffic complexity and streamlining ATC workload. 01/2015 Url : https://www.eurocontrol.int/sites/default/files/publication/files/dynamic-demand-capacity-balancing-factsheet-2015.pdf EUROCONTROL - CHMI ATFCM Map Reference Guide - 4.0 / 03/2011 Url : https://www.eurocontrol.int/sites/default/files/publication/files/chmi-atfcm-map-reference-guide-current.pdf [NIMS-08]-strategic and pre-tactical demand-capacity balancing evaluation, simulation and display tools
ATM Master Plan relationship :	
Finalisation criteria :	1 - The tools supporting STAM phase 1 have been implemented.

FCM04-ASP02	Provision of ANSPs sector and traffic occupancy parameters data to NM	From:	By:
		01/09/2013	31/12/2015

Action by :	ANS Providers
Description & purpose :	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.
Derogations :	None
Supporting material(s) :	EUROCONTROL - ATFCM Operations Manual - 19.1 / 04/2015 Url : https://www.eurocontrol.int/tags/atfcm DYNAMIC DCB-Reducing traffic complexity and streamlining ATC workload. 01/2015 Url : https://www.eurocontrol.int/sites/default/files/publication/files/dynamic-demand-capacity-balancing-factsheet-2015.pdf EUROCONTROL - CHMI ATFCM Map Reference Guide - 4.0 / 03/2011 Url : https://www.eurocontrol.int/sites/default/files/publication/files/chmi-atfcm-map-reference-guide-current.pdf
Finalisation criteria :	1 - Local sector and occupancy counts parameters are provided to NM.

FCM04	Implementation of Short Term ATFCM Measures - phase 1		
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FCM04-ASP03	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.	From:	By:
		01/09/2013	31/12/2015

Action by : **ANS Providers**

Description & purpose : 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.

Derogations : None

Supporting material(s) : EUROCONTROL - ATFCM Operations Manual - 19.1 / 04/2015

Url : <https://www.eurocontrol.int/tags/atfcm>

DYNAMIC DCB-Reducing traffic complexity and streamlining ATC workload. 01/2015

Url : <https://www.eurocontrol.int/sites/default/files/publication/files/dynamic-demand-capacity-balancing-factsheet-2015.pdf>

EUROCONTROL - CHMI ATFCM Map Reference Guide - 4.0 / 03/2011

Url : <https://www.eurocontrol.int/sites/default/files/publication/files/chmi-atfcm-map-reference-guide-current.pdf>

ATM Master Plan relationship : [\[PRO-038\]-FCM Procedures to enable application of flow management techniques on traffic streams closer to real-time](#)

Finalisation criteria : 1 - Operational procedures are available.

FCM04-ASP04	Develop, and deliver as necessary, a safety assessment of the changes imposed by the implementation of Short Term ATFCM Measures Phase 1	From:	By:
		01/09/2013	31/12/2015

Action by : **ANS Providers**

Description & purpose : 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.

Note: Any other validated/recognised method for the safety assessment, is acceptable, if agreed with the Regulator/NSA/Competent Authority.

Derogations : None

Supporting material(s) : EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006

Url : <http://www.eurocontrol.int/articles/safety-assessment-methodology-sam>

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>

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/LexUriServ/LexUriServ.do?uri=OJ:L:2011:271:0023:0041:EN:PDF>

Finalisation criteria : 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.

FCM04-USE01	Availability of demand-capacity balancing tools	From:	By:
		01/09/2013	31/12/2015

Action by : **Airspace Users**

Description & purpose : A tool supporting STAM phase 1 operations for Airspace user needs be implemented. The tool can be CHMI or a local tool.

Derogations : None

Supporting material(s) : EUROCONTROL - ATFCM Operations Manual - 19.1 / 04/2015

Url : <https://www.eurocontrol.int/tags/atfcm>

DYNAMIC DCB-Reducing traffic complexity and streamlining ATC workload. 01/2015

Url : <https://www.eurocontrol.int/sites/default/files/publication/files/dynamic-demand-capacity-balancing-factsheet-2015.pdf>

EUROCONTROL - CHMI ATFCM Map Reference Guide - 4.0 / 03/2011

Url : <https://www.eurocontrol.int/sites/default/files/publication/files/chmi-atfcm-map-reference-guide-current.pdf>

ATM Master Plan relationship : [\[NIMS-08\]-strategic and pre-tactical demand-capacity balancing evaluation, simulation and display tools](#)

Finalisation criteria : 1 - Tool supporting STAM Phase 1 is available.

FCM04	Implementation of Short Term ATFCM Measures - phase 1
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FCM04-NM02	Integration of ANSPs sector and traffic occupancy parameters data into NM systems	From:	By:
		01/09/2013	31/12/2015

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.

Derogations : None

Supporting material(s) : EUROCONTROL - ATFCM Operations Manual - 19.1 / 04/2015

Url : <https://www.eurocontrol.int/tags/atfcm>

DYNAMIC DCB-Reducing traffic complexity and streamlining ATC workload. 01/2015

Url : <https://www.eurocontrol.int/sites/default/files/publication/files/dynamic-demand-capacity-balancing-factsheet-2015.pdf>

EUROCONTROL - CHMI ATFCM Map Reference Guide - 4.0 / 03/2011

Url : <https://www.eurocontrol.int/sites/default/files/publication/files/chmi-atfcm-map-reference-guide-current.pdf>

Finalisation criteria : 1 - Parameters have been integrated within NM systems.

PCP	Active					ECAC	
FCM05	Implementation of interactive rolling NOP						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

This objective is functionally related to ATM Functionalities 4 and 5 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to their deployment target dates.

The validated and consistent information relating to the intentions and decisions of stakeholders has to be available and widely shared in relation to the use and management of European airspace from strategic planning through to archiving data post flight. For example: military demand for route and airspace, implemented ATFCM scenarios to address demand/capacity imbalances.

The Network Operation Plan provides an overview of the ATFCM situation from strategic planning to real time operations (accessible from 6 months to the day of operation) with ever increasing accuracy up to and including the day of operations. The data is accessible online by stakeholders for consultation and update as and when needed, subject to access and security controls.

The elements and formats of the NOP will be established taking into account the requirements of the users of these plans. It will be possible for them to access and extract data for selected areas to support their operation and, if required, to create their specific operations plan. The NOP will also be updated taking into account the actual traffic situation and real time flow and capacity management.

The rolling NOP will also allow users to access simulations and to assess results.

The first steps of the interactive Rolling NOP were already implemented through the deployment of the NOP portal (through n-CONNECT platform and B2B services). Further information and data are available or planned for deployment (between 2010/2013-15) to support the Interactive approach to the NOP (e.g. ADR, DDR2,...) and the access to the NOP data will be more and more available through B2B services. Most of the enablers required are expected to be gradually deployed over this period.

The Objective has been reviewed and aligned with the Deployment Programme developed by the Deployment Manager. The alignment concerns notably the implementation dates and the extension of scope so as to address the information sharing between the Airport Operations Plan (AOP) and the NOP. In addition it covers NOP B2B services.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/09/2013

Applicability Area

Full operational capability

31/12/2021

Applicability Area

References

European ATM Master Plan relationship

OI step -	[AOM-0202]-Enhanced Real-time Civil-Military Coordination of Airspace Utilisation									
Enablers -	AAMS-06a	AAMS-08 AOM19	AAMS-09 AOM19	AAMS-10a AOM13.1	AAMS-15	AIMS-21	AIMS-22 AOM19	GGSWIM-49		
	PRO-184 AOM19									

OI step -	[AOM-0205]-Modular Temporary Airspace Structures and Reserved Areas									
Enablers -	AAMS-08 AOM19	AIMS-20	NIMS-14a	NIMS-14b	PRO-009 AOM19	PRO-082 AOM19	PRO-185 AOM19			

OI step -	[DCB-0102]-Interactive Rolling NOP									
Enablers -	AAMS-06a	AIMS-21	PRO-035							

OI step -	[DCB-0103-A]-Collaborative NOP for Step 1									
Enablers -	AIRPORT-3 8	METEO-06b	MIL-0501	MIL-0502	NIMS-13b	NIMS-14b	PRO-028	SWIM-APS-01a		
	SWIM-APS-02a	SWIM-APS-03a	SWIM-APS-04a	SWIM-INFR-05a	SWIM-NET-01a	SWIM-SUP-T-01a	SWIM-SUPT-03a	SWIM-SUPT-05a		

OI step -	[IS-0901-A]-SWIM for Step1									
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FCM05	Implementation of interactive rolling NOP									
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	Enablers -	AAMS-06b	MIL-0501	MIL-0502	REG-0300	SWIM-APS-01a	SWIM-APS-02a	SWIM-APS-03a	SWIM-APS-04a	
		SWIM-APS-05a	SWIM-APS-06a	SWIM-APS-07a	SWIM-GOV-05a	SWIM-INFR-01a	SWIM-INFR-05a	SWIM-NET-01a	SWIM-SUPT-01a	
		SWIM-SUPT-03a	SWIM-SUPT-05a							

Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan
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Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)
Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
FCM05-REG01	Review, as appropriate, the safety argument of the changes to the ASM system, supporting the implementation of interactive Rolling NOP by the NM	DELETED	
FCM05-ASP01	Upgrade the automated ASM support system with the capability of AIXM 5.1 B2B data exchange with NM	01/09/2013	31/12/2017
FCM05-ASP02	Perform an integration of the automated ASM support systems with the Network	01/09/2013	31/12/2017
FCM05-ASP03	Produce a safety assessment on the upgrade of automated ASM support systems to the AIXM 5.1 capability	01/09/2013	31/12/2017
FCM05-APO01	Provide the required data to the Network Manager for DDR	01/09/2013	31/12/2017
FCM05-APO02	Perform the integration of the AOP with the NOP	01/01/2015	31/12/2021
FCM05-USE01	Provide the required data to the Network Manager for DDR	01/09/2013	31/12/2017
FCM05-NM01	ADR to provide, common and consolidated view of European airspace data containing both static and dynamic digital data	FINALISED	
FCM05-NM02	Upgrade NM system for external user access to the airspace data repository (making restrictions available in AIXM 5.1 format via B2B)	FINALISED	
FCM05-NM03	Equip Airspace management system with tools for collection of airspace data (Interoperability with ASM tools in AIXM 5.1)	FINALISED	
FCM05-NM04	Perform an integration of ASM support systems with the Network	01/09/2013	31/12/2017
FCM05-NM05	Upgrade NM systems to allow the access of interested users to the Demand Data Repository	FINALISED	
FCM05-NM06	Implement FCM Procedures for on-line access/update to the NOP and notification of updates	01/09/2013	31/12/2017
FCM05-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	
FCM05-NM08	Flight Plan filing capability directly via the NOP portal	FINALISED	
FCM05-NM09	Develop AOP/NOP interfaces	01/01/2015	31/12/2017
FCM05-NM10	Integrate the AOPs into the Network Operation Plan	01/01/2016	31/12/2021
FCM05-NM11	Develop Network Manager B2B services	01/01/2015	31/12/2017

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

FCM05	Implementation of interactive rolling NOP
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Expected performance benefits

Safety :	Enhanced by improved sharing of the network situation.
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.
Cost effectiveness :	Enhanced through use of cost effective tools to access network information instead of expensive local tools or procedures and through the improved capacity.
Environment :	Marginal benefits resulting from better knowledge of Airspace status.
Security :	N/A

Detailed SloA descriptions

FCM05-ASP01	Upgrade the automated ASM support system with the capability of AIXM 5.1 B2B data exchange with NM	From:	By:
		01/09/2013	31/12/2017

Action by :	ANS Providers
Description & purpose :	Develop an AIXM 5.1 B2B interface between the local/regional automated ASM support systems and the NM systems. The local/regional automated ASM tool can be locally developed (STANLY or others) or LARA tools.
Derogations :	None
Supporting material(s) :	EUROCONTROL - NM B2B Reference Manuals - access available on request to NM Url : http://www.eurocontrol.int/articles/nm-services-and-products [AIMS-20]-Airspace Data Repository
ATM Master Plan relationship :	
Finalisation criteria :	1 - Local/regional automated ASM support systems have been developed or upgraded with an interface using AIXM 5.1 B2B.

FCM05-ASP02	Perform an integration of the automated ASM support systems with the Network	From:	By:
		01/09/2013	31/12/2017

Action by :	ANS Providers
Description & purpose :	Integrate the local/regional the automated ASM support systems migrated to AIXM 5.1 B2B with the NM system.
Derogations :	None
Supporting material(s) :	EUROCONTROL - NM B2B Reference Manuals - access available on request to NM Url : http://www.eurocontrol.int/articles/nm-services-and-products
Finalisation criteria :	1 - Local/regional ASM support systems using AIXM 5.1 B2B have been integrated with NM.

FCM05-ASP03	Produce a safety assessment on the upgrade of automated ASM support systems to the AIXM 5.1 capability	From:	By:
		01/09/2013	31/12/2017

Action by :	ANS Providers
Description & purpose :	Notify the Regulator/NSA/Competent Authority of planned safety related changes and develop safety assessment of changes to the automated ASM support systems with the capabilities of AIXM 5.1. The tasks to be performed are as follows: <ul style="list-style-type: none"> - 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. <p>Note: Any other validated/recognised method for the safety assessment, is acceptable, if agreed with the Regulator/NSA/Competent Authority.</p>
Derogations :	None
Supporting material(s) :	EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006 Url : http://www.eurocontrol.int/articles/safety-assessment-methodology-sam 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 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/LexUriServ/LexUriServ.do?uri=OJ:L:2011:271:0023:0041:EN:PDF [AIMS-20]-Airspace Data Repository
ATM Master Plan relationship :	

FCM05	Implementation of interactive rolling NOP		
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Finalisation criteria :

1 - Safety argument addressing the implementation of changes to the automated ASM support systems, as required by the ESSIP objective, has been developed.

2 - The safety argument addressing the implementation of changes to the automated ASM support systems, as required by 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.

FCM05-APO01	Provide the required data to the Network Manager for DDR	From:	By:
		01/09/2013	31/12/2017

Action by : **Airport Operators**

Description & purpose : Coordinated Airports to provide the Airport slots information in SSIM format to EUACA. From this, EUACA will compile them and will transmit them to NM in a EUACA format.

Derogations : None

Supporting material(s) : IATA - Standard Schedules Information Manual - Edition 23
Url : <http://www.iata.org/publications/Pages/ssim.aspx>
[NIMS-14b]-Demand Data Repository Phase II

ATM Master Plan relationship : [NIMS-14b]-Demand Data Repository Phase II

Finalisation criteria : 1 - Airport slot information provided to DDR.

FCM05-APO02	Perform the integration of the AOP with the NOP	From:	By:
		01/01/2015	31/12/2021

Action by : **Airport Operators**

Description & purpose : Linking AOP with NOP (Airport Business Trajectory and User Preferred Trajectory) will contribute in optimising both Network and Airport management. This will be achieved by timely and simultaneously updating AOP and NOP, providing Network and Airport Managers with a commonly updated, consistent and accurate Plan. The AOP is therefore the tool which provides/integrates the airport information into the Network (NOP). This is done by sharing information with NOP or by requesting information from the NOP.
The AO will have to ensure that AOP core information is provided to the NOP and that change in information in the AOP with anticipated impact on the network is made available to the NOP according with the appropriate agreed quality of service.

Derogations : None

Supporting material(s) : SJU - OFA 05.01.01 - Airport Operations Centre Definition - Operational Service and Environment Definition Part 1 - 00.03.00 / 12/2014
[AIRPORT-38]-Airport/ATFCM Extended data interface
[PRO-028]-Procedures to support AOP-NOP collaborative process

ATM Master Plan relationship : [AIRPORT-38]-Airport/ATFCM Extended data interface
[PRO-028]-Procedures to support AOP-NOP collaborative process

Finalisation criteria : 1 - The relevant AOP information is made available to the NOP
2 - The relevant NOP information is integrated into the AOP

FCM05-USE01	Provide the required data to the Network Manager for DDR	From:	By:
		01/09/2013	31/12/2017

Action by : **Airspace Users**

Description & purpose : Airspace users to provide the scheduled flight information.

Derogations : None

Supporting material(s) : IATA - Standard Schedules Information Manual - Edition 23
Url : <http://www.iata.org/publications/Pages/ssim.aspx>
[NIMS-14b]-Demand Data Repository Phase II

ATM Master Plan relationship : [NIMS-14b]-Demand Data Repository Phase II

Finalisation criteria : 1 - Scheduled flight information is provided.

FCM05-NM04	Perform an integration of ASM support systems with the Network	From:	By:
		01/09/2013	31/12/2017

Action by : **NM**

Description & purpose : Integrate the local/regional automated ASM support tools with the NM system

Derogations : None

Supporting material(s) : EUROCONTROL - NM B2B Reference Manuals - access available on request to NM
Url : <http://www.eurocontrol.int/articles/nm-services-and-products>

Finalisation criteria : 1 - Local/Regional automated ASM support systems using AIXM 5.1 B2B have been integrated with NM systems.

FCM05	Implementation of interactive rolling NOP		
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FCM05-NM06	Implement FCM Procedures for on-line access/update to the NOP and notification of updates	From:	By:
		01/09/2013	31/12/2017

Action by : **NM**
Description & purpose : Develop the necessary procedures for NOP access (incremental work, a set of procedures for each yearly version)
Derogations : None
Supporting material(s) : NOP User Guide; Edition :19.0-92 / 25/03/2015
 Url :
<http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/nop-portal-user-guide-current.pdf>
ATM Master Plan relationship : [\[PRO-035\]-FCM Procedures for on-line access/update to the NOP and notification of updates](#)
Finalisation criteria : 1 - Procedures are available

FCM05-NM09	Develop AOP/NOP interfaces	From:	By:
		01/01/2015	31/12/2017

Action by : **NM**
Description & purpose : Linking AOP with NOP will contribute in optimising both Network and Airport management. This will be achieved by developing AOP/NOP B2C and B2B interfaces, providing NOP and AOPs with a commonly updated, consistent and accurate data .
 The NM will have to ensure that relevant information for airport operations, which may be contained in the AOPs, is shared with the relevant part of the NOP.
Derogations : None
Supporting material(s) : SJU - OFA 05.01.01 - Airport Operations Centre Definition - Operational Service and Environment Definition Part 1 - 00.03.00 / 12/2014
ATM Master Plan relationship : [\[AIRPORT-38\]-Airport/ATFCM Extended data interface](#)
Finalisation criteria : 1 - Availability of AOP/NOP B2B and B2C interfaces

FCM05-NM10	Integrate the AOPs into the Network Operation Plan	From:	By:
		01/01/2016	31/12/2021

Action by : **NM**
Description & purpose : Linking AOP with NOP will contribute in optimising both Network and Airport management. This will be achieved by timely and simultaneously updating NOP with AOPs data, providing NOP and AOPs with a commonly updated, consistent and accurate data. The AOP is therefore the tool which provides the airport information into the Network (NOP). This is done by sharing information between the NOP and the AOP.
 The NM will have to ensure that relevant information for airport operations, which may be contained in the AOPs, are shared with the relevant part of the NOP.
Derogations : None
Supporting material(s) : SJU - OFA 05.01.01 - Airport Operations Centre Definition - Operational Service and Environment Definition Part 1 - 00.03.00 / 12/2014
ATM Master Plan relationship : [\[AIRPORT-38\]-Airport/ATFCM Extended data interface](#)
[\[PRO-028\]-Procedures to support AOP-NOP collaborative process](#)
Finalisation criteria : 1 - Integration of relevant AOP data for a specific airport into NOP
 2 - The relevant NOP information is made available to the AOP

FCM05-NM11	Develop Network Manager B2B services	From:	By:
		01/01/2015	31/12/2017

Action by : **NM**

FCM05	Implementation of interactive rolling NOP
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<u>Description & purpose</u> :	<p>This SLOA address the gradual development and implementation of enhanced data exchange, according to the SWIM Yellow Profile, through B2B services for:</p> <ul style="list-style-type: none"> - Publication of ATFCM tactical updates, regulations, AIMS, airspace live updates, e-AML, flight status via publish/subscribe - Network Events management services - Extend FUA services - ATFCM tactical updates management services - Exchange of Flow Management messages - Improve airspace data export in support of flight plan accuracy - ATFCM Measures management services - Hotspot management services - Counts services - Service availability information - Departure Planning Information - Arrival Planning Information - Changes in the Flight Service to deal with STAM - Exchange of flight data using SWIM Yellow Profile
<u>Derogations</u> :	None
<u>ATM Master Plan relationship</u> :	[SWIM-APS-01a]-Provision of Aeronautical Information services for Step 1 [SWIM-APS-03a]-Provision of ATFCM Information Services for Step 1
<u>Finalisation criteria</u> :	1 - NM systems have been updated to allow data exchange via B2B services

PCP	Active						EU+
FCM06	Traffic Complexity Assessment						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

This objective is functionally related to ATM Functionality 4 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, and is bound to its deployment target dates

The Traffic Load management tool addressed by SESAR OI step CM-0101 (Automatic support for traffic load density management) is the predecessor of traffic complexity tools. The traffic complexity tools continuously monitor sector demand and evaluate traffic complexity (by applying predefined complexity metrics) according to a predetermined qualitative scale. The predicted complexity coupled with traffic demand enables ATFCM to take timely action to adjust capacity, or request the traffic profile changes in coordination with ATC and airspace users.

The rigid application of ATFCM regulations based on standard capacity thresholds as the pre-dominant tactical capacity measure needs to be replaced by a close working relationship between ANSPs and Network Manager, which would monitor both the real demand, the effective capacity of sectors having taken into account the complexity of expected traffic situation.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All EU+ States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2015

Applicability Area

Full operational capability

31/12/2021

Applicability Area

References

European ATM Master Plan relationship

OI step -	[CM-0101]-Automated Support for Traffic Load (Density) Management									
Enablers -	ER APP ATC 124									

OI step -	[CM-0103-A]-Automated Support for Traffic Complexity Assessment									
Enablers -	A/C-37a	ER APP ATC 100	ER APP ATC 149a	ER APP ATC 93	NIMS-37	PRO-220a	PRO-220b	SWIM-APS- 03a FCM05		
	SWIM-APS- 04a	SWIM-INFR- 05a	SWIM-NET- 01a	SWIM-SUPT- 01a	SWIM-SUPT- 03a	SWIM-SUP T-05a				

OI step -	[IS-0102]-Improved Management of Flight Plan After Departure									
Enablers -	NIMS-02 FCM03	NIMS-20	PRO-005							

Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan
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Applicable legislation

Commission Regulation (EU) No 677/2011 of 7 July 2011 laying down detailed rules for the implementation of air traffic management (ATM) network functions and amending Regulation (EU) No 691/2010
Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
FCM06-ASP01	Implement Local Traffic Load Management tool	01/01/2015	31/12/2021
FCM06-ASP02	Receive, process and integrate ETFMS Flight Data (EFD)	01/01/2015	31/12/2021

FCM06	Traffic Complexity Assessment		
FCM06-ASP03	Implement Local Traffic Complexity tools and procedures	01/01/2018	31/12/2021
FCM06-NM01	Provide EFD to the local traffic complexity tools	01/01/2015	31/12/2021
FCM06-NM02	Improved trajectory in NM systems	01/01/2015	31/12/2021
FCM06-NM03	Network Traffic Complexity Assessment	01/01/2015	31/12/2021

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	The better ATCO workload predictability via deployment of the traffic complexity assessment tool will lead to some safety gains. Some enhancement through reduction in controller workload.
Capacity :	Increased through the better resource utilisation to enhance productivity and reduce controller workload.
Cost effectiveness :	Optimising of ATCO resources will provide substantial cost effectiveness if this tool is coupled with the resource management tool.
Environment :	Reductions in emissions through use of more optimal routes.
Security :	N/A

Detailed SLoA descriptions

FCM06-ASP01	Implement Local Traffic Load Management tool	From:	By:
		01/01/2015	31/12/2021

Action by : **ANS Providers**

Description & purpose : The automated tools shall support the continuous monitoring of the traffic loads per network node (sector, waypoint, route, route-segment) according to declared capacities and provide support to the local resource management.

Derogations : None

ATM Master Plan relationship :

[\[ER APP ATC 124\]-Basic Resource Management and Planning Tools.](#)

Finalisation criteria : 1 - Tools supporting local traffic load management are implemented and available for operational use

FCM06-ASP02	Receive, process and integrate ETFMS Flight Data (EFD)	From:	By:
		01/01/2015	31/12/2021

Action by : **ANS Providers**

Description & purpose : The local FDPS to receive, process and integrate EFD provided by NM in the local traffic complexity assessment tool. This activity is needed in order to supplement the local traffic count with the flight plan data from ETFMS.

Derogations : None

Supporting material(s) : EUROCONTROL - Flight Progress Messages Document - 2.100 / 03/2015

Url :

<https://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/flight-progress-msg.pdf>

ATM Master Plan relationship :

[\[NIMS-20\]-Provision, reception and processing of ATFCM flight progress messages](#)

Finalisation criteria : 1 - Reception, processing and integration of EFD message has been implemented.

FCM06-ASP03	Implement Local Traffic Complexity tools and procedures	From:	By:
		01/01/2018	31/12/2021

Action by : **ANS Providers**

Description & purpose : Local traffic Complexity assessment tools shall receive process and integrate EFD provided by NM.

Derogations : None

ATM Master Plan relationship :

[\[ER APP ATC 93\]-Enhance Resource Management and Planning Tools to use Traffic Complexity Assessment.](#)

[\[PRO-220a\]-ATC Procedures related to Detection and Resolution of Complexity, Density and Traffic Flow Problems](#)

[\[PRO-220b\]-FCM procedures to describe how detection and resolution of complexity, density or traffic flow issues are managed.](#)

Finalisation criteria : 1 - The local traffic complexity tools and procedures are implemented documented and in operational use.

FCM06-NM01	Provide EFD to the local traffic complexity tools	From:	By:
		01/01/2015	31/12/2021

Action by : **NM**

FCM06	Traffic Complexity Assessment
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Description & purpose : Provide the EFD data to the local FDPs.
Derogations : None
Supporting material(s) : EUROCONTROL - Flight Progress Messages Document - 2.100 / 03/2015
 Url : <https://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/user-guides/flight-progress-msg.pdf>
ATM Master Plan relationship : [\[NIMS-20\]-Provision, reception and processing of ATFCM flight progress messages](#)
Finalisation criteria : 1 - Provision of EFD to ANSPs.

FCM06-NM02	Improved trajectory in NM systems	From:	By:
		01/01/2015	31/12/2021

Action by : **NM**
Description & purpose : The NM systems adaptation activities (specifications, development and deployment) deal with improving the quality of the planned trajectory, thus enhancing flight planning and complexity assessment. They address the following functions:

- Operational deployment of EFPL
- Processing of ATC information
- Processing of OAT FPL information
- Support to mixed mode operations

Derogations : None
ATM Master Plan relationship : [\[NIMS-21a\]-Initial Flight Planning management enhanced to support 4D for Step 1](#)
[\[NIMS-35\]-Flight Planning management sub-system enhanced to process improved OAT flight plans](#)
Finalisation criteria : 1 - NM scenario management tools and procedures are implemented, documented and in operational use

FCM06-NM03	Network Traffic Complexity Assessment	From:	By:
		01/01/2015	31/12/2021

Action by : **NM**
Description & purpose : Implementation of scenario management tools in support of traffic complexity management in the pre-tactical phase. This tool is built on the planned trajectory information and allows to simulate options optimising the use of available capacity. It is intended to support NM operations by identifying the possible mitigation strategies to be applied at network or local level, in coordination with FMPs and airspace users.
 In addition there is a need to develop a procedure related to implementation of traffic count methodologies that do not impact trajectory calculation.

Derogations : None
ATM Master Plan relationship : [\[NIMS-37\]-Basic Complexity assessment tools](#)
[\[PRO-220b\]-FCM procedures to describe how detection and resolution of complexity, density or traffic flow issues are managed.](#)
Finalisation criteria : 1 - NM scenario management tools and procedures are implemented, documented and in operational use

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SESAR	Active						ECAC
INF04	Implement integrated briefing						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

Implement integrated briefing to allow integrated, flexible provision and presentation of data which are required during the pre-flight phase for the preparation and execution of a flight.

Integrated briefing is a system and/or service enabling the generic briefing process by enhancing the access to and provision of various data/information sources such as AIS, ARO, MET and ATFM which provide i.e. NOTAM, SNOWTAM, MET messages, FPL and related messages or ATFM messages.

Because of significant institutional and organisational constraints, implementation on a broad basis by ATM/CNS providers has not yet been achieved.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/07/2002

Applicability Area

Full operational capability

31/12/2012

Applicability Area

References

European ATM Master Plan relationship

OI step -	[IS-0201]-Integrated Pre-Flight Briefing						
Enablers -	AIMS-07						
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan	

Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
INF04-ASP01	Implement and provide integrated briefing function	01/07/2002	31/12/2012
INF04-AGY01	Develop and provide a high-level User Requirements document for integrated briefing	FINALISED	
INF04-AGY02	Develop and provide the Concept document for integrated briefing	FINALISED	
INF04-AGY03	Provide awareness to facilitate the implementation of integrated briefing	FINALISED	

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Improved, standardised flight preparation and planning ensures consistent, timely and complete provision of required pre-flight information.
Capacity :	N/A
Cost effectiveness :	Improved access and provision of information reduces duplication in data assembly, avoids ambiguities and inconsistencies and results in improved service.
Environment :	N/A
Security :	N/A

INF04	Implement integrated briefing
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Detailed SloA descriptions

INF04-ASP01	Implement and provide integrated briefing function	From:	By:
		01/07/2002	31/12/2012

Action by : **ANS Providers**

Description & purpose : Implement and provide integrated briefing function.

The data required during the pre-flight phase is provided and presented into one package in a flexible manner. This is about integrating all information relevant to a flight (AIS, Flight Plan, MET and ATFM) into one single output that can be tailored to the user-s needs.

Note: Level 5 defines a single report to be provided by systems. At this level full integration is achieved and a single front-end application is used to access the briefing services. However these may have separate background applications hidden from the user. Level five allows the various briefing products (MET, AIS etc.) to be combined into a single output which may be tailored as requested by the pilot.

Specific applicability: Military Authorities are recommended to consider implementation of integrated briefing for units that provide briefing services for both, military and civil operation.

Derogations : None

Supporting material(s) : ICAO - EUR-Doc 010 - Harmonized Access to AIS and MET Services relating to pre-flight planning - Edition 2.0 / 06/2003

Url :

<http://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/010%20-%20AIS%20and%20MET%20Services%20Access%20-%202nd%20Edition/Second%20edition%20-%20English.pdf>

EUROCONTROL - Integrated Briefing High Level Concept Document, Edition 0.8 / 08/2002

Url : <http://www.eurocontrol.int/articles/integrated-briefing-phase-3-p-12>

EUROCONTROL - Integrated Briefing Technical Concept Document - Edition 0.4 / 09/2002

Url : <http://www.eurocontrol.int/articles/integrated-briefing-phase-3-p-12>

ATM Master Plan relationship : [\[AIMS-07\]-Generation of pre-flight briefing information](#)

Finalisation criteria :

- 1 - Integrated briefing function has been implemented with the following conditions accomplished:
- Facilities and services with one final application at one terminal;
 - One single entry of flight details;
 - All briefing products combined into a single package that may be tailored by request of the user.

PCP	Active						ECAC	
INF07	Electronic Terrain and Obstacle Data (TOD)							
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 1 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates.

This objective has been introduced in order to aid the States in establishing a robust framework that will ensure the timely provision of Electronic Terrain and Obstacle Data (TOD)

ICAO Annex 15, Aeronautical Information Services, requires the States to provide TOD for their own territory and to announce it in the national AIPs. TOD is sub-divided into four areas:

- Area 1 - the entire territory of a State
- Area 2 - the terminal control area
- Area 3 - aerodromes/heliport area
- Area 4 - CAT II or CAT III operation area

States need to assess the existing national regulations and policies, including the safeguarding of aerodromes and obstacle permission processes, in order to evaluate their suitability in relation to the electronic terrain and obstacle data requirements of ICAO Annex 15 and to allocate responsibilities.

In addition, States will need to create capabilities for the origination, collection, exchange, management and distribution of the digital terrain and obstacle information in the form of digital datasets. This implies the establishment of efficient and reliable processes (e.g. data acquisition, cross-border provision, data validation and verification, data maintenance, data storage, data transmission, and oversight, etc.) ensuring the provision of up-to-date data which meets the operational requirements in support of an enhanced overall situational awareness and separation assurance and at the same time complies with the requirements of EU Regulation 73/2010 on the quality of aeronautical data and aeronautical information for the Single European Sky.

The operational capability dates given for this objective are not meant to replace, amend or modify in any way the deadline for implementation of the ICAO Annex 15 requirements for electronic terrain and obstacle data (TOD). The aim of this objective is to ensure that all States of the ECAC area provide the required TOD as soon as possible in line with the ICAO Annex 15.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/11/2014

Applicability Area

Full operational capability

31/05/2018

Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -							
Enablers -	AIMS-16							
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan	

Applicable legislation

EU Regulation 73/2010 - Requirements on the quality of aeronautical data and aeronautical information for the Single European Sky

EU Regulation 139/2014 - Requirements and administrative procedures related to aerodromes

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

SLoA ref.

Title

From

By

INF07	Electronic Terrain and Obstacle Data (TOD)		
INF07-REG01	Establish National TOD policy	01/11/2014	30/11/2015
INF07-REG02	Establish TOD regulatory framework	01/05/2015	31/12/2017
INF07-REG03	Establish oversight of TOD implementation	01/06/2015	31/12/2017
INF07-REG04	Verify the regulatory compliance of TOD implementation	01/12/2017	31/05/2018
INF07-ASP01	Plan the required activities for the collection, management and provision of TOD in accordance with national TOD policy	01/11/2014	30/11/2015
INF07-ASP02	Implement the collection, management and provision of TOD in accordance with the national TOD policy and regulatory framework	01/05/2015	31/05/2018
INF07-APO01	Plan the required activities for the collection, management and provision of TOD in accordance with national TOD policy	01/11/2014	30/11/2015
INF07-APO02	Implement the collection, management and provision of TOD in accordance with the national TOD policy and regulatory framework	01/05/2015	31/05/2018

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	The availability of quality-assured electronic terrain and obstacle data from the State's authoritative sources will significantly improve situational awareness with respect to terrain or obstacle hazards, separation assurance and the visualisation of approaches in challenging terrain environments, and thereby contribute to increased safety levels and performance in airborne and ground-based systems (e.g. EGPWS, MSAW, APM, SVS, A-SMGCS and Instrument Procedure Design).
Capacity :	Efficient and reliable obstacle data collection processes as well as the provision of seamless terrain data supporting the increasingly demanding operational requirements will enhance the overall situational awareness in respect of terrain or obstacle hazards and separation assurance, thereby contributing to or enabling informed decisions, and facilitating better use of available capacity (e.g. improved flight procedure design).
Cost effectiveness :	Digital obstacle and terrain data provides a means of allowing a number of advances in technology and the operating environment. Operating costs will decrease with the "paperless cockpit" trend, leading to a reduction in printing costs and weight. A more accurate obstacle and terrain dataset will enable more plausible aircraft operating limitation analysis allowing the design of fuel-effective performance based navigation procedures as well as optimized engine maintenance cycles through more accurate take-off performance calculations.
Environment :	The availability of more accurate digital terrain and obstacle data would potentially enable the design of more fuel-effective and noise-reduced performance based approach procedures.
Security :	State provision of TOD is to be made in compliance with EU Regulation 73/2010, which includes requirements for data security.

Detailed SLoA descriptions

INF07-REG01	Establish National TOD policy	From:	By:
		01/11/2014	30/11/2015

Action by : State Authorities

Description & purpose : In close coordination with ANSPs, airport operators and other organisations or bodies relevant in the TOD processes to establishing commonly agreed national TOD policy and implementation programmes, setting up the necessary steps to enable the provision of electronic terrain and obstacle data. The national TOD policy, being a binding document for TOD stakeholders, should include, as a minimum:

- TOD affected stakeholders within the State, their roles and responsibilities (cost recovery models, where appropriate) for TOD origination, collection, verification, validation, management and provision;
- TOD to be made available, including the survey requirements based on the data quality requirements, methods for verification and validation and delivery formats;
- list of aerodromes where Area 2, 3 and 4 TOD would be provided;
- the milestones and tasks of the TOD stakeholders and implementation timeline;
- the list of rules/regulations constituting the TOD regulatory framework that would require to be developed or updated;
- where appropriate, principles for exchange and harmonisation of the common TOD with neighbouring States.

Derogations : None

INF07	Electronic Terrain and Obstacle Data (TOD)
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Supporting material(s) : ICAO - Annex 15 - Aeronautical Information Services
 Url : <http://store1.icao.int/>
 ICAO - Doc 9137-Part 6 - Airport Services Manual - Part 6 - Control of Obstacles - Edition 2 / 12/1983
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 EASA - Acceptable Means of Compliance and Guidance Material to Regulation (EU) No 139/2014
 Url : <https://www.easa.europa.eu/document-library/acceptable-means-of-compliance-and-guidance-materials/aerodromes-amc-gm>
 ICAO - Annex 14 - Aerodromes, Volume I and II
 Url : <http://store1.icao.int/index.php/publications/annexes/14-aerodromes.html>
 ICAO - ICAO - Annex 4 - Aeronautical charts
 Url : <http://store1.icao.int/index.php/publications/annex-4-aeronautical-charts-11th-edition-july-2009-english-printed.html>
 EC - EU Regulation 139/2014 Requirements and administrative procedures related to aerodromes
 Url : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2014:044:0001:0034:EN:PDF>
 ICAO - Doc 9881 - Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information
 Url : <http://store1.icao.int/>
 EC - Regulation (EU) No 73/2010-(OJ L 23, 27.1.2010, p.6) - Regulation (EU) No 73/2010 of 26 January 2010 laying down requirements on the quality of aeronautical data and aeronautical information 01/2010
 Url : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:023:0006:0027:EN:PDF>
 EUROCONTROL - Terrain and Obstacle Data Manual - Edition 2.0 / 10/2011
 Url : <http://www.eurocontrol.int/publications/terrain-and-obstacle-data-tod-manual>

Finalisation criteria : 1 - In coordination with relevant TOD stakeholders, national TOD policy and implementation programme is established

INF07-REG02	Establish TOD regulatory framework	From:	By:
		01/05/2015	31/12/2017

Action by : **State Authorities**

Description & purpose : - Establish the TOD regulatory framework based on National TOD Policy (REG01) through the development or updating of the national rules and regulations affecting the provision of TOD (e.g. suitability of the existing national safeguarding policy for obstacle development in all four areas in relation to electronic obstacle data requirements or origination responsibilities and processes).
 - Include and maintain in the EUR ANP/FASID (AIM part) the list of aerodromes where Area 2, 3 and 4 TOD would be provided
 - Where appropriate, changes to State legislation should be initiated to ensure timely implementation.

Derogations : None

Supporting material(s) : EASA - Acceptable Means of Compliance and Guidance Material to Regulation (EU) No 139/2014
 Url : <https://www.easa.europa.eu/document-library/acceptable-means-of-compliance-and-guidance-materials/aerodromes-amc-gm>
 ICAO - Annex 15 - Aeronautical Information Services
 Url : <http://store1.icao.int/>
 ICAO - Doc 9137-Part 6 - Airport Services Manual - Part 6 - Control of Obstacles - Edition 2 / 12/1983
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 ICAO - Annex 14 - Aerodromes, Volume I and II
 Url : <http://store1.icao.int/index.php/publications/annexes/14-aerodromes.html>
 ICAO - ICAO - Annex 4 - Aeronautical charts
 Url : <http://store1.icao.int/index.php/publications/annex-4-aeronautical-charts-11th-edition-july-2009-english-printed.html>
 EC - EU Regulation 139/2014 Requirements and administrative procedures related to aerodromes
 Url : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2014:044:0001:0034:EN:PDF>
 ICAO - Doc 9881 - Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information
 Url : <http://store1.icao.int/>
 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/LexUriServ/LexUriServ.do?uri=OJ:L:2011:271:0023:0041:EN:PDF>
 EC - Regulation (EU) No 73/2010-(OJ L 23, 27.1.2010, p.6) - Regulation (EU) No 73/2010 of 26 January 2010 laying down requirements on the quality of aeronautical data and aeronautical information 01/2010
 Url : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:023:0006:0027:EN:PDF>
 EUROCONTROL - Terrain and Obstacle Data Manual - Edition 2.0 / 10/2011
 Url : <http://www.eurocontrol.int/publications/terrain-and-obstacle-data-tod-manual>

INF07	Electronic Terrain and Obstacle Data (TOD)
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Finalisation criteria :

- 1 - The TOD regulatory framework based on National TOD Policy (REG01) is established
- 2 - The list of aerodromes where Area 2, 3 and 4 TOD would be provided is included in EUR ANP/FASID (AIM part)
- 3 - Change process to state legislation is initiated as required

INF07-REG03	Establish oversight of TOD implementation	From:	By:
		01/06/2015	31/12/2017

Action by : **State Authorities**

Description & purpose : The regulatory oversight of TOD implementation for data origination, collection, verification and validation, management and provision based on the national TOD policy and regulatory framework.

Derogations : None

Supporting material(s) : ICAO - Annex 15 - Aeronautical Information Services
 Url : <http://store1.icao.int/>
 ICAO - Annex 14 - Aerodromes, Volume I and II
 Url : <http://store1.icao.int/index.php/publications/annexes/14-aerodromes.html>
 ICAO - ICAO - Annex 4 - Aeronautical charts
 Url : <http://store1.icao.int/index.php/publications/annex-4-aeronautical-charts-11th-edition-july-2009-english-printed.html>
 ICAO - Doc 9881 - Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information
 Url : <http://store1.icao.int/>
 ICAO - ICAO Doc 9734: Safety Oversight Manual
 Url : http://www.icao.int/safety/fsix/Library/Doc9734_Part_A.pdf and http://www.icao.int/safety/fsix/Library/Doc9734_Part_B.pdf
 EC - Regulation (EU) No 73/2010-(OJ L 23, 27.1.2010, p.6) - Regulation (EU) No 73/2010 of 26 January 2010 laying down requirements on the quality of aeronautical data and aeronautical information 01/2010
 Url : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:023:0006:0027:EN:PDF>
 EUROCONTROL - Terrain and Obstacle Data Manual - Edition 2.0 / 10/2011
 Url : <http://www.eurocontrol.int/publications/terrain-and-obstacle-data-tod-manual>

Finalisation criteria :

- 1 - State TOD oversight plan, including all TOD affected stakeholders, in accordance with the national TOD policy and regulatory framework is established
- 2 - Procedures are established for the national supervision of the ongoing TOD operation.

INF07-REG04	Verify the regulatory compliance of TOD implementation	From:	By:
		01/12/2017	31/05/2018

Action by : **State Authorities**

Description & purpose : The verification of compliance with the regulatory TOD requirements through oversight and acceptance of TOD implementation for data origination, collection, verification and validation, management and provision based on the international TOD requirements and the national TOD regulatory framework.

Derogations : None

Supporting material(s) : ICAO - Annex 15 - Aeronautical Information Services
 Url : <http://store1.icao.int/>
 ICAO - Annex 14 - Aerodromes, Volume I and II
 Url : <http://store1.icao.int/index.php/publications/annexes/14-aerodromes.html>
 ICAO - ICAO - Annex 4 - Aeronautical charts
 Url : <http://store1.icao.int/index.php/publications/annex-4-aeronautical-charts-11th-edition-july-2009-english-printed.html>
 ICAO - Doc 9881 - Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information
 Url : <http://store1.icao.int/>
 ICAO - ICAO Doc 9734: Safety Oversight Manual
 Url : http://www.icao.int/safety/fsix/Library/Doc9734_Part_A.pdf and http://www.icao.int/safety/fsix/Library/Doc9734_Part_B.pdf
 EC - Regulation (EU) No 73/2010-(OJ L 23, 27.1.2010, p.6) - Regulation (EU) No 73/2010 of 26 January 2010 laying down requirements on the quality of aeronautical data and aeronautical information 01/2010
 Url : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:023:0006:0027:EN:PDF>
 EUROCONTROL - Terrain and Obstacle Data Manual - Edition 2.0 / 10/2011
 Url : <http://www.eurocontrol.int/publications/terrain-and-obstacle-data-tod-manual>

Finalisation criteria :

- 1 - Implementation of TOD is verified through oversight and acceptance and corrective action where required

INF07	Electronic Terrain and Obstacle Data (TOD)
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INF07-ASP01	Plan the required activities for the collection, management and provision of TOD in accordance with national TOD policy	From:	By:
		01/11/2014	30/11/2015

Action by : **ANS Providers**

Description & purpose : In close coordination with the State authorities and related TOD stakeholders, analyse the current environment and develop a plan/roadmap demonstrating the feasibility of achieving the necessary steps to enable the collection (where applicable), management and provision of electronic terrain and obstacle data in accordance with the national TOD policy. The implementation planning should cover the following topics, as applicable:

- System change;
- Change management;
- Process development;
- Migration of processes and data;
- Data validation and verification;
- Financial and human resources;
- Performance monitoring;
- Risk management;
- Compliance management;
- Training

Derogations : None

Supporting material(s) : ICAO - Annex 15 - Aeronautical Information Services

Url : <http://store1.icao.int/>

ICAO - ICAO - Annex 4 - Aeronautical charts

Url : <http://store1.icao.int/index.php/publications/annex-4-aeronautical-charts-11th-edition-july-2009-english-printed.html>

ICAO - Doc 9881 - Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information

Url : <http://store1.icao.int/>

EC - Regulation (EU) No 73/2010-(OJ L 23, 27.1.2010, p.6) - Regulation (EU) No 73/2010 of 26 January 2010 laying down requirements on the quality of aeronautical data and aeronautical information 01/2010

Url : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:023:0006:0027:EN:PDF>

EUROCONTROL - Terrain and Obstacle Data Manual - Edition 2.0 / 10/2011

Url : <http://www.eurocontrol.int/publications/terrain-and-obstacle-data-tod-manual>

Finalisation criteria : 1 - The availability of a plan/roadmap by the ANSP demonstrating the feasibility of implementation of TOD as defined by the national TOD policy in line with the national TOD implementation programme

INF07-ASP02	Implement the collection, management and provision of TOD in accordance with the national TOD policy and regulatory framework	From:	By:
		01/05/2015	31/05/2018

Action by : **ANS Providers**

Description & purpose : Adjust the AIM system (i.e. people, equipment and procedures) to ensure the collection (where applicable), management and provision of TOD in accordance with the national TOD policy and regulatory framework.

Derogations : None

Supporting material(s) : ICAO - Annex 15 - Aeronautical Information Services

Url : <http://store1.icao.int/>

ICAO - Doc 9881 - Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information

Url : <http://store1.icao.int/>

ATM Master Plan relationship : [\[AIMS-16\]-Electronic Terrain and Obstacle Data \(TOD\)](#)

Finalisation criteria : 1 - The requirements defined in the national TOD policy and regulatory framework for ANSP are fulfilled in accordance with the national TOD implementation programme

INF07-APO01	Plan the required activities for the collection, management and provision of TOD in accordance with national TOD policy	From:	By:
		01/11/2014	30/11/2015

Action by : **Airport Operators**

Description & purpose : In close coordination with the State authorities and related TOD stakeholders, analyse the current environment and develop a plan/roadmap demonstrating the feasibility of achieving the necessary steps to enable the collection, management and provision of electronic terrain and obstacle data in accordance with the national TOD policy.

Derogations : None

INF07	Electronic Terrain and Obstacle Data (TOD)
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Supporting material(s) : EASA - Acceptable Means of Compliance and Guidance Material to Regulation (EU) No 139/2014
 Url : <https://www.easa.europa.eu/document-library/acceptable-means-of-compliance-and-guidance-materials/aerodromes-amc-gm>
 ICAO - Annex 15 - Aeronautical Information Services
 Url : <http://store1.icao.int/>
 ICAO - Doc 9137-Part 6 - Airport Services Manual - Part 6 - Control of Obstacles - Edition 2 / 12/1983
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 ICAO - Annex 14 - Aerodromes, Volume I and II
 Url : <http://store1.icao.int/index.php/publications/annexes/14-aerodromes.html>
 ICAO - ICAO - Annex 4 - Aeronautical charts
 Url : <http://store1.icao.int/index.php/publications/annex-4-aeronautical-charts-11th-edition-july-2009-english-printed.html>
 EC - EU Regulation 139/2014 Requirements and administrative procedures related to aerodromes
 Url : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2014:044:0001:0034:EN:PDF>
 ICAO - Doc 9881 - Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information
 Url : <http://store1.icao.int/>
 EC - Regulation (EU) No 73/2010-(OJ L 23, 27.1.2010, p.6) - Regulation (EU) No 73/2010 of 26 January 2010 laying down requirements on the quality of aeronautical data and aeronautical information 01/2010
 Url : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:023:0006:0027:EN:PDF>
 EUROCONTROL - Terrain and Obstacle Data Manual - Edition 2.0 / 10/2011
 Url : <http://www.eurocontrol.int/publications/terrain-and-obstacle-data-tod-manual>

Finalisation criteria : 1 - The availability of a plan/roadmap by the airport operator demonstrating the feasibility of implementation of TOD as defined by the national TOD policy in line with the national TOD implementation programme

INF07-APO02	Implement the collection, management and provision of TOD in accordance with the national TOD policy and regulatory framework	From:	By:
		01/05/2015	31/05/2018

Action by : **Airport Operators**

Description & purpose : Adjust the related airport operation system (i.e. people, equipment and procedures) to ensure the collection, management and provision of TOD in accordance with the national TOD policy and regulatory framework.

Derogations : None

Supporting material(s) : ICAO - Annex 15 - Aeronautical Information Services
 Url : <http://store1.icao.int/>
 ICAO - Doc 9137-Part 6 - Airport Services Manual - Part 6 - Control of Obstacles - Edition 2 / 12/1983
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 ICAO - Annex 14 - Aerodromes, Volume I and II
 Url : <http://store1.icao.int/index.php/publications/annexes/14-aerodromes.html>
 ICAO - ICAO - Annex 4 - Aeronautical charts
 Url : <http://store1.icao.int/index.php/publications/annex-4-aeronautical-charts-11th-edition-july-2009-english-printed.html>
 EC - EU Regulation 139/2014 Requirements and administrative procedures related to aerodromes
 Url : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2014:044:0001:0034:EN:PDF>
 ICAO - Doc 9881 - Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information
 Url : <http://store1.icao.int/>
 EC - Regulation (EU) No 73/2010-(OJ L 23, 27.1.2010, p.6) - Regulation (EU) No 73/2010 of 26 January 2010 laying down requirements on the quality of aeronautical data and aeronautical information 01/2010
 Url : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:023:0006:0027:EN:PDF>
 EUROCONTROL - Terrain and Obstacle Data Manual - Edition 2.0 / 10/2011
 Url : <http://www.eurocontrol.int/publications/terrain-and-obstacle-data-tod-manual>
 EASA - Acceptable Means of Compliance and Guidance Material to Regulation (EU) No 139/2014
 Url : <https://www.easa.europa.eu/document-library/acceptable-means-of-compliance-and-guidance-materials/aerodromes-amc-gm>
 [AIMS-16]-Electronic Terrain and Obstacle Data (TOD)

ATM Master Plan relationship :

Finalisation criteria : 1 - The requirements defined in the national TOD policy and regulatory framework for airport operators are fulfilled in accordance with the national TOD implementation programme

SES		Active					EU+	
ITY-ACID		Aircraft identification						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This SES-related implementation objective is derived from Implementing Regulation (EU) No 1206/2011 of 22 November 2011, laying down requirements on aircraft identification for surveillance for the single European sky. The main objective of the Regulation is to ensure the unambiguous and continuous identification of individual aircraft operating as general air traffic under instrument flight rules throughout the airspace of the single European sky (the ACID IR) through a phased approach.

The scope of this ESSIP objective is limited to the milestone of 2 January 2020 as identified in the Regulation. By this date, the Regulation requires that air navigation service providers deploy the capability to use the downlinked aircraft identification feature as well as the associated procedures so as to ensure the unambiguous and continuous identification of all individual aircraft operating IFR/GAT flights, by using this feature. It also addresses the possible exemptions associated to this date, under specific conditions.

Implementing Regulation (EU) No 1206/2011 requires that air navigation service providers, in all Member States, have the capability to establish individual aircraft identification using the downlinked aircraft identification feature, for all IFR/GAT flights. This will be achieved with the deployment of the appropriate elements of the surveillance chain as identified in the Implementing Regulation, so as to ensure this capability. Practically this capability can be ensured by deploying Mode S surveillance, or ADS-B or WAM, taking into account the local operating environments, constraints and needs as well as the airspace user's capabilities. The possibility of delayed compliance, under very specific conditions (approach area where air traffic services are provided by military units or under military supervision) is envisaged.

For completeness of information, Implementing Regulation (EU) No 1206/2011 of 22 November 2011 includes a first milestone, applicable from 9 February 2012, requiring the use the downlinked aircraft identification feature, or the deployment of improved and harmonised capabilities for the automatic assignment of SSR codes (e.g. directional assignments of SSR codes, multiple simultaneous assignments to flights operated in conflict-free directions, etc). As the first milestone has been already implemented, it is outside the scope of the ESSIP as an implementation planning tool.

It should be noted that the technical capability of the airborne constituents (the carriage of transponders capable to downlink of the aircraft identification) is addressed by Regulation (EU) No 1207/2011 of 22 November 2011 laying down requirements for the performance and the interoperability of surveillance for the single European sky (as amended by Commission Implementing Regulation (EU) No 1028/2014) being covered by ESSIP objective ITY-SPI. However, as the ACID-IR identifies specific procedures to be used by the Operators, notably with regard the setting of the downlinked aircraft identification on-board, the ITY-ACID ESSIP objective defines a specific Stakeholder Line of Action with regard the appropriate training to be provided by the Operators to the personnel operating and maintaining surveillance equipment, in relationship with the use of the aircraft identification feature.

This SES-related implementation objective does not replace the EC legislation. It aims at facilitating the monitoring and reporting of the implementation of the requirements on aircraft identification for surveillance in European ATM in line with the EC regulations.

This SES-related implementation objective does not replace the EU legislation. It aims at facilitating the monitoring and reporting of the implementation of aircraft identification in European ATM in line with the EU regulations and through the SES implementation monitoring and reporting mechanism.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Applicability Area(s) & Timescale(s)

Applicability Area

All EU+ States

Timescales:

From:

By:

Applicable to:

Entry into force of the Regulation	13/12/2011		Applicability Area
System capability		02/01/2020	Applicability Area
Possible deferred compliance, only for services provided by military units or under military supervision, subject to conditions:		02/01/2025	Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -								
Enablers -	GSURV-010								
	1								

ITY-ACID		Aircraft identification				
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan

Applicable legislation

Regulation (EU) No 1206/2011 of 22 November 2011 laying down requirements on aircraft identification for surveillance for the single European sky
Regulation (EU) No 1207/2011 of 22 November 2011 laying down requirements for the performance and the interoperability of surveillance for the single European sky as amended by Commission Implementing Regulation (EU) No 1028/2014

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
ITY-ACID-ASP01	Ensure the capability of the cooperative surveillance chain, to use the downlinked aircraft identification		02/01/2020
ITY-ACID-ASP02	Organise personnel training and awareness		02/01/2020
ITY-ACID-ASP03	Develop, and deliver as necessary, a safety assessment of the changes imposed by the implementation of the capability allowing the establishment of the individual aircraft identification using the downlinked aircraft identification feature		02/01/2020
ITY-ACID-USE01	Organise personnel training and awareness		02/01/2020

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

<u>Safety</u> :	Enhanced safety levels by ensuring that unambiguous individual aircraft identification is achieved, maintained and shared accurately throughout EATMN airspace
<u>Capacity</u> :	Avoidance of delays and of reduction in the network capacity caused by the shortage of SSR transponder codes or by increased controller workload caused by code changes.
<u>Cost effectiveness</u> :	The use of downlinked aircraft identification represents the most efficient long term solution as shown in the impact assessment of Regulation (EU) No 1206/2011
<u>Environment</u> :	N/A
<u>Security</u> :	N/A

Detailed SLoA descriptions

ITY-ACID-ASP01	Ensure the capability of the cooperative surveillance chain, to use the downlinked aircraft identification	From:	By:
			02/01/2020

Action by : **ANS Providers**

Description & purpose : Ensure that the cooperative surveillance chain has the necessary capability to allow the establishment of the individual aircraft identification using the downlinked aircraft identification feature in compliance with Article 4.2 and ensure the operational use of this capability as prescribed in Article 4.3 (including Annex II) of Regulation (EU) No 1206/2011. The deployment and the use of this capability will have an impact on the surveillance systems as well as on flight data processing systems, surveillance data processing systems, human machine interface systems and ground-to-ground communication systems used for the distribution of surveillance data. With regard to the specific surveillance technologies the ANSPs could use to support this requirement they have the choice between Mode S surveillance, ADS-B or WAM, taking into account the local operating environments, constraints and needs as well as the capabilities of the airspace users.

Derogations : For the specific case of approach areas where air traffic services are provided by military units or under military supervision and when procurement constraints prevent compliance with Article 4(2) of the Regulation, Member States shall communicate to the Commission by 31 December 2017 at the latest, the date of compliance with downlinked aircraft identification that shall not be later than 2 January 2025, as prescribed in Article 11 "Exemptions" of Regulation (EU) No 1206/2011. Following consultation with the Network Manager, and not later than 31 December 2018, the Commission may review the exemptions that could have a significant impact on the EATMN.

ITY-ACID	Aircraft identification
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Supporting material(s) : EUROCONTROL - ADS-B documentation
 Url : <http://www.eurocontrol.int/sms/documentation>
 EUROCONTROL - Mode S Elementary Surveillance (ELS) Operations Manual
 Url : <http://www.eurocontrol.int/sites/default/files/article/content/documents/nm/surveillance/surveillance-mode-s-els-ops-manual-ed-1.0-20110102.pdf>
 EUROCONTROL - Wide Area Multilateration (WAM) Guidance Material
 Url : <http://www.eurocontrol.int/publications/wide-area-multilateration-wam-guidance-material>

Finalisation criteria :
 1 - All the appropriate systems have been upgraded
 2 - The technical file (TF) with evidences of compliance and the EC declaration of verification of systems (DoV) has been delivered to the competent National Supervisory Authority (NSA)
 3 - The upgraded systems have been put into service, allowing the establishment of the individual aircraft identification using the downlinked aircraft identification.

ITY-ACID-ASP02	Organise personnel training and awareness	From:	By:
			02/01/2020

Action by : **ANS Providers**
Description & purpose : Ensure that:
 - personnel are made duly aware of the requirements of the Regulation and adequately trained as prescribed in Art 8.(1)]
 - operations manuals, working methods and operating procedures comply with Article 8(2) of Regulation (EU) No 1206/2011.
 Note: The completion dates should take into account the possible derogations identified in SLoA ITY-ACID-ASP01 (ref, Article 11 'Exemptions' of Regulation (EU) No 1206/2011).

Derogations : None

Supporting material(s) : EUROCONTROL - ADS-B documentation
 Url : <http://www.eurocontrol.int/sms/documentation>
 EUROCONTROL - Mode S Elementary Surveillance (ELS) Operations Manual
 Url : <http://www.eurocontrol.int/sites/default/files/article/content/documents/nm/surveillance/surveillance-mode-s-els-ops-manual-ed-1.0-20110102.pdf>
 EUROCONTROL - Wide Area Multilateration (WAM) Guidance Material
 Url : <http://www.eurocontrol.int/publications/wide-area-multilateration-wam-guidance-material>

Finalisation criteria :
 1 - The training plans have been updated and a training package has been developed.
 2 - All concerned personnel have been trained.

ITY-ACID-ASP03	Develop, and deliver as necessary, a safety assessment of the changes imposed by the implementation of the capability allowing the establishment of the individual aircraft identification using the downlinked aircraft identification feature	From:	By:
			02/01/2020

Action by : **ANS Providers**
Description & purpose : Notify the Regulator/NSA/Competent Authority of planned safety related changes and develop safety assessment of these changes, imposed by implementation of the capability allowing the establishment of the individual aircraft identification using the downlinked aircraft identification feature.
 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.
 The assessment should consider transition planning leading to the introduction of the capability as well as fall-back mitigation.
 Note: 1 - Any other validated/recognised method for the safety assessment, is acceptable, if agreed with the Regulator/NSA/Competent Authority.
 2 - The completion dates should take into account the possible derogations identified in SLoA ITY-ACID-ASP01 (ref, Article 11 'Exemptions' of Regulation (EU) No 1206/2011).

Derogations : None

ITY-ACID	Aircraft identification
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Supporting material(s) : EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006
 Url : <http://www.eurocontrol.int/articles/safety-assessment-methodology-sam>
 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>
 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/LexUriServ/LexUriServ.do?uri=OJ:L:2011:271:0023:0041:EN:PDF>

Finalisation criteria :
 1 - Safety argument addressing the implementation of the capability allowing the establishment of the individual aircraft identification using the downlinked aircraft identification feature has been developed.
 2 - Safety argument addressing the implementation of the capability allowing the establishment of the individual aircraft identification using the downlinked aircraft identification feature, 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.

ITY-ACID-USE01	Organise personnel training and awareness	From:	By:
			02/01/2020

Action by : **Airspace Users**

Description & purpose : Operators shall ensure that the personnel operating and maintaining surveillance equipment are made duly aware of Regulation (EU) No 1206/2011, that they are adequately trained to use this equipment, that instructions are available in the cockpit and that the correct processes are applied in operations, so as to ensure compliance with the provisions of Article 9 'Additional requirements for operators' of Regulation (EU) No 1206/2011.
 Note: This SLoA is specific to the provision and use of the downlinked aircraft identification feature and complements the User SLoAs identified in the ITY-SPI ESSIP objective.

Derogations : None

Finalisation criteria :
 1 - Training manuals have been updated, as required and that instructions are available in the cockpit.
 2 - All personnel operating surveillance equipment have been trained and the correct processes are applied in operations.

PCP	Active						EU+	
ITY-AGDL	Initial ATC air-ground data link services above FL-285							
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionalities 6 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to their deployment target dates.

This SES - related implementation objective is derived from COMMISSION IMPLEMENTING REGULATION (EU) 2015/310 of 26 February 2015, amending Regulation (EC) No 29/2009 of 16 January 2009 and repealing Implementing Regulation (EU) No 441/2014, laying down requirements on data link services for the single European sky.

Regulation (EC) No 29/2009 applies to air-ground data communications systems, their constituents and associated procedures and to flight data processing systems serving air traffic control units providing services to general air traffic, their constituents and associated procedures [Ref. Article 1(2)].

Regulation (EC) No 29/2009 requires the interoperable implementation of the first set of en-route non-time critical air-ground data link services DLIC, ACL, ACM and AMC [Ref. Annex II].

This regulation applies to all flights operating as general air traffic in accordance with instrument flight rules above FL 285, within the defined airspace areas [Ref. Article 1.1 of COMMISSION IMPLEMENTING REGULATION (EU) 2015/310 of 26 February 2015].

The terms used in this objective are defined in Article 2 of Regulation (EC) No 549/2004 and in Article 2 of Regulation (EC) No 29/2009.

This SES-related implementation objective does not replace the EC legislation. It aims at facilitating the monitoring and reporting of the implementation of data link services in European ATM in line with the EC regulations and through the SES implementation monitoring and reporting mechanism. It supersedes 'ECIP' objective ATC06 'Implement ATC air-ground data link services (Phase 1)'.

The ESSIP objective is aligned with COMMISSION IMPLEMENTING REGULATION (EU) 2015/310 of 26 February 2015 amending Regulation (EC) No 29/2009 and repealing Implementing Regulation (EU) No 441/2014

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All EU+ States

Timescales:

From:

By:

Applicable to:

ATS unit operational capability

05/02/2018

Applicability Area

Aircraft capability

05/02/2020

Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -								
Enablers -	CTE-C02b								
OI step -	[AUO-0301]-Voice Controller-Pilot Communications (En Route) Complemented by Data Link								
Enablers -	A/C-31	ER ATC 154a	ER ATC 154b	PRO-044b	PRO-228a				
Legend:	WXYZ-001	Covered by SLoA(s) in this objective		WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan	

Applicable legislation

COMMISSION IMPLEMENTING REGULATION (EU) 2015/310 of 26 February 2015 amending Regulation (EC) No 29/2009 of 16 January 2009 and repealing Implementing Regulation (EU) No 441/2014, laying down requirements on data link services for the single European sky

ITY-AGDL	Initial ATC air-ground data link services above FL-285
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Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
ITY-AGDL-REG01	Ensure that safety is assessed before any change to the existing system	DELETED	
ITY-AGDL-REG02	Ensure the processing and the distribution of the information on the data link capability by the IFPS	FINALISED	
ITY-AGDL-REG03	Ensure the publication of relevant information in the national aeronautical information publication		05/02/2018
ITY-AGDL-REG04	Ensure ATN/VDL-2 availability, security policy and address management procedures		05/02/2018
ITY-AGDL-REG05	Approve the operational use of air-ground data link services	DELETED	
ITY-AGDL-REG06	Notify potential exemption cases to the European Commission	FINALISED	
ITY-AGDL-ASP01	Ensure the conformity of communications, flight data and initial flight plan processing systems and associated procedures		05/02/2018
ITY-AGDL-ASP02	Organise personnel awareness and training		05/02/2018
ITY-AGDL-ASP03	Ensure ground communication systems comply with air-ground communication requirements		05/02/2018
ITY-AGDL-ASP04	Deploy communication infrastructure to handle air-ground data link services		05/02/2018
ITY-AGDL-MIL01	Equip transport-type State aircraft		01/01/2019
ITY-AGDL-USE01	Equip aircraft with data link equipment supporting the identified services		05/02/2020
ITY-AGDL-USE02	Specify relevant operational procedures		05/02/2020
ITY-AGDL-USE03	Arrange air-ground ATS data link service provision		05/02/2020
ITY-AGDL-USE04	Organise personnel awareness and training		05/02/2020
ITY-AGDL-IND01	Provide avionics and ground systems for data link services	DELETED	

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Through the delivery of standard and unambiguous messages (entailing significant error and fatigue reduction), the provision of a communications back up and the possibility of immediate message retrieval, data link communications are a major safety enhancement.
Capacity :	Increased capacity through both reduction of voice congestion and increase in controller efficiency. Capacity gain is expected from 3.4 % (if 25% of flights is equipped) up to 11% (if 75% of flights is equipped).
Cost effectiveness :	Data link is a cost-effective capacity increase enabler through sector productivity increase and delay cost savings. ANSPs savings derived from staff cost avoidance. Aircraft operators will benefit of en route cost savings and reduction of delays.
Environment :	N/A
Security :	N/A

Detailed SLoA descriptions

ITY-AGDL-REG03	Ensure the publication of relevant information in the national aeronautical information publication	From:	By:
			05/02/2018

Action by :	State Authorities
Description & purpose :	Ensure that relevant information on the use of data link services is published in the national aeronautical information publications [Regulation (EC) No 29/2009, Article 13(8)].
Derogations :	None
Finalisation criteria :	1 - National aeronautical information publications have been updated appropriately.

ITY-AGDL	Initial ATC air-ground data link services above FL-285
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ITY-AGDL-REG04	Ensure ATN/VDL-2 availability, security policy and address management procedures	From:	By:
			05/02/2018

Action by : **State Authorities**

Description & purpose : Member States which have designated ATS providers in the applicable airspace shall:

- Ensure that air-ground communications services satisfying requirements for ATN and VDL-2 are available to operators for aircraft flying within that airspace under their responsibility for CM and CPDLC data exchanges, with due regard to possible coverage limitations inherent in the communication technology used [Regulation (EC) No 29/2009, Article 7(1)];
- Ensure that air navigation service providers and other entities providing communication services implement an appropriate security policy for data exchanges of the DLIC, ACM, ACL and AMC services, notably by applying common security rules to protect distributed physical resources supporting those data exchanges [Regulation (EC) No 29/2009, Article 7(2)];
- Ensure that harmonised procedures apply for the management of addressing information in order to unambiguously identify air and ground communications systems supporting data exchanges of the CM and CPDLC air/ground applications [Regulation (EC) No 29/2009, Article 7(3)].

Derogations : None

Finalisation criteria :

- 1 - Availability of ATN/VDL-2 service has been published in national aeronautical information publication.
- 2 - Security policy is available.
- 3 - Harmonised addressing procedures are available.

ITY-AGDL-ASP01	Ensure the conformity of communications, flight data and initial flight plan processing systems and associated procedures	From:	By:
			05/02/2018

Action by : **ANS Providers**

Description & purpose : Ensure that air-ground communications systems, flight data processing systems and human-machine interface systems serving ATS units providing service to general air traffic within the applicable airspace areas comply with the following articles of Regulation (EC) No 29/2009:

- Article 1(3) on the operational coverage;
- Article 3(1) on the capability to provide and operate the DLIC, ACM, ACL and AMC data link services;
- Article 4 on procedures for CPDLC establishment, operation and termination, and for the filing of flight plans regarding information pertaining to data link capability;
- Article 5(1) on ground systems support of CM and CPDLC;
- Article 5(2) on seamless provision, message set and integrity requirements of end-to-end communications for data exchanges of the CM and CPDLC air-ground applications;
- Article 5(3) on service level agreement for communication services for CM and CPDLC data exchanges that may be provided by other organisations (i.e. CSPs);
- Article 5(4) on ensuring that data exchanges can be established with all compliant aircraft flying in the airspace under their responsibility;
- Article 5(5) on automated notification, coordination and transfer of flights between ATC units (Note that this requires implementation of LOF/NAN processes in accordance with Regulation (EC) No 1032/2006 - as complemented by Regulation (EC) No 30/2009 - refer to SES-related implementation objective ITY-COTR);
- Article 5(6) on performance monitoring;
- Article 9 on the application of air-ground communications in ground communication systems and their constituents for CM and CPDLC data exchanges, allowing either ATN/VDL-2 or an alternative communication technology;
- Article 13(1) and (2) on the ground-based recording of data link communications.

Derogations : None

Supporting material(s) : ICAO - Annex 10, Volume III - Aeronautical Telecommunications, Volume III Communication Systems, Part 1 Digital Data Communication Systems - Edition 2.0

Url : <http://store1.icao.int/>

EUROCONTROL - SPEC 116 - EUROCONTROL Specification on Data Link Services - Edition 2.1 / 01/2009

Url : <http://www.eurocontrol.int/articles/link-2000-library>

EUROCAE - ED-111 - Functional specifications for CNS/ATM Recording - Including Amendment N°1 - 30 July 2003 07/2002

Url : <http://boutique.eurocae.net/catalog/index.php>

ATM Master Plan relationship :

[\[ER ATC 154b\]-Enhance En-route ATC sub-systems \(internal processing, FDP and Controller Workstation\) to enable CPDLC dialog with Pilot](#)

[\[PRO-044b\]-ATC Procedures involving protocol for utilization of DataLink communications, message composition, receipt acknowledgement](#)

Finalisation criteria :

- 1 - Air-ground ANSP communications systems enable data link communication between controllers and operators of equipped aircraft.
- 2 - Flight data and initial flight plan processing systems are able to handle the information about the data link capability of flights.
- 3 - Associated procedures are applied in operation.

ITY-AGDL-ASP02	Organise personnel awareness and training	From:	By:

ITY-AGDL	Initial ATC air-ground data link services above FL-285
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			05/02/2018
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Action by : **ANS Providers**

Description & purpose : Develop and maintain operations manuals containing the necessary instructions and information to enable all personnel concerned to apply Regulation (EC) No 29/2009.
Ensure that these manuals are accessible and kept up to date and that their update and distribution are subject to appropriate quality and documentation configuration management.
Ensure that the working methods and operating procedures comply with Regulation (EC) No 29/2009.
Ensure that all personnel concerned are made duly aware of the relevant provisions in Regulation (EC) No 29/2009.
Ensure that all personnel concerned are adequately trained for their job functions.

Note: In accordance with Regulation (EC) No 29/2009, Articles 13(3) and 13(5)

Derogations : None

Finalisation criteria : 1 - Air Navigation Service Providers have produced the operations manuals and the training programmes.

ITY-AGDL-ASP03	Ensure ground communication systems comply with air-ground communication requirements	From:	By:
			05/02/2018

Action by : **ANS Providers**

Description & purpose : Entities providing communication services shall ensure that the ground communication systems and their constituents apply air-ground communications for CM and CPDLC data exchanges in compliance with Article 9 of Regulation (EC) No 29/2009, allowing either ATN/VDL-2 or an alternative communication technology.

Derogations : None

ATM Master Plan relationship : [\[ER ATC 154a\]-Basic air-ground datalink communications service derived from the CM and CPDLC applications](#)

Finalisation criteria : 1 - CSP has deployed and made available ground communication systems which allow ATN/VDL-2 or alternative communication technology.

ITY-AGDL-ASP04	Deploy communication infrastructure to handle air-ground data link services	From:	By:
			05/02/2018

Action by : **ANS Providers**

Description & purpose : Ensure that the entities providing communication services for data exchanges of the air-ground applications deploy the appropriate telecommunication infrastructure (e.g. based on ATN/VDL-Mode 2).

Derogations : None

Supporting material(s) : EUROCONTROL - SPEC 116 - EUROCONTROL Specification on Data Link Services - Edition 2.1 / 01/2009
Url : <http://www.eurocontrol.int/articles/link-2000-library>
EUROCONTROL - Generic Requirements for a LINK 2000+ Air/Ground Communications Service Provider (ACSP) - Edition 1.6 / 12/2009
Url : <http://www.eurocontrol.int/articles/link-2000-guidance-material>
EUROCONTROL - LINK 2000+ Network Planning Document - Edition 3.6 / 12/2012
Url : <http://www.eurocontrol.int/articles/link-2000-guidance-material>
ARINC - 631-5 - VHF Digital Link (VDL) Mode 2 Implementation Provisions - ARINC 600 Series / 12/2008
Url : https://www.arinc.com/cf/store/catalog.cfm?prod_group_id=1&category_group_id=3
ARINC - 631-6 - VHF Digital Link (VDL) Mode 2 Implementation Provisions Standards - ARINC 600 Series / 11/2010
Url : https://www.arinc.com/cf/store/catalog.cfm?prod_group_id=1&category_group_id=3
ATM Master Plan relationship : [\[CTE-C02b\]-A/G Datalink over ATN/OSI - Single frequency](#)

Finalisation criteria : 1 - Appropriate telecommunication infrastructure has been deployed in the specific locations selected by the State, and is ready to handle the selected air-ground data link services.

ITY-AGDL-MIL01	Equip transport-type State aircraft	From:	By:
			01/01/2019

Action by : **Military Authorities**

Description & purpose : States which decide to equip new transport type State aircraft entering into service from 1 January 2019 with data link capability relying upon standards which are not specific to military operational requirements, shall ensure that those aircraft comply with the following articles of Regulation (EC) No 29/2009:
- Article 3(5), amended by Article 1.2.4 of COMMISSION IMPLEMENTING REGULATION (EU) 2015/310, on the capability to operate the data link services DLIC, ACM, ACL and AMC;
- Article 8(1) on communications systems support of CM and CPDLC;
- Article 8(2) on seamless provision, message set and integrity requirements of end-to-end communications for data exchanges of the CM and CPDLC air-ground applications;
- Article 8(3) on requirements for air-ground communication systems and their constituents to apply air-ground communications for data exchanges of the CM and CPDLC applications, allowing either ATN/VDL-2 or an alternative communication technology.

Derogations : None

ITY-AGDL	Initial ATC air-ground data link services above FL-285
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Supporting material(s) : EUROCONTROL - SPEC 116 - EUROCONTROL Specification on Data Link Services - Edition 2.1 / 01/2009

Url : <http://www.eurocontrol.int/articles/link-2000-library>

Finalisation criteria : 1 - Transport-type aircraft have been equipped with data link capabilities.

ITY-AGDL-USE01	Equip aircraft with data link equipment supporting the identified services	From:	By:
			05/02/2020

Action by : **Airspace Users**

Description & purpose : Operators shall ensure that:

- Their aircraft operating IFR/GAT flights within the applicable airspace above FL285 have the capability to operate the DLIC, ACM, ACL and AMC services [Article 1.(2).2 of COMMISSION IMPLEMENTING REGULATION 2015/310]
- Aircraft air-ground communication systems and their constituents support the CM and CPDLC air-ground applications [Regulation (EC) No 29/2009, Article 6(1)];
- Aircraft air-ground communication systems and their constituents apply end-to-end communications for data exchanges of the CM and CPDLC air-ground applications in compliance with Regulation (EC) No 29/2009, Article 6(2);
- Aircraft air-ground communication systems and their constituents apply air-ground communications for data exchanges of the CM and CPDLC air-ground applications in compliance with Regulation (EC) No 29/2009, Article 6(3), allowing either ATN/VDL-2 or an alternative communication technology.

Derogations : Not applicable to:

- Aircraft with an individual certificate of airworthiness first issued before 01.01.14 and fitted with FANS-1/A data link equipment certified against the requirements of EUROCAE ED-100 or ED-100A [Article 1.(2).3.a of COMMISSION IMPLEMENTING REGULATION 2015/310];
- Aircraft with an individual certificate of airworthiness first issued before 31.12.2003 which will cease operation in the applicable airspace by 31.12.2022 [Article 1.(2).3.b of COMMISSION IMPLEMENTING REGULATION 2015/310];
- State aircraft [Article 1.(2).3.c of COMMISSION IMPLEMENTING REGULATION 2015/310];
- Aircraft being flown for testing, delivery or for maintenance purpose or with data link constituents temporarily inoperative under conditions specified in the applicable minimum equipment list [Article 1.(2).3.d of COMMISSION IMPLEMENTING REGULATION 2015/310];
- Specific aircraft types for which exemptions are justified and granted according to the procedure in Article 5(3) of Regulation (EC) No 549/2004 [Article 14].

Supporting material(s) : EUROCONTROL - SPEC 116 - EUROCONTROL Specification on Data Link Services - Edition 2.1 / 01/2009

Url : <http://www.eurocontrol.int/articles/link-2000-library>

Finalisation criteria : 1 - Airworthiness certificate with evidence of compliance with the certification specification has been granted by EASA.

ITY-AGDL-USE02	Specify relevant operational procedures	From:	By:
			05/02/2020

Action by : **Airspace Users**

Description & purpose : Specify and apply common standardised procedures consistent with relevant ICAO provisions for CPDLC establishment, operation and termination, and for the filing of flight plans regarding information pertaining to data link capability, in compliance with Regulation (EC) No 29/2009, Article 4.

Derogations : None

Supporting material(s) : EUROCONTROL - SPEC 116 - EUROCONTROL Specification on Data Link Services - Edition 2.1 / 01/2009

Url : <http://www.eurocontrol.int/articles/link-2000-library>

Finalisation criteria : 1 - Operators have updated flight manuals with relevant information for the use of data link equipment and for CPDLC operations.

ITY-AGDL-USE03	Arrange air-ground ATS data link service provision	From:	By:
			05/02/2020

Action by : **Airspace Users**

Description & purpose : Make appropriate arrangements (with a CSP) to ensure that data exchanges can be established between their aircraft and all ATS units which may control the flights they operate in the applicable airspace, with due regard to possible coverage limitations inherent in the communication technology used [Regulation (EC) No 29/2009, Article 6(4)].

Derogations : None

Finalisation criteria : 1 - Operators have made appropriate arrangements with Communication Service Providers serving all relevant ATS units.

ITY-AGDL-USE04	Organise personnel awareness and training	From:	By:
			05/02/2020

Action by : **Airspace Users**

Description & purpose : Ensure that the personnel operating data link equipment are made duly aware of Regulation (EC) No 29/2009, and that they are adequately trained for their job functions, and that instructions for using data link equipment are available in the cockpit [Regulation (EC) No 29/2009, Article 13(6)].

Derogations : None

ITY-AGDL	Initial ATC air-ground data link services above FL-285
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Finalisation criteria :

- 1 - Operators have training package added to training courses.
- 2 - Operators have training plans.
- 3 - Operators have Flight Manual with relevant information for the use of data link equipment available in the cockpit.

PCP	Active					EU+	
ITY-ADQ	Ensure quality of aeronautical data and aeronautical information						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

This objective is functionally related to ATM Functionalities 1 and 5 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to their deployment target dates.

This SES-related implementation objective is derived from Regulation (EU) No 73/2010 of 26 January 2010, amended by Commission Implementing Regulation (EU) No 1029 of 26 September 2014, laying down requirements on the quality of aeronautical data and aeronautical information for the single European sky (Official Journal L23/6, dated 27.01.2010). The Regulation lays down the requirements on the quality of aeronautical data and aeronautical information in terms of accuracy, resolution and integrity [Article 1].

It applies to European Air Traffic Management Network (EATM Network) systems, their constituents and associated procedures involved in the origination, production, storage, handling, processing, transfer and distribution of aeronautical data and aeronautical information [Article 2(1)].

The Regulation applies to the following aeronautical data and aeronautical information [Article 2(1)]:

- the integrated aeronautical information package (IAIP) made available by Member States, with the exception of aeronautical information circulars;
- electronic obstacle and electronic terrain data or elements thereof, where made available by Member States;
- aerodrome mapping data, where made available by Member States.

It applies to ANSPs, AIS Providers, operators of those aerodromes and heliports for which IFR or Special-VFR procedures have been published in national aeronautical information publications, public or private entities providing services for the origination and provision of survey data, procedure design services, electronic terrain data, electronic obstacle data and manufacturing industry [Article 2(2)].

It applies up to the moment when the aeronautical data and/or aeronautical information are made available by the aeronautical information service to the next intended user [Article 2(3)].

The terms used in this objective are defined in Article 2 of Regulation (EC) No 549/2004, complemented by definitions set in Article 3 of Regulation (EU) No 73/2010, amended by Commission Implementing Regulation (EU) No 1029 of 26 September 2014.

This SES-related implementation objective does not replace the EU legislation. It aims at facilitating the monitoring and reporting of the implementation of quality of aeronautical data and aeronautical information in terms of accuracy, resolution and integrity in European ATM in line with the EU regulations and through the SES implementation monitoring and reporting mechanism.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All EU+ States

Timescales:

	From:	By:	Applicable to:
Entry into force of the regulation	16/02/2010		Applicability Area
Article 5(4)(a), Article 5(4)(b) and Article 6 to 13 to be implemented by		30/06/2013	Applicability Area
Article 4, Article 5(1) and Article 5(2), Article 5(3) and Article 5(4)(c) to be implemented by		30/06/2014	Applicability Area
All data requirements implemented by		30/06/2017	Applicability Area

References

European ATM Master Plan relationship

OI step -	[IS-0202]-Improved Supply Chain for Aeronautical Data through Common Quality Measures							
Enablers -	AIMS-13							
OI step -	[IS-0204]-Facilitated Aeronautical Data Exchanges through Digitalised/Electronic Information							
Enablers -	AIMS-19a	AIMS-19b AOM13.1	CTE-C06c COM10	GGSWIM-11	GGSWIM-26 a	GGSWIM-5 2	GGSWIM-53	
Legend:	WXYZ-001	Covered by SLoA(s) in this objective		WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan

ITY-ADQ	Ensure quality of aeronautical data and aeronautical information
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Applicable legislation

Regulation (EU) No 73/2010 of 26 January 2010 laying down requirements on the quality of aeronautical data and aeronautical information for the single European sky, amended by Regulation (EU) No 1029/2014 of 26 September 2014.

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
ITY-ADQ-REG01	Verify the compliance with data quality requirements and supervise safety assessments		30/06/2013
ITY-ADQ-REG02	Verify the establishment of formal arrangements		30/06/2013
ITY-ADQ-REG03	Verify the compliance with the common dataset specifications and the data exchange format requirements	DELETED	
ITY-ADQ-REG04	Verify that all parties comply with all data requirements		30/06/2017
ITY-ADQ-ASP01	Implement data quality and process requirements		30/06/2013
ITY-ADQ-ASP02	Establish formal arrangements		30/06/2013
ITY-ADQ-ASP03	Establish consistency mechanisms and implement timeliness requirements		30/06/2013
ITY-ADQ-ASP04	Implement personnel and performance requirements		30/06/2013
ITY-ADQ-ASP05	Implement a quality management system and fulfil safety and security objectives		30/06/2013
ITY-ADQ-ASP06	Implement the common dataset and digital exchange format		30/06/2014
ITY-ADQ-ASP07	Implement all data requirements		30/06/2017
ITY-ADQ-APO01	Implement data quality and process requirements		30/06/2013
ITY-ADQ-APO02	Implement personnel and performance requirements		30/06/2013
ITY-ADQ-APO03	Implement a quality management system and fulfil safety and security objectives		30/06/2013
ITY-ADQ-APO04	Implement the common dataset and digital exchange format requirements		30/06/2014
ITY-ADQ-APO05	Implement all data quality requirements		30/06/2017
ITY-ADQ-IND01	Implement data quality and process requirements		30/06/2013
ITY-ADQ-IND02	Implement personnel and performance requirements		30/06/2013
ITY-ADQ-IND03	Implement a quality management system and fulfil safety and security objectives		30/06/2013
ITY-ADQ-IND04	Implement the common dataset and digital exchange format requirements		30/06/2014
ITY-ADQ-IND05	Implement all data quality requirements		30/06/2017

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

<u>Safety</u> :	Improved consistency, reliability and integrity.
<u>Capacity</u> :	N/A
<u>Cost effectiveness</u> :	Avoidance of repair, correction and re-work activities at data provider and data user level as a necessary step towards the implementation of system wide information management.
<u>Environment</u> :	N/A
<u>Security</u> :	Enhanced security due to the implementation of security requirements.

ITY-ADQ	Ensure quality of aeronautical data and aeronautical information
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Detailed SloA descriptions

ITY-ADQ-REG01	Verify the compliance with data quality requirements and supervise safety assessments	From:	By:
			30/06/2013

Action by : **State Authorities**

Description & purpose : Verify that data quality and process requirements are fulfilled in accordance with Article 6 (with the exception of Article 6(3), see ITY-ADQ-REG02) and Annex IV Parts A, B, D, E and F of Regulation (EU) No 73/2010.

Supervise that a safety assessment is conducted in accordance with Article 10 of Regulation (EU) No 73/2010 and review the safety assessment report. If applicable review the safety arguments.
Notify the acceptance of the change to the ANSP/ANS.

Derogations : None

Supporting material(s) : EUROCONTROL - CHAIN Preliminary Safety Case - Edition 0.4 / 10/2006

Url : <https://www.eurocontrol.int/articles/adq-library>

EUROCONTROL - SPEC 148 - EUROCONTROL Specification for Data Assurance Levels - Edition 1.0 / 03/2012

Url : <http://www.eurocontrol.int/publications/data-assurance-levels-dal-specification>

EUROCONTROL - SPEC 152 - EUROCONTROL Specification for Data Quality Requirements - Edition 1.1 / 06/2014

Url : <http://www.eurocontrol.int/publications/data-quality-requirements-dqr-specification>

EUROCONTROL - SPEC 154 - EUROCONTROL Specification for the Origination of Aeronautical Data - Edition 1.0 / 02/2013

Url : <http://www.eurocontrol.int/publications/origination-aeronautical-data-do-specification>

EUROCONTROL - Guidelines on Conformity Assessment for the Interoperability Regulation of the Single European Sky - Edition 3.0 / 02/2012

Url : <http://www.eurocontrol.int/publications/conformity-assessment-guidelines>

EUROCONTROL - Guidelines supporting the implementation of the Regulation on Aeronautical Data and Information Quality - Edition 1.3 / 06/2010

Url : <https://www.eurocontrol.int/articles/adq-library>

EUROCONTROL - NSA Coordination Platform - Guidelines on Interoperability Oversight - Edition 1.0 / 06/2012

Url : <http://www.eurocontrol.int/articles/support-civil-aviation-and-national-supervisory-authorities>

Finalisation criteria :

1 - An EN ISO 9001 certificate has been submitted to the NSA by relevant organisations.

2 - (For ANSPs, APOs and IND certified as ANS): A safety assessment report, including safety arguments where applicable, has been received and reviewed.

3 - (For ANSPs, APOs and IND certified as ANS): Proposed changes have been accepted and formally notified to the relevant organisation.

4 - (For ANSPs, APOs and IND certified as ANS): An EC declaration of verification of systems and technical file containing evidence of compliance with the relevant regulatory provisions and with the relevant parts of EUROCONTROL specifications or other acceptable means of compliance received and assessed.

ITY-ADQ-REG02	Verify the establishment of formal arrangements	From:	By:
			30/06/2013

Action by : **State Authorities**

Description & purpose : Verify that appropriate formal arrangements, respecting at least the minimum content, are established between the relevant parties in accordance with Article 6(3) and Annex IV Part C of Regulation (EU) No 73/2010.

Derogations : None

Supporting material(s) : EUROCONTROL - SPEC 148 - EUROCONTROL Specification for Data Assurance Levels - Edition 1.0 / 03/2012

Url : <http://www.eurocontrol.int/publications/data-assurance-levels-dal-specification>

EUROCONTROL - SPEC 154 - EUROCONTROL Specification for the Origination of Aeronautical Data - Edition 1.0 / 02/2013

Url : <http://www.eurocontrol.int/publications/origination-aeronautical-data-do-specification>

EUROCONTROL - Guidelines supporting the implementation of the Regulation on Aeronautical Data and Information Quality - Edition 1.3 / 06/2010

Url : <https://www.eurocontrol.int/articles/adq-library>

EUROCONTROL - NSA Coordination Platform - Guidelines on Interoperability Oversight - Edition 1.0 / 06/2012

Url : <http://www.eurocontrol.int/articles/support-civil-aviation-and-national-supervisory-authorities>

EUROCONTROL - Service Level Agreements (SLA) package - Edition 1.0 / 08/2007

Url : <http://www.eurocontrol.int/articles/adq-library>

Finalisation criteria :

1 - Formal arrangements have been established and signed by relevant parties.

ITY-ADQ	Ensure quality of aeronautical data and aeronautical information
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ITY-ADQ-REG04	Verify that all parties comply with all data requirements	From:	By:
			30/06/2017

Action by : **State Authorities**

Description & purpose : Verify that those aeronautical data and aeronautical information items published before 1 July 2013 and not amended since are brought in line by 30 June 2017, at the latest, and that all parties fulfil the requirements in accordance with Article 14 of Regulation (EU) No 73/2010.

Derogations : None

Supporting material(s) : EUROCONTROL - NSA Coordination Platform - Guidelines on Interoperability Oversight - Edition 1.0 / 06/2012
 Url : <http://www.eurocontrol.int/articles/support-civil-aviation-and-national-supervisory-authorities>

Finalisation criteria : 1 - All parties publishing aeronautical data and/or aeronautical information comply with all the requirements set in Regulation (EU) No 73/2010 and an according statement of compliance has been received.

ITY-ADQ-ASP01	Implement data quality and process requirements	From:	By:
			30/06/2013

Action by : **ANS Providers**

Description & purpose : Implement the data quality, evidence, origination, process, error reporting and rectification requirements in accordance with Article 6 (with the exception of Article 6(3), see: ITY-ADQ-ASP02) and Annex IV Parts A, B, D, E and F of Regulation (EU) No 73/2010 and provide written evidence that the requirements are met.

Validate and verify all tools used to support or automate processes in the origination, production, storage, handling, processing and transfer of aeronautical data and/or aeronautical information in accordance with Article 8 and Annex V of Regulation (EU) No 73/2010. Protect data against loss or alteration in accordance with Article 9 and Annex VI of Regulation (EU) No 73/2010.

Conduct a safety assessment including hazard identification, risk assessment and mitigation in accordance with Article 10 of Regulation (EU) No 73/2010 and provide a safety assessment report to the NSA. If applicable provide safety arguments to the NSA.

Conduct a verification of the systems demonstrating the conformity with the interoperability, performance and safety requirements in accordance with Article 12 and Annex IX and X of Regulation (EU) No 73/2010 and draw up an EC declaration of verification of systems together with a technical file.

Derogations : None

Supporting material(s) : EUROCONTROL - CHAIN Preliminary Safety Case - Edition 0.4 / 10/2006
 Url : <https://www.eurocontrol.int/articles/adq-library>
 EUROCONTROL - SPEC 148 - EUROCONTROL Specification for Data Assurance Levels - Edition 1.0 / 03/2012
 Url : <http://www.eurocontrol.int/publications/data-assurance-levels-dal-specification>
 EUROCONTROL - SPEC 152 - EUROCONTROL Specification for Data Quality Requirements - Edition 1.1 / 06/2014
 Url : <http://www.eurocontrol.int/publications/data-quality-requirements-dqr-specification>
 EUROCONTROL - SPEC 154 - EUROCONTROL Specification for the Origination of Aeronautical Data - Edition 1.0 / 02/2013
 Url : <http://www.eurocontrol.int/publications/origination-aeronautical-data-do-specification>
 EUROCONTROL - Guidelines supporting the implementation of the Regulation on Aeronautical Data and Information Quality - Edition 1.3 / 06/2010
 Url : <https://www.eurocontrol.int/articles/adq-library>
ATM Master Plan relationship : [\[AIMS-13\]-Controlled & Harmonised Aeronautical Information Network Activity \(CHAIN\)](#)

Finalisation criteria :

- 1 - Data quality requirements have been implemented and are documented for verification and audit.
- 2 - A safety assessment report, including safety arguments where applicable, has been provided to the NSA.
- 3 - The introduction of the change into service was accepted by the NSA and a notification of acceptance has been received.
- 4 - An EC declaration of verification of systems and a technical file containing evidence of compliance with the relevant regulatory provisions and with the relevant parts of EUROCONTROL specifications or other acceptable means of compliance has been submitted to the NSA.

ITY-ADQ-ASP02	Establish formal arrangements	From:	By:
			30/06/2013

Action by : **ANS Providers**

Description & purpose : Establish formal arrangements with other relevant parties for the exchange of aeronautical data and/or aeronautical information in accordance with Article 6(3) and Annex IV Part C of Regulation (EU) No 73/2010.

Derogations : None

ITY-ADQ	Ensure quality of aeronautical data and aeronautical information
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Supporting material(s) : EUROCONTROL - SPEC 148 - EUROCONTROL Specification for Data Assurance Levels - Edition 1.0 / 03/2012
 Url : <http://www.eurocontrol.int/publications/data-assurance-levels-dal-specification>
 EUROCONTROL - SPEC 154 - EUROCONTROL Specification for the Origination of Aeronautical Data - Edition 1.0 / 02/2013
 Url : <http://www.eurocontrol.int/publications/origination-aeronautical-data-do-specification>
 EUROCONTROL - Guidelines supporting the implementation of the Regulation on Aeronautical Data and Information Quality - Edition 1.3 / 06/2010
 Url : <https://www.eurocontrol.int/articles/adq-library>
 EUROCONTROL - Service Level Agreements (SLA) package - Edition 1.0 / 08/2007
 Url : <http://www.eurocontrol.int/articles/adq-library>
Finalisation criteria : 1 - Formal arrangements signed by all relevant parties have been established.

ITY-ADQ-ASP03	Establish consistency mechanisms and implement timeliness requirements	From:	By:
			30/06/2013

Action by : **ANS Providers**
Description & purpose : Establish and document mechanisms to ensure consistency and implement the timeliness requirements in accordance with Article 7(1), 7(2) and 7(3) of Regulation (EU) No 73/2010.
Derogations : None
Supporting material(s) : EUROCONTROL - Guidelines supporting the implementation of the Regulation on Aeronautical Data and Information Quality - Edition 1.3 / 06/2010
 Url : <https://www.eurocontrol.int/articles/adq-library>
Finalisation criteria : 1 - Mechanisms ensuring consistency and, if relevant, annotating AIP items not meeting the data quality requirements have been established and documented

ITY-ADQ-ASP04	Implement personnel and performance requirements	From:	By:
			30/06/2013

Action by : **ANS Providers**
Description & purpose : Develop and maintain awareness material and implement training and competence requirements in accordance with Articles 7(4) and 7(5) of Regulation (EU) No 73/2010.
 Develop and maintain operating manuals and request security clearances in accordance with Article 13 of Regulation (EU) No 73/2010.
Derogations : None
Supporting material(s) : EUROCONTROL - AIS Training Development Guidelines - Edition 1.1 / 10/2011
 Url : <http://www.eurocontrol.int/publications/ais-training-development-guidelines-ais-tdg>
 EUROCONTROL - Common AIS Staff Profiling (CASP) - Edition 1.0 / 08/2004
 Url : <http://www.eurocontrol.int/publications/common-ais-staff-profiling-casp>
 EUROCONTROL - SPEC 146 - EUROCONTROL Specification for the Electronic Aeronautical Information Publication (eAIP) - Edition 2.0 / 02/2011
 Url : <http://www.eurocontrol.int/publications/eaip-specification>
Finalisation criteria : 1 - Awareness material and training records have been published.
 2 - Competence requirements for staff have been met.
 3 - Operating manuals have been provided.
 4 - Security clearances for authorised staff have been provided.

ITY-ADQ-ASP05	Implement a quality management system and fulfil safety and security objectives	From:	By:
			30/06/2013

Action by : **ANS Providers**
Description & purpose : Implement and maintain a quality management system meeting the safety management and the security management objectives in accordance with Article 10 and Annex VII of Regulation (EU) No 73/2010.
 Note : An EN ISO 9001 certificate issued by an appropriately accredited organisation shall be considered as a sufficient means of compliance for the quality management system.
Derogations : None
Supporting material(s) : EUROCONTROL - Guidelines supporting the implementation of the Regulation on Aeronautical Data and Information Quality - Edition 1.3 / 06/2010
 Url : <https://www.eurocontrol.int/articles/adq-library>

ITY-ADQ	Ensure quality of aeronautical data and aeronautical information		
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Finalisation criteria :

- 1 - A quality management system meeting the safety and security management objectives has been implemented, documented and is maintained.
- 2 - An EN ISO 9001 certificate has been obtained.
- 3 - Documentation related to certification has been provided to the NSA.
- 4 - Access authorisations have been provided.

ITY-ADQ-ASP06	Implement the common dataset and digital exchange format	From:	By:
			30/06/2014

Action by : **ANS Providers**

Description & purpose : Implement the common dataset, provide and document the IAIP, aerodrome mapping, electronic obstacle data, electronic terrain data and metadata in accordance with Article 4 and Annex I of Regulation (EU) No 73/2010.

Implement a common data exchange for IAIP, aerodrome mapping, electronic obstacle data and electronic terrain data allowing digital data exchange and verify that all aeronautical data and aeronautical information within the IAIP, AIP amendments and AIP supplements are made available to the next intended user in accordance with Article 5 and Annex II of Regulation (EU) No 73/2010.

Conduct a safety assessment including hazard identification, risk assessment and mitigation in accordance with Article 10 of Regulation (EU) No 73/2010 and provide a safety assessment report to the NSA. If applicable provide safety arguments to the NSA.

Note : (1). Digital NOTAM may be excluded from the data exchange format ref. Article 5(3) (subject to revision once digital NOTAM work progressed).

Note: (2). Concerning the provision of Electronic obstacle data, electronic terrain data and aerodrome mapping data, ref. Article 2(1)(b-d).

Derogations : Refer to Article 15(2) of Regulation (EU) No 73/2010.

Supporting material(s) : EUROCONTROL - CHAIN Preliminary Safety Case - Edition 0.4 / 10/2006

Url : <https://www.eurocontrol.int/articles/adq-library>

EUROCONTROL - SPEC 151 - EUROCONTROL Specification for Aeronautical Information Exchange - Edition 1.0 / 12/2012

Url : <http://www.eurocontrol.int/publications/aeronautical-information-exchange-aix-specification>

EUROCONTROL - SPEC 148 - EUROCONTROL Specification for Data Assurance Levels - Edition 1.0 / 03/2012

Url : <http://www.eurocontrol.int/publications/data-assurance-levels-dal-specification>

EUROCONTROL - SPEC 146 - EUROCONTROL Specification for the Electronic Aeronautical Information Publication (eAIP) - Edition 2.0 / 02/2011

Url : <http://www.eurocontrol.int/publications/eaip-specification>

EUROCONTROL - SPEC 154 - EUROCONTROL Specification for the Origination of Aeronautical Data - Edition 1.0 / 02/2013

Url : <http://www.eurocontrol.int/publications/origination-aeronautical-data-do-specification>

EUROCONTROL - Guidelines supporting the implementation of the Regulation on Aeronautical Data and Information Quality - Edition 1.3 / 06/2010

Url : <https://www.eurocontrol.int/articles/adq-library>

Finalisation criteria :

- 1 - The common dataset and digital exchange format requirements have been implemented.
- 2 - A safety assessment report, including safety arguments where applicable, has been provided to the NSA.
- 3 - The introduction of the change into service was accepted by the NSA and a notification of acceptance has been received.
- 4 - An EC declaration of verification of systems and a technical file containing evidence of compliance with the relevant regulatory provisions and with the relevant parts of EUROCONTROL specifications or other acceptable means of compliance has been submitted to the NSA.

ITY-ADQ-ASP07	Implement all data requirements	From:	By:
			30/06/2017

Action by : **ANS Providers**

Description & purpose : Update those aeronautical data and aeronautical information items which were published before 1 July 2013 and not amended since in accordance with Article 14 of Regulation (EU) No 73/2010.

Derogations : None

Finalisation criteria : 1 - All electronic data is compliant to all requirements and a statement of compliance has been provided to the NSA.

ITY-ADQ-APO01	Implement data quality and process requirements	From:	By:
			30/06/2013

ITY-ADQ	Ensure quality of aeronautical data and aeronautical information
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Action by :	Aerodrome & heliport Operators for which IFR or Special-VFR procedures have been published in national AIPs
Description & purpose :	<p>Implement the data quality and data origination requirements in accordance with Article 6 and Annex IV Parts A - F of Regulation (EU) No 73/2010 and provide written evidence that the requirements are met.</p> <p>Validate and verify all tools used to support or automate processes in the origination, production, storage, handling, processing and transfer of aeronautical data and/or aeronautical information and document the validation in a technical file in accordance with Article 8 and Annex V of Regulation (EU) No 73/2010. Protect data against loss or alteration in accordance with Article 9 and Annex VI of Regulation (EU) No 73/2010.</p> <p>Conduct a safety assessment including hazard identification, risk assessment and mitigation in accordance with Article 10 of Regulation (EU) No 73/2010. If certified as ANS, provide a safety assessment report to the NSA and if applicable provide safety arguments to the NSA.</p>
Derogations :	None
Supporting material(s) :	<p>EUROCONTROL - CHAIN Preliminary Safety Case - Edition 0.4 / 10/2006</p> <p>Url : https://www.eurocontrol.int/articles/adq-library</p> <p>EUROCONTROL - SPEC 148 - EUROCONTROL Specification for Data Assurance Levels - Edition 1.0 / 03/2012</p> <p>Url : http://www.eurocontrol.int/publications/data-assurance-levels-dal-specification</p> <p>EUROCONTROL - SPEC 152 - EUROCONTROL Specification for Data Quality Requirements - Edition 1.1 / 06/2014</p> <p>Url : http://www.eurocontrol.int/publications/data-quality-requirements-dqr-specification</p> <p>EUROCONTROL - SPEC 154 - EUROCONTROL Specification for the Origination of Aeronautical Data - Edition 1.0 / 02/2013</p> <p>Url : http://www.eurocontrol.int/publications/origination-aeronautical-data-do-specification</p> <p>EUROCONTROL - Guidelines supporting the implementation of the Regulation on Aeronautical Data and Information Quality - Edition 1.3 / 06/2010</p> <p>Url : https://www.eurocontrol.int/articles/adq-library</p>
Finalisation criteria :	<p>1 - Data quality requirements have been implemented and are documented for verification and audit.</p> <p>2 - (For APOs certified as ANS): A safety assessment report, including safety arguments where applicable, has been provided to the NSA.</p> <p>3 - (For APOs certified as ANS): The introduction of the change into service was accepted by the NSA and a notification of acceptance has been received.</p> <p>4 - (For APOs certified as ANS): An EC declaration of verification of systems and a technical file containing evidence of compliance with the relevant regulatory provisions and with relevant parts of EUROCONTROL specifications or other acceptable means of compliance has been submitted to the NSA.</p>

ITY-ADQ-APO02	Implement personnel and performance requirements	From:	By:
			30/06/2013

Action by :	Aerodrome & heliport Operators for which IFR or Special-VFR procedures have been published in national AIPs
Description & purpose :	<p>Develop and maintain awareness material and implement training and competence requirements in accordance with Article 7(4) and Article 7(5) of Regulation (EU) No 73/2010.</p> <p>Develop and maintain operating manuals and request security clearances in accordance with Article 13 of Regulation (EU) No 73/2010.</p>
Derogations :	None
Supporting material(s) :	<p>EUROCONTROL - Common AIS Staff Profiling (CASP) - Edition 1.0 / 08/2004</p> <p>Url : http://www.eurocontrol.int/publications/common-ais-staff-profiling-casp</p> <p>EUROCONTROL - AIS Training Development Guidelines - Edition 1.1 / 10/2011</p> <p>Url : http://www.eurocontrol.int/publications/ais-training-development-guidelines-ais-tdg</p>
Finalisation criteria :	<p>1 - Awareness material and training records have been published.</p> <p>2 - Competence requirements for staff have been met.</p> <p>3 - Operating manuals have been provided.</p> <p>4 - Security clearances for authorised staff have been provided.</p>

ITY-ADQ-APO03	Implement a quality management system and fulfil safety and security objectives	From:	By:
			30/06/2013

Action by :	Aerodrome & heliport Operators for which IFR or Special-VFR procedures have been published in national AIPs
Description & purpose :	<p>Implement and maintain a quality management system meeting the safety management and the security management objectives in accordance with Article 10 and Annex VII of Regulation (EU) No 73/2010.</p> <p>Note : An EN ISO 9001 certificate issued by an appropriately accredited organisation shall be considered as a sufficient means of compliance for the quality management system.</p>
Derogations :	None

ITY-ADQ	Ensure quality of aeronautical data and aeronautical information
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Supporting material(s) : EUROCONTROL - Guidelines supporting the implementation of the Regulation on Aeronautical Data and Information Quality - Edition 1.3 / 06/2010

Url : <https://www.eurocontrol.int/articles/adq-library>

Finalisation criteria :

- 1 - A quality management system meeting the safety and security management objectives have been implemented, documented and is maintained.
- 2 - An EN ISO 9001 certificate has been obtained.
- 3 - Documentation related to certification has been provided to the NSA.
- 4 - Access authorisations have been provided.

ITY-ADQ-APO04	Implement the common dataset and digital exchange format requirements	From:	By:
			30/06/2014

Action by : **Aerodrome & heliport Operators for which IFR or Special-VFR procedures have been published in national AIPs**

Description & purpose : Implement the common dataset, provide and document the IAIP, aerodrome mapping, electronic obstacle data, electronic terrain data and metadata in accordance with Article 4 and Annex I of Regulation (EU) No 73/2010.

If certified as ANS, implement a common data exchange for IAIP, aerodrome mapping, electronic obstacle data and electronic terrain data allowing digital data exchange and verify that all aeronautical data and aeronautical information within the IAIP, AIP amendments and AIP supplements are made available to the next intended user in accordance with Article 5 and Annex II of Regulation (EU) No 73/2010.

Conduct a safety assessment including hazard identification, risk assessment and mitigation in accordance with Article 10 of Regulation (EU) No 73/2010. If certified as ANS, provide a safety assessment report to the NSA and if applicable provide safety arguments to the NSA.

Note : Digital NOTAM may be excluded from the data exchange format ref. Article 5(3) (subject to revision once digital NOTAM work progressed).

Derogations : None

Supporting material(s) : EUROCONTROL - CHAIN Preliminary Safety Case - Edition 0.4 / 10/2006

Url : <https://www.eurocontrol.int/articles/adq-library>

EUROCONTROL - SPEC 151 - EUROCONTROL Specification for Aeronautical Information Exchange - Edition 1.0 / 12/2012

Url : <http://www.eurocontrol.int/publications/aeronautical-information-exchange-aiex-specification>

EUROCONTROL - SPEC 148 - EUROCONTROL Specification for Data Assurance Levels - Edition 1.0 / 03/2012

Url : <http://www.eurocontrol.int/publications/data-assurance-levels-dal-specification>

EUROCONTROL - SPEC 146 - EUROCONTROL Specification for the Electronic Aeronautical Information Publication (eAIP) - Edition 2.0 / 02/2011

Url : <http://www.eurocontrol.int/publications/eaip-specification>

EUROCONTROL - SPEC 154 - EUROCONTROL Specification for the Origination of Aeronautical Data - Edition 1.0 / 02/2013

Url : <http://www.eurocontrol.int/publications/origination-aeronautical-data-do-specification>

EUROCONTROL - Guidelines supporting the implementation of the Regulation on Aeronautical Data and Information Quality - Edition 1.3 / 06/2010

Url : <https://www.eurocontrol.int/articles/adq-library>

Finalisation criteria :

- 1 - The common dataset requirements have been implemented.
- 2 - (For APOs certified as ANS): The common digital exchange format requirements have been implemented.
- 3 - (For APOs certified as ANS): A safety assessment report, including safety arguments where applicable, has been provided to the NSA.
- 4 - (For APOs certified as ANS): The introduction of the change into service was accepted by the NSA and a notification of acceptance has been received.
- 5 - (For APOs certified as ANS): An EC declaration of verification of systems and a technical file containing evidence of compliance with relevant regulatory provisions and with the relevant parts of EUROCONTROL specifications or other acceptable means of compliance has been submitted to the NSA.

ITY-ADQ-APO05	Implement all data quality requirements	From:	By:
			30/06/2017

Action by : **Aerodrome & heliport Operators for which IFR or Special-VFR procedures have been published in national AIPs**

Description & purpose : Update those aeronautical data and aeronautical information items which were published before 1 July 2013 and not amended since in accordance with Article 14 of Regulation (EU) No 73/2010.

Derogations : None

Finalisation criteria : 1 - All electronic data is compliant to all requirements and a statement of compliance has been provided to the NSA.

ITY-ADQ	Ensure quality of aeronautical data and aeronautical information		
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ITY-ADQ-IND01	Implement data quality and process requirements	From:	By:
			30/06/2013

Action by : **Public/private entities providing services for the origination/provision of survey, electronic terrain & obstacle data and procedures design services**

Description & purpose : Implement the data quality and data origination requirements in accordance with Article 6 and Annex IV Parts A - F of Regulation (EU) No 73/2010 and provide written evidence that the requirements are met.

Validate and verify all tools used to support or automate processes in the origination, production, storage, handling, processing and transfer of aeronautical data and/or aeronautical information in accordance with Article 8 and Annex V of Regulation (EU) No 73/2010. Protect data against loss or alteration in accordance with Article 9 and Annex VI of Regulation (EU) No 73/2010.

Conduct a safety assessment including hazard identification, risk assessment and mitigation in accordance with Article 10 of Regulation (EU) No 73/2010. If certified as an ANS, provide a safety assessment report to the NSA and if applicable provide safety arguments to the NSA.

Assess the conformity or suitability for use of constituents in accordance with Article 11 and Annex VIII of Regulation (EU) No 73/2010 and issue an EC declaration of conformity or suitability for use of constituents together with a technical file.

Derogations : None

Supporting material(s) : EUROCONTROL - CHAIN Preliminary Safety Case - Edition 0.4 / 10/2006

Url : <https://www.eurocontrol.int/articles/adq-library>

EUROCONTROL - SPEC 148 - EUROCONTROL Specification for Data Assurance Levels - Edition 1.0 / 03/2012

Url : <http://www.eurocontrol.int/publications/data-assurance-levels-dal-specification>

EUROCONTROL - SPEC 152 - EUROCONTROL Specification for Data Quality Requirements - Edition 1.1 / 06/2014

Url : <http://www.eurocontrol.int/publications/data-quality-requirements-dqr-specification>

EUROCONTROL - SPEC 154 - EUROCONTROL Specification for the Origination of Aeronautical Data - Edition 1.0 / 02/2013

Url : <http://www.eurocontrol.int/publications/origination-aeronautical-data-do-specification>

EUROCONTROL - Guidelines supporting the implementation of the Regulation on Aeronautical Data and Information Quality - Edition 1.3 / 06/2010

Url : <https://www.eurocontrol.int/articles/adq-library>

Finalisation criteria :

- 1 - Data quality requirements have been implemented and are documented for verification and audit.
- 2 - (For IND certified as ANS): The introduction of the change into service has been accepted by the NSA and a notification of acceptance was received.
- 3 - (For IND certified as ANS): An EC declaration of verification of systems and a technical file containing evidence of compliance with the relevant regulatory provisions and with the relevant parts of EUROCONTROL specifications or other acceptable means of compliance has been submitted to the NSA.
- 4 - (For Manufacturers of constituents): An EC declaration of conformity of constituents or of suitability for use has been issued.
- 5 - (For IND certified as ANS): A safety assessment report, including safety arguments where applicable, has been provided to the NSA.

ITY-ADQ-IND02	Implement personnel and performance requirements	From:	By:
			30/06/2013

Action by : **Public/private entities providing services for the origination/provision of survey, electronic terrain & obstacle data and procedures design services**

Description & purpose : Develop and maintain awareness material and implement training and competence requirements in accordance with Articles 7(4) and 7(5) of Regulation (EU) No 73/2010. Develop and maintain operating manuals and request security clearances in accordance with Article 13 of Regulation (EU) No 73/2010.

Derogations : None

Supporting material(s) : EUROCONTROL - AIS Training Development Guidelines - Edition 1.1 / 10/2011

Url : <http://www.eurocontrol.int/publications/ais-training-development-guidelines-ais-tdg>

EUROCONTROL - Common AIS Staff Profiling (CASP) - Edition 1.0 / 08/2004

Url : <http://www.eurocontrol.int/publications/common-ais-staff-profiling-casp>

Finalisation criteria :

- 1 - Awareness material and training records have been published.
- 2 - Competence requirements for staff have been met.
- 3 - Operating manuals have been provided.
- 4 - Security clearances for authorised staff have been provided.

ITY-ADQ	Ensure quality of aeronautical data and aeronautical information
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ITY-ADQ-IND03	Implement a quality management system and fulfil safety and security objectives	From:	By:
			30/06/2013

Action by : Public/private entities providing services for the origination/provision of survey, electronic terrain & obstacle data and procedures design services

Description & purpose : Implement and maintain a quality management system meeting the safety management and the security management objectives in accordance with Article 10 and Annex VII of Regulation (EU) No 73/2010

Derogations : None

Supporting material(s) : EUROCONTROL - Guidelines supporting the implementation of the Regulation on Aeronautical Data and Information Quality - Edition 1.3 / 06/2010
 Url : <https://www.eurocontrol.int/articles/adq-library>

Finalisation criteria :

- 1 - A quality management system meeting the safety and security management objectives has been implemented documented and is maintained.
- 2 - Access authorisations have been provided.
- 3 - An EN ISO 9001 certificate has been obtained.
- 4 - Documentation related to certification has been provided to the NSA.

ITY-ADQ-IND04	Implement the common dataset and digital exchange format requirements	From:	By:
			30/06/2014

Action by : Public/private entities providing services for the origination/provision of survey, electronic terrain & obstacle data and procedures design services

Description & purpose : Implement the common dataset, provide and document the IAIP, aerodrome mapping, electronic obstacle data, electronic terrain data and metadata in accordance with Article 4 and Annex I of Regulation (EU) No 73/2010.

If certified as ANS, implement a common data exchange for IAIP, aerodrome mapping, electronic obstacle data and electronic terrain data allowing digital data exchange and verify that all aeronautical data and aeronautical information within the IAIP, AIP amendments and AIP supplements are made available to the next intended user in accordance with Article 5 and Annex II of Regulation (EU) No 73/2010.

Conduct a safety assessment including hazard identification, risk assessment and mitigation in accordance with Article 10 of Regulation (EU) No 73/2010. If certified as an ANS, provide a safety assessment report to the NSA and if applicable provide safety arguments to the NSA.

Note :(1). Digital NOTAM may be excluded from the data exchange format ref. Article 5(3) (subject to revision once digital NOTAM work progressed).

Note: (2). Concerning the provision of Electronic obstacle data, electronic terrain data and aerodrome mapping data, ref. Article 2(1)(b-d).

Derogations : None

Supporting material(s) : EUROCONTROL - CHAIN Preliminary Safety Case - Edition 0.4 / 10/2006
 Url : <https://www.eurocontrol.int/articles/adq-library>
 EUROCONTROL - SPEC 151 - EUROCONTROL Specification for Aeronautical Information Exchange - Edition 1.0 / 12/2012
 Url : <http://www.eurocontrol.int/publications/aeronautical-information-exchange-aix-specification>
 EUROCONTROL - SPEC 148 - EUROCONTROL Specification for Data Assurance Levels - Edition 1.0 / 03/2012
 Url : <http://www.eurocontrol.int/publications/data-assurance-levels-dal-specification>
 EUROCONTROL - SPEC 146 - EUROCONTROL Specification for the Electronic Aeronautical Information Publication (eAIP) - Edition 2.0 / 02/2011
 Url : <http://www.eurocontrol.int/publications/eaip-specification>
 EUROCONTROL - SPEC 154 - EUROCONTROL Specification for the Origination of Aeronautical Data - Edition 1.0 / 02/2013
 Url : <http://www.eurocontrol.int/publications/origination-aeronautical-data-do-specification>

Finalisation criteria :

- 1 - The common dataset requirements have been implemented.
- 2 - (For IND certified as ANS): The common digital exchange format requirements have been implemented.
- 3 - (For IND certified as ANS): A safety assessment report, including safety arguments where applicable, has been provided to the NSA.
- 4 - (For IND certified as ANS): The introduction of the change into service was accepted by the NSA and a notification of acceptance has been received.
- 5 - (For IND certified as ANS): An EC declaration of verification of systems and a technical file containing evidence of compliance with the relevant regulatory provisions and with the relevant parts of EUROCONTROL specifications or other acceptable means of compliance has been submitted to the NSA.
- 6 - (For Manufacturers of constituents): An EC declaration of conformity of constituents or of suitability for use has been issued.

ITY-ADQ	Ensure quality of aeronautical data and aeronautical information
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ITY-ADQ-IND05	Implement all data quality requirements	From:	By:
			30/06/2017

Action by : **Public/private entities providing services for the origination/provision of survey, electronic terrain & obstacle data and procedures design services**

Description & purpose : Update those aeronautical data and aeronautical information items which were published before 1 July 2013 and not amended since in accordance with Article 14 of Regulation (EU) No 73/2010.

Derogations : None

Finalisation criteria : 1 - All electronic data is compliant to all requirements and a statement of compliance has been provided to the NSA.

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SES	Active					EU+	
ITY-AGVCS2	Implement air-ground voice channel spacing requirements below FL195						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

This SES-type objective is derived from Implementing Regulation (EU) No 1079/2012 of 16 November 2012 laying down requirements for voice channels spacing for the single European sky.

The Regulation applies to:

1. all radios operating in the 117,975-137 MHz band ('the VHF band') allocated to the aeronautical mobile route service, including systems, their constituents and associated procedures;
2. all flights operating as general air traffic, within the airspace of the ICAO EUR region where States are responsible for the provision of air traffic services in accordance with Regulation (EC) No 550/2004.

The conversion requirements of the Regulation do NOT apply to frequency assignments:

(a) that will remain in 25 kHz channel spacing on the following frequencies:

- (i) the emergency frequency (121,5 MHz);
 - (ii) the auxiliary frequency for search and rescue operations (123,1 MHz);
 - (iii) the VHF digital link (VDL) frequencies (136,725 MHz, 136,775 MHz, 136,825 MHz, 136,875 MHz, 136,925 MHz and 136,975 MHz);
 - (iv) the aircraft communications addressing and reporting system (ACARS) frequencies (131,525 MHz, 131,725 MHz and 131,825 MHz);
- (b) where offset carrier operation within a 25 kHz channel spacing is utilised.

According to Article 14 of Regulation (EU) No 1079/2012, for cases having limited impact on the network, States may take local measures granting exemptions from compliance with:

- Article 4(5) on the obligation for all radios to have 8,33 kHz channel spacing capability by 31 December 2017 at the latest (except ground radios operated by air navigation service providers);
- Article 5(4) on the obligation for aircraft to be equipped with an 8,33 kHz-capable radio from 1 January 2018 to operate in airspace where carriage of radio is required;
- and 6(10) on the obligation to convert all frequency assignments to 8,33 kHz channel spacing by 31 December 2018 at the latest (except frequency assignments that stay in 25 kHz as a result of a safety requirement, or 25 kHz frequency assignments used to accommodate State aircraft).

However, the State shall provide the Commission with detailed information justifying the exemption at the latest one year before the dates identified in the relevant articles. Within six months of receiving the information and after consultation with the Network Manager, the Commission may review the exemption if the impact on the network is not limited.

The terms used in this objective are defined in Article 2 of Regulation (EC) No 549/2004 and Article 2 of Regulation (EU) No 1079/2012.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All EU+ States except: Maastricht UAC

Timescales:

	From:	By:	Applicable to:
Entry into force	07/12/2012		Applicability Area
New and upgraded radio equipment	17/11/2013		Applicability Area
New or upgraded radios on State aircraft	01/01/2014		Applicability Area
Interim target for freq. conversions		31/12/2014	Applicability Area
All radio equipment		31/12/2017	Applicability Area
All frequencies converted		31/12/2018	Applicability Area
State aircraft equipped, except those notified to EC		31/12/2018	Applicability Area
State aircraft equipped, except those exempted [Art 9(11)]		31/12/2020	Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -							
	Enablers -	CTE-C01a						
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan	

ITY-AGVCS2	Implement air-ground voice channel spacing requirements below FL195
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Applicable legislation

Regulation (EU) No 1079/2012 of 16 November 2012 laying down requirements for voice channels spacing.
Regulation (EC) No 552/2004 of 10 March 2004 - the interoperability Regulation

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
ITY-AGVCS2-REG01	Ensure radios have 8,33 kHz channel spacing capability		31/12/2017
ITY-AGVCS2-REG02	Ensure the achievement of the interim target for 8,33 kHz frequency conversions		31/12/2014
ITY-AGVCS2-REG03	Ensure compliance with the requirements on 8,33 kHz frequency conversions		31/12/2018
ITY-AGVCS2-ASP01	Ensure conformity of voice communications systems and associated procedures		31/12/2017
ITY-AGVCS2-ASP02	Convert 25 kHz frequencies to 8,33 kHz to achieve the interim target		31/12/2014
ITY-AGVCS2-ASP03	Convert all 25 kHz frequencies to 8,33 kHz		31/12/2018
ITY-AGVCS2-ASP04	Develop safety assessment		31/12/2018
ITY-AGVCS2-ASP05	Organise personnel training and awareness		31/12/2017
ITY-AGVCS2-MIL01	Equip State aircraft with radio equipment with 8,33 kHz channel spacing capability		31/12/2020
ITY-AGVCS2-MIL02	Organise personnel training and awareness of military aircrew		31/12/2020
ITY-AGVCS2-APO01	Convert all 25 kHz frequencies to 8,33 kHz		31/12/2018
ITY-AGVCS2-APO02	Accommodate non-equipped vehicles		31/12/2017
ITY-AGVCS2-APO03	Organise personnel training and awareness		31/12/2018
ITY-AGVCS2-USE01	Equip aircraft with radio equipment with 8,33 kHz channel spacing capability		31/12/2017
ITY-AGVCS2-USE02	Organise personnel training and awareness		31/12/2017
ITY-AGVCS2-NM01	Ensure the centralised flight planning processing and distribution service complies with the Regulation		07/12/2012

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

<u>Safety</u> :	N/A
<u>Capacity</u> :	Increased capacity by satisfying the demand for new frequency assignments in the VHF band
<u>Cost effectiveness</u> :	N/A
<u>Environment</u> :	N/A
<u>Security</u> :	N/A

ITY-AGVCS2	Implement air-ground voice channel spacing requirements below FL195
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Detailed SLoA descriptions

ITY-AGVCS2-REG01	Ensure radios have 8,33 kHz channel spacing capability	From:	By:
			31/12/2017

Action by :

State Authorities

Description & purpose :

Take the necessary measures to ensure compliance of ANSPs, operators and other users of radios with the interoperability and performance requirements as specified in Article 4 of Regulation (EU) No 1079/2012. In particular:

i) From entry into force of the Regulation, ensure that all radios having the 8,33 kHz channel spacing capability:

- Are able to tune to 25 kHz spaced channels [Art. 4(6)];

- The performance of these radios and the transmitter/receiver ground constituent complies with the ICAO standards referred to in the supporting material of this SLoA [Art. 4(7) & 4(8)].

ii) From 17 November 2013:

- all radio equipment put into service or subject to radio upgrades by ANSPs, operators and other users or owners of radios includes the 8,33 kHz channel spacing capability [Art. 4(2) & 4(4)];

- aircraft for which the individual certificates of airworthiness or individual flight permits are first issued in the States included in the applicability area of this objective from 17 November 2013 and have a radio equipage requirement are fitted with radios having the 8,33 kHz channel spacing capability [Art. 4(3)].

iii) By 31 December 2017 at the latest all radios have the 8,33 kHz channel spacing capability with the exception of ground radios operated by air navigation service providers [Art. 4(5)].

Note : Note that Regulation (EU) No 1079/2012 applies to 'all radios operating in the VHF band allocated to the aeronautical mobile route service' which goes beyond ATM and might affect stakeholders that are not part of the ESSIP/LSSIP process, however this objective is limited to ATM in line with the scope of ESSIP/LSSIP.

Derogations :

None

Supporting material(s) :

ICAO - Annex 10, Volume III - Aeronautical Telecommunications, Volume III Communication Systems, Part 2 (incorporating Amendment No 85), Chapter 2, Sections 2.1, 2.2, 2.3.1 and 2.3.2 (excluding Subsection 2.3.2.8) - Second Edition / 07/2007

Url : <http://store1.icao.int/>

ICAO - Doc 4444 - Air Traffic Management, Section 12.3.1.4 '8,33 kHz channel spacing' - Edition 15

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

EUROCONTROL - 8.33 ISG - Frequently Asked Questions and Answers - Edition 1.1

Url : <https://www.eurocontrol.int/services/vhf-833-khz>

Finalisation criteria :

1 - Where applicable, the State has published the additional local exemptions as per Article 14 of Regulation (EU) No 1079/2012.

2 - From 17 November 2013: Measures have been taken to ensure that all radio equipment put into service or subject to radio upgrades by ANSPs, operators and other users or owners of radios includes the 8,33 kHz channel spacing capability.

3 - From 17 November 2013: Measures have been taken to ensure that aircraft for which the individual certificates of airworthiness or individual flight permits are first issued from 17 November 2013 and have a radio equipage requirement are fitted with radios having the 8,33 kHz channel spacing capability.

4 - By 31 December 2017: The NSA has evidence that all radios in the State have 8,33 kHz channel spacing capability except where derogations apply and/or exemptions have been granted.

ITY-AGVCS2-REG02	Ensure the achievement of the interim target for 8,33 kHz frequency conversions	From:	By:
			31/12/2014

Action by :

State Authorities

Description & purpose :

Ensure the requirements of Article 6(3) to 6(9) of the of Regulation (EU) No 1079/2012 on 8,33 kHz conversions are met. In particular:

i) By 31 December 2013:

- With the support of the ANSP, establish the 25% target for frequency conversions as specified by Articles 6(3) and 6(4) of the Regulation;

- Notify the Commission of the 25% target including, if this target cannot be met, a justification for not being able to achieve the target and an alternative date for achieving it. The communication shall also identify the frequency assignments that cannot be converted and the reasons for it [Art. 6(5), 6(6) & 6(7)].

ii) By 31 December 2014:

- Ensure the 25% target for frequency conversions has been achieved. These conversions shall not be limited to ACC frequency assignments and shall not include operational control communication frequency assignments [Art 6(3)];

- Ensure all operational control communication (OPC) frequency assignments in the central register are 8,33 kHz [Art 6(8)];

- Where due to technical reasons, not all operational control communication frequency assignments can be converted, notify the Commission which frequency assignments will not be converted and a justification for it [Art 6(9)].

Specific applicability:

This SLoA only applies to the States listed in Annex I of the Regulation (i.e. Germany, Ireland, France, Italy, Luxembourg, Hungary, Netherlands, Austria, and United Kingdom).

Derogations :

None

Finalisation criteria :

1 - 25% target for frequency conversions as per Articles 6(5) to 6(7) of the Regulation notified to the Commission.

2 - 25% target for frequency conversions achieved.

3 - All OPC frequency assignments converted to 8,33 kHz or, where applicable, OPC frequencies not converted and justification for it notified to the Commission.

ITY-AGVCS2	Implement air-ground voice channel spacing requirements below FL195
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ITY-AGVCS2-REG03	Ensure compliance with the requirements on 8,33 kHz frequency conversions	From:	By:
			31/12/2018

Action by :	State Authorities
Description & purpose :	Ensure that, by 31 December 2018 at the latest, all frequency assignments are converted to 8,33 kHz [Art 6(10)]. Where the State decides not to convert a 25 kHz frequency assignment as a result of a safety requirement (see Derogations below) this shall be subject to a safety assessment.
Derogations :	The conversion requirements to 8,33 kHz channel spacing do not apply to frequency assignments: <ul style="list-style-type: none"> a) that are outside the scope of the Regulation [Art 2(4)]; b) that stay in 25 kHz as a result of a safety requirement [Art. 6(10)]; c) 25 kHz frequency assignments used to accommodate State aircraft [Art. 6(10)]. States may grant additional local exemptions as per Article 14 of Regulation (EU) No 1079/2012 (see Objective "Subject Matter and Scope").
Supporting material(s) :	EUROCONTROL - 8.33 ISG - Frequently Asked Questions and Answers - Edition 1.1 Url : https://www.eurocontrol.int/services/vhf-833-khz
Finalisation criteria :	1 - All frequency assignments published in the Table COM2 of ICAO Doc 7754, except where derogations apply or the State has granted local exceptions, have been converted to 8,33 kHz.

ITY-AGVCS2-ASP01	Ensure conformity of voice communications systems and associated procedures	From:	By:
			31/12/2017

Action by :	ANS Providers
Description & purpose :	Ensure that voice communication systems and associated communication procedures comply with the following articles of Regulation (EU) No 1079/2012: <ul style="list-style-type: none"> i) From entry into force: <ul style="list-style-type: none"> - Articles 4(6), 4(7) and 4(8) on interoperability and performance requirements; - Article 7(1) on operational coverage; - Article 8(1) on the identification of the transmitting channel; - Article 8(2) on air-ground voice communication procedures; - Article 12(1) and 12(2) on the verification of systems. ii) From 17 November 2013: <ul style="list-style-type: none"> - Articles 4(2) and 4(4) on the 8,33 kHz channel spacing capability of new radio equipment or equipment subject to radio upgrades; iii) By 31 December 2017: <ul style="list-style-type: none"> - Article 4(5) on the 8,33 kHz channel spacing capability of all radios.
Derogations :	None
Supporting material(s) :	ICAO - Annex 10, Volume III - Aeronautical Telecommunications, Volume III Communication Systems, Part 2 (incorporating Amendment No 85), Chapter 2, Sections 2.1, 2.2, 2.3.1 and 2.3.2 (excluding Subsection 2.3.2.8) - Second Edition / 07/2007 Url : http://store1.icao.int/ ICAO - Doc 4444 - Air Traffic Management, Section 12.3.1.4 '8,33 kHz channel spacing' - Edition 15 Url : http://www.icao.int/publications/Pages/catalogue.aspx EUROCONTROL - 8.33 ISG - Frequently Asked Questions and Answers - Edition 1.1 Url : https://www.eurocontrol.int/services/vhf-833-khz
Finalisation criteria :	1 - Voice communication systems have been upgraded. 2 - The technical file (TF) with evidences of compliance and the EC declaration of verification of systems (DoV) has been delivered to the competent National Supervisory Authority (NSA). 3 - Upgraded communication systems have been put into service.

ITY-AGVCS2-ASP02	Convert 25 kHz frequencies to 8,33 kHz to achieve the interim target	From:	By:
			31/12/2014

Action by :	ANS Providers
Description & purpose :	Ensure that the interim requirements for frequency conversions to 8,33 kHz channel spacing as specified in Articles 6(3) and 6(4) of Regulation (EU) No 1079/2012 are complied with. In particular: <ul style="list-style-type: none"> - By 31 December 2013, support the Regulator in the calculation and establishment of the 25% target for frequency conversions as specified by Articles 6(3) and 6(4) of the Regulation; - By 31 December 2014, ensure that the 25% target for frequency conversions referred to above and notified to the Commission is met. These conversions shall not be limited to ACC frequency assignments and shall not include operational control communication frequency assignments [Art 6(3)].
Specific applicability:	This SLoA only applies to the ANSPs providing services in the States listed in Annex I of the Regulation (i.e. Germany, Ireland, France, Italy, Luxembourg, Hungary, Netherlands, Austria, and United Kingdom).
Derogations :	None
ATM Master Plan relationship :	[CTE-C01a]-Existing Voice radio (VHF 25/8.33KHz)
Finalisation criteria :	1 - 25% target for frequency conversions has been achieved.

ITY-AGVCS2	Implement air-ground voice channel spacing requirements below FL195
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ITY-AGVCS2-ASP03	Convert all 25 kHz frequencies to 8,33 kHz	From:	By:
			31/12/2018

Action by : **ANS Providers**

Description & purpose : Ensure that, by 31 December 2018 at the latest, all 25 kHz frequencies are converted 8,33 kHz [Art. 6(10)].

Derogations : The conversion requirements to 8,33 kHz channel spacing do not apply to frequency assignments:
a) that are outside the scope of the Regulation [Art 2(4)];
b) that stay in 25 kHz as a result of a safety requirement [Art. 6(10)];
c) 25 kHz frequency assignments used to accommodate State aircraft [Art. 6(10)].
States may grant additional local exemptions as per Article 14 of Regulation (EU) No 1079/2012 (see Objective "Subject Matter and Scope").

Supporting material(s) : EUROCONTROL - 8.33 ISG - Frequently Asked Questions and Answers - Edition 1.1
Url : <https://www.eurocontrol.int/services/vhf-833-khz>
ATM Master Plan relationship : [\[CTE-C01a\]-Existing Voice radio \(VHF 25/8.33KHz\)](#)

Finalisation criteria : 1 - All frequency assignments published in the Table COM2 of ICAO Doc 7754, except where derogations apply or the State has granted local exceptions, have been converted to 8,33 kHz.

ITY-AGVCS2-ASP04	Develop safety assessment	From:	By:
			31/12/2018

Action by : **ANS Providers**

Description & purpose : Develop a safety assessment of any changes to existing systems or introduction of new systems referred to in Article 2(1) of Regulation (EU) No 1079/2012 [Art 10].
The tasks to be performed are as follows:
- notify the NSA of planned changes;
- conduct hazard identification, risk assessment and mitigation;
- develop safety assessment;
- deliver safety assessment report to the NSA, if new standards are applicable or if the severity class of identified risks is 1 or 2.
The assessment shall be based in full validated/recognised method and shall take into consideration, as a minimum, the requirements of Annex III to the Regulation.

Derogations : None

Supporting material(s) : 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 - 8.33 ISG - Frequently Asked Questions and Answers - Edition 1.1
Url : <https://www.eurocontrol.int/services/vhf-833-khz>

Finalisation criteria : 1 - Safety assessment report including safety arguments for the changes has been submitted to the NSA and notification of acceptance was received.

ITY-AGVCS2-ASP05	Organise personnel training and awareness	From:	By:
			31/12/2017

Action by : **ANS Providers**

Description & purpose : Ensure that:
- personnel are made duly aware of the requirements of the Regulation and adequately trained [Art 13.(1)]
- operations manuals, working methods and operating procedures comply with Article 13(3) of the Regulation.

Derogations : None

Finalisation criteria : 1 - The training plans have been updated and a training package has been developed.
2 - All concerned personnel have been trained.

ITY-AGVCS2	Implement air-ground voice channel spacing requirements below FL195
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ITY-AGVCS2-MIL01	Equip State aircraft with radio equipment with 8,33 kHz channel spacing capability	From:	By:
			31/12/2020

Action by :	Military Authorities
Description & purpose :	<p>Ensure that aircraft are equipped with 8,33 kHz channel spacing capability in compliance with the following articles of Regulation (EU) No 1079/2012:</p> <p>i) From entry into force of the Regulation, ensure that all radios having the 8,33 kHz channel spacing capability comply with:</p> <ul style="list-style-type: none"> - Articles 4(6), 4(7) and 4(8) on interoperability and performance requirements; - Articles 8(4) and 8(5) on flight plan requirements, where applicable; - Article 8(6) on the notification to the IFPS, where applicable. <p>ii) From 1 January 2014:</p> <ul style="list-style-type: none"> - ensure all new State aircraft entering into service are equipped with radios having the 8,33 kHz channel spacing capability [Art. 9.(6)] - ensure that whenever the radios installed on-board State aircraft are subject to radio upgrades, the new radios have the 8,33 kHz channel spacing capability [Art. 9.(7)]. <p>iii) By 30 June 2018:</p> <ul style="list-style-type: none"> - communicate to the Commission the list of State aircraft that cannot be equipped with 8,33 kHz radios due to compelling technical or budgetary constraints or procurement constraints [Art. 9(9)]. <p>iv) By 31 December 2018:</p> <ul style="list-style-type: none"> - ensure all State aircraft, except those communicated to the Commission as per the previous bullet, are equipped with radios having the 8,33 kHz channel spacing capability [Art. 9(8)]. <p>v) By 31 December 2020:</p> <ul style="list-style-type: none"> - ensure the State aircraft not equipped by 31 December 2018 due to procurement constraints (as communicated to the Commission by 30 June 2018) are equipped with radios having the 8,33 kHz channel spacing capability [Art. 9(10)].
Derogations :	<p>The obligation does not apply to State aircraft that will be withdrawn from operational service by 31 December 2025 [Art 9(11)].</p> <p>The State can grant additional exemptions to State aircraft that cannot be equipped with radios having the 8,33 kHz channel spacing capability due to compelling technical or budgetary constraints.</p>
Supporting material(s) :	<p>ICAO - Annex 10, Volume III - Aeronautical Telecommunications, Volume III Communication Systems, Part 2 (incorporating Amendment No 85), Chapter 2, Sections 2.1, 2.2, 2.3.1 and 2.3.2 (excluding Subsection 2.3.2.8) - Second Edition / 07/2007</p> <p>Url : http://store1.icao.int/</p> <p>ICAO - Doc 4444 - Air Traffic Management, Section 12.3.1.4 '8,33 kHz channel spacing' - Edition 15</p> <p>Url : http://www.icao.int/publications/Pages/catalogue.aspx</p>
Finalisation criteria :	<p>1 - List of State aircraft that cannot be equipped with 8,33 kHz radios by 31 December 2018 has been communicated to the Commission.</p> <p>2 - State aircraft have been equipped.</p>

ITY-AGVCS2-MIL02	Organise personnel training and awareness of military aircrew	From:	By:
			31/12/2020

Action by :	Military Authorities
Description & purpose :	Military Authorities shall ensure that the personnel operating radio equipment are made duly aware of Regulation (EU) No 1079/2012 that they are adequately trained to use this equipment and that instructions are available in the cockpit where feasible.
Derogations :	None
Finalisation criteria :	<p>1 - Training manuals have been updated, as required.</p> <p>2 - All personnel operating radio equipment have been trained.</p>

ITY-AGVCS2-APO01	Convert all 25 kHz frequencies to 8,33 kHz	From:	By:
			31/12/2018

Action by :	Airport Operators
Description & purpose :	Ensure that, by 31 December 2018 at the latest, all 25 kHz frequencies are converted 8,33 kHz [Art. 6(10)].
Derogations :	<p>The conversion requirements to 8,33 kHz channel spacing do not apply to frequency assignments:</p> <p>a) that are outside the scope of the Regulation [Art 2(4)];</p> <p>b) that stay in 25 kHz as a result of a safety requirement [Art. 6(10)];</p> <p>c) 25 kHz frequency assignments used to accommodate State aircraft [Art. 6(10)].</p> <p>States may grant additional local exemptions as per Article 14 of Regulation (EU) No 1079/2012 (see Objective "Subject Matter and Scope").</p>
Supporting material(s) :	<p>EUROCONTROL - 8.33 ISG - Frequently Asked Questions and Answers - Edition 1.1</p> <p>Url : https://www.eurocontrol.int/services/vhf-833-khz</p>
ATM Master Plan relationship :	[CTE-C01a]-Existing Voice radio (VHF 25/8.33KHz)
Finalisation criteria :	1 - All frequency assignments published in the Table COM2 of ICAO Doc 7754, except where derogations apply or the State has granted local exceptions, have been converted to 8,33 kHz.

ITY-AGVCS2	Implement air-ground voice channel spacing requirements below FL195		
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ITY-AGVCS2-APO02	Accommodate non-equipped vehicles	From:	By:
			31/12/2017

Action by : **Airport Operators**

Description & purpose : Ensure that procedures for handling non-8,33 kHz equipped vehicles through airport areas using 8,33 kHz channel spacing are published and applied as appropriate [Annex III.8].

Derogations : None

Finalisation criteria : 1 - Procedures for handling non-8,33 kHz equipped vehicles through airport areas using 8,33 kHz channel spacing have been published and are applied as appropriate.

ITY-AGVCS2-APO03	Organise personnel training and awareness	From:	By:
			31/12/2018

Action by : **Airport Operators**

Description & purpose : Ensure that the personnel operating radio equipment are made duly aware of this Regulation, that they are adequately trained for their job functions [Art 13(1)].

Derogations : None

Finalisation criteria : 1 - The training plans have been updated and a training package has been developed.
2 - All personnel operating radio equipment have been trained.

ITY-AGVCS2-USE01	Equip aircraft with radio equipment with 8,33 kHz channel spacing capability	From:	By:
			31/12/2017

Action by : **Airspace Users**

Description & purpose : Ensure that aircraft are equipped with 8,33 kHz channel spacing capability in compliance with the following articles of Regulation (EU) No 1079/2012:
i) From entry into force:
- Articles 4(6), 4(7) and 4(8) on interoperability and performance requirements;
- Articles 8(4) and 8(5) on flight plan requirements;
- Article 8(6) on the notification to the IFPS.
ii) From 17 November 2013:
- Articles 4(2) and 4(4) on the 8,33 kHz channel spacing capability of new radio equipment or equipment subject to radio upgrades;
iii) By 31 December 2017:
- Article 4(5) on the 8,33 kHz channel spacing capability of all radios.

Derogations : None

Supporting material(s) : ICAO - Annex 10, Volume III - Aeronautical Telecommunications, Volume III Communication Systems, Part 2 (incorporating Amendment No 85), Chapter 2, Sections 2.1, 2.2, 2.3.1 and 2.3.2 (excluding Subsection 2.3.2.8) - Second Edition / 07/2007
Url : <http://store1.icao.int/>
ICAO - Doc 4444 - Air Traffic Management, Section 12.3.1.4 '8,33 kHz channel spacing' - Edition 15
Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

Finalisation criteria : 1 - Operators are able to demonstrate the conformity of airborne equipment.

ITY-AGVCS2-USE02	Organise personnel training and awareness	From:	By:
			31/12/2017

Action by : **Airspace Users**

Description & purpose : Operators shall ensure that the personnel operating radio equipment are made duly aware of Regulation (EU) No 1079/2012 that they are adequately trained to use this equipment and that instructions are available in the cockpit where feasible.

Derogations : None

Finalisation criteria : 1 - Training manuals have been updated, as required.
2 - All personnel operating radio equipment have been trained.

ITY-AGVCS2-NM01	Ensure the centralised flight planning processing and distribution service complies with the Regulation	From:	By:
			07/12/2012

Action by :

Description & purpose : The Network Manager shall ensure that the centralised flight planning processing and distribution service [Art. 13(4)]:
a) develops and maintains operations manuals containing the necessary instructions and information to enable all relevant personnel to apply Regulation (EU) No 1079/2012;
b) ensures that the manuals referred to in point (a) are accessible and kept up to date and that their update and distribution are subject to appropriate quality and documentation management;
c) ensures that its working methods and operating procedures comply with the Regulation.

ITY-AGVCS2	Implement air-ground voice channel spacing requirements below FL195
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Derogations : None
Supporting material(s) : EUROCONTROL - 8.33 ISG - Frequently Asked Questions and Answers - Edition 1.1
 Url : <https://www.eurocontrol.int/services/vhf-833-khz>
Finalisation criteria : 1 - Systems, operations manuals, working methods and operating procedures have been updated in compliance with the Regulation and documented.

PCP	Active						EU+	
ITY-COTR	Implementation of ground-ground automated co-ordination processes							
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 3 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates.

This SES-related implementation objective is derived from:

- Regulation (EC) No 1032/2006 of 06 July 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, and
- Regulation (EC) No 30/2009 of 16 January 2009 amending Regulation (EC) No 1032/2006 as far as the requirements for automatic systems for the exchange of flight data supporting data link services are concerned.

Regulation (EC) No 1032/2006 applies to:

- Flight data processing systems serving air traffic control units providing services to general air traffic;
- Flight data exchange systems supporting the coordination procedures between air traffic services units and controlling military units.

This objective covers the following mandatory processes, supported by system information exchanges:

- Notification;
 - Initial Coordination;
 - Revision of Coordination;
 - Abrogation of Coordination;
 - Basic Flight Data;
 - Changes to Basic Flight Data.
- As described in Regulation (EC) No 1032/2006, Annex I (Parts A and B)

Also, this objective covers the following processes, supported by system information exchanges:

- Logon Forward;
- Next Authority Notified;

As described in Regulation (EC) No 30/2009, Annex (Part D).

The terms used in this objective are defined in Article 2 of Regulation (EC) No 549/2004 and in Article 2 of Regulation (EC) No 1032/2006.

Regulation (EC) No 1032/2006 shall not apply to flight data processing systems for which the flight data are synchronised by means of a common system.

This SES-related implementation objective does not replace the EC legislation. It aims at facilitating the monitoring and reporting of the implementation of ground-ground coordination processes in European ATM in line with the EC regulations and through the SES implementation monitoring and reporting mechanism.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All EU+ States

Timescales:

From:

By:

Applicable to:

For putting into service of EATMN systems in respect of notification and initial coordination processes

27/07/2006

Applicability Area

Entry into force of Regulation

27/07/2006

Applicability Area

For putting into service of EATMN systems in respect of Revision of Coordination, Abrogation of Coordination, Basic Flight Data and Change to Basic Flight Data

01/01/2009

Applicability Area

To all EATMN systems in operation by 12/2012

31/12/2012

Applicability Area

Systems serving ACCs providing services above FL285 in the airspace defined in Regulation (EU) 2015/310

05/02/2018

Applicability Area

References

European ATM Master Plan relationship

OI step -	[ICM-0201]-Automated Assistance to Controller for Seamless Coordination, Transfer and Dialogue								
Enablers -	PRO-048 ATC17								

ITY-COTR	Implementation of ground-ground automated co-ordination processes
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Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan
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Applicable legislation

Regulation (EC) No 30/2009 of 16 January 2009 amending Regulation (EC) No 1032/2006 as far as the requirements for automatic systems for the exchange of flight data supporting data link services are concerned;
Regulation (EU) 2015/310 amending Regulation (EC) No 29/2009 of 16 January 2009 laying down requirements on data link services for the single European sky;
Regulation (EC) No 1032/2006 of 06 July 2006 laying down requirements for automatic systems for the exchange of flight data for the purpose of notification, coordination and transfer of flights between air traffic control units.

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
ITY-COTR-REG01	Ensure oversight of changes to system	DELETED	
ITY-COTR-ASP01	Implement flight data processing and exchange systems		01/01/2009 31/12/2012
ITY-COTR-ASP02	Implement Notification process		27/07/2006 31/12/2012
ITY-COTR-ASP03	Implement Initial Coordination process		27/07/2006 31/12/2012
ITY-COTR-ASP04	Implement Revision of Coordination process		01/01/2009 31/12/2012
ITY-COTR-ASP05	Implement Abrogation of Coordination process		01/01/2009 31/12/2012
ITY-COTR-ASP06	Implement Basic Flight Data process		01/01/2009 31/12/2012
ITY-COTR-ASP07	Implement Change to Basic Flight Data process		01/01/2009 31/12/2012
ITY-COTR-ASP08	Implement Logon Forward process		05/02/2018
ITY-COTR-ASP09	Implement Next Authority Notified process		05/02/2018
ITY-COTR-ASP10	Develop safety assessment		01/01/2009 31/12/2012
ITY-COTR-ASP11	Organise training to Air Traffic Control personnel		05/02/2018
ITY-COTR-MIL01	Implement Basic Flight Data process		01/01/2009 31/12/2012
ITY-COTR-MIL02	Implement Change to Basic Flight Data process		01/01/2009 31/12/2012

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

<u>Safety</u> :	Reduction of human error.
<u>Capacity</u> :	Reduction of controller workload. Reduction in aircrew workload as regards the AGDL login messages (ASP08 and ASP09);
<u>Cost effectiveness</u> :	More efficient planning and operational decision making.
<u>Environment</u> :	N/A
<u>Security</u> :	N/A

ITY-COTR	Implementation of ground-ground automated co-ordination processes
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Detailed SloA descriptions

ITY-COTR-ASP01	Implement flight data processing and exchange systems	From:	By:
			01/01/2009 31/12/2012

Action by : **ANS Providers**

Description & purpose : The system shall provide all the information required for the display, processing and compilation of the system information exchanged in the process specified. [Regulation (EC) No 1032/2006, Annex I, Part A].

Derogations : It shall not apply to flight data processing systems for which the flight data are synchronised by means of a common system.

Supporting material(s) : 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 - Flight data processing and exchange systems have been upgraded.
- 2 - The technical file (TF) with evidences of compliance and the EC declaration of verification of systems (DoV) have been delivered to the competent National Supervisory Authority (NSA).
- 3 - Upgraded flight data processing and exchange systems have been put into service.

ITY-COTR-ASP02	Implement Notification process	From:	By:
			27/07/2006 31/12/2012

Action by : **ANS Providers**

Description & purpose : Implement a process of notification of flight between ATC units.

The Notification process satisfies the following operational requirements:

- Provide for acquisition of missing flight plan data;
- Provide advance boundary information and revisions thereto for the next ATC unit;
- Update the basic flight plan data;
- Facilitate early correlation of radar tracks;
- Facilitate accurate short-term sector load assessment;
- Request the assignment of an SSR code from the unit to which the above notification is sent, if required.

This process shall comply with the interoperability and performance requirements specified in Art. 3 of Regulation (EC) No 1032/2006.

Derogations : It shall not apply to flight data processing systems for which the flight data are synchronised by means of a common system.

Supporting material(s) : EUROCONTROL - SPEC 107 - EUROCONTROL Specification for ATS Data Exchange Presentation (ADEXP) - Edition 3.1 - OJ 2008/C 68/03 / 10/2007
 Url : <http://www.eurocontrol.int/publications/ats-data-exchange-presentation-adexp-specification>
 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 Notification process has been implemented, documented and is in operational use with all partners within the applicability area.

ITY-COTR-ASP03	Implement Initial Coordination process	From:	By:
			27/07/2006 31/12/2012

Action by : **ANS Providers**

ITY-COTR	Implementation of ground-ground automated co-ordination processes
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Description & purpose : Implement a process of initial coordination of flight between ATC units.

The Initial Coordination process satisfies the following operational requirements:

- Replace the verbal boundary estimate by transmitting automatically details of a flight from one ATC unit to the next prior to the transfer of control;
- Update the basic flight plan data in the receiving ATC unit with the most recent information;
- Facilitate distribution and display of flight plan data within the receiving ATC unit to the working positions involved;
- Enable display of correlation in the receiving ATC unit;
- Provide transfer conditions to the receiving ATC unit.

This process shall comply with the interoperability and performance requirements specified in Art. 3 of Regulation (EC) No 1032/2006.

Derogations : It shall not apply to flight data processing systems for which the flight data are synchronised by means of a common system.

Supporting material(s) : EUROCONTROL - SPEC 107 - EUROCONTROL Specification for ATS Data Exchange Presentation (ADEXP) - Edition 3.1 - OJ 2008/C 68/03 / 10/2007

Url : <http://www.eurocontrol.int/publications/ats-data-exchange-presentation-adexp-specification>

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 Initial Coordination process has been implemented, documented and is in operational use.

ITY-COTR-ASP04	Implement Revision of Coordination process	From:	By:
			01/01/2009 31/12/2012

Action by : **ANS Providers**

Description & purpose : Implement a process of revision of coordination of flight between ATC units.

The Revision of Coordination process is used to transmit revisions to co-ordination data previously sent in an Initial Coordination message provided that the accepting unit does not change as a result of the modification.

This process shall comply with the interoperability and performance requirements specified in Art. 3 of Regulation (EC) No 1032/2006.

Derogations : It shall not apply to flight data processing systems for which the flight data are synchronised by means of a common system.

Supporting material(s) : EUROCONTROL - SPEC 107 - EUROCONTROL Specification for ATS Data Exchange Presentation (ADEXP) - Edition 3.1 - OJ 2008/C 68/03 / 10/2007

Url : <http://www.eurocontrol.int/publications/ats-data-exchange-presentation-adexp-specification>

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 Revision of Coordination process has been implemented, documented and is in operational use.

ITY-COTR-ASP05	Implement Abrogation of Coordination process	From:	By:
			01/01/2009 31/12/2012

Action by : **ANS Providers**

Description & purpose : Implement a process of abrogation of coordination of flight between ATC units.

An Abrogation of Coordination process is used to indicate to the receiving unit that the co-ordination or notification previously effected for a flight is being abrogated.
The Abrogation of Coordination message is not a replacement for a Cancellation message, as defined by ICAO, and therefore, shall not be used to erase the basic flight plan data.

The abrogation of coordination process shall ensure association with the previous notification or coordination process that is being cancelled.

This process shall comply with the interoperability and performance requirements specified in Art. 3 of Regulation (EC) No 1032/2006.

Derogations : It shall not apply to flight data processing systems for which the flight data are synchronised by means of a common system.

ITY-COTR	Implementation of ground-ground automated co-ordination processes
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Supporting material(s) : EUROCONTROL - SPEC 107 - EUROCONTROL Specification for ATS Data Exchange Presentation (ADEXP) - Edition 3.1 - OJ 2008/C 68/03 / 10/2007
 Url : <http://www.eurocontrol.int/publications/ats-data-exchange-presentation-adexp-specification>
 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 Abrogation of Coordination process has been implemented, documented and is in operational use.

ITY-COTR-ASP06	Implement Basic Flight Data process	From:	By:
			01/01/2009 31/12/2012

Action by : **ANS Providers**
Description & purpose : Implement a process for the provision of basic flight data between ATC units which:
 - Forwards basic flight data from civil units to military units and, if bilaterally agreed, from military units to civil units;
 - Forwards basic flight data to an ATSU which requires information on the flight but whose airspace is not planned to be penetrated by the flight, e.g. where the route takes the flight close to the boundary and a Letter of Agreement exists requiring such flights to be notified of coordinated;
 - Identifies the controller/console having the flight under control, particularly where it may not be apparent from the current position of the flight as is the case at a number of military units;
 - Activates the system flight plan in the receiving unit, if necessary;
 - Allows correlation of radar data with flight plan data.
 This process shall comply with the interoperability and performance requirements specified in Art. 3 of Regulation (EC) No 1032/2006.

Derogations : It shall not apply to flight data processing systems for which the flight data are synchronised by means of a common system.
Supporting material(s) : EUROCONTROL - SPEC 107 - EUROCONTROL Specification for ATS Data Exchange Presentation (ADEXP) - Edition 3.1 - OJ 2008/C 68/03 / 10/2007
 Url : <http://www.eurocontrol.int/publications/ats-data-exchange-presentation-adexp-specification>
 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 Basic Flight Data process has been implemented, documented and is in operational use.

ITY-COTR-ASP07	Implement Change to Basic Flight Data process	From:	By:
			01/01/2009 31/12/2012

Action by : **ANS Providers**
Description & purpose : Implement a process for change to basic flight data between ATC units.
 The Change to Basic Flight Data process is for the unit controlling the flight to notify the interested unit of:
 - All significant changes to flight data previously sent to this unit with a Basic Flight Data / Change to Basic Flight Data;
 - All flight data required to be notified by bilateral agreement and not included in the Basic Flight Data or previous Change to Basic Flight Data .
 This process shall comply with the interoperability and performance requirements specified in Art. 3 of Commission Regulation (EC) No 1032/2006.
Derogations : It shall not apply to flight data processing systems for which the flight data are synchronised by means of a common system.
Supporting material(s) : EUROCONTROL - SPEC 107 - EUROCONTROL Specification for ATS Data Exchange Presentation (ADEXP) - Edition 3.1 - OJ 2008/C 68/03 / 10/2007
 Url : <http://www.eurocontrol.int/publications/ats-data-exchange-presentation-adexp-specification>
 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>

ITY-COTR	Implementation of ground-ground automated co-ordination processes
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Finalisation criteria : 1 - The Change to Basic Flight Data process has been implemented, documented and is in operational use.

ITY-COTR-ASP08	Implement Logon Forward process	From:	By:
			05/02/2018

Action by : **ANS Providers**

Description & purpose : Implement a process for the transmission of logon parameters of flight data between ATC units as specified in the Annex to Regulation (EC) No 30/2009 amending Regulation (EC) No 1032/2006.

The Logon Forward process is transmitted to provide the ATN or FANS/1A logon parameters to the receiving data-link equipped unit, to allow the unit to use the data link applications (CM, CPDLC, ADS, FIS).

This process shall comply with the interoperability and performance requirements specified in Art. 3 of Regulation (EC) No 1032/2006.

Specific applicability: [Related to Commission Regulation 29/2009 laying down requirements on datalink services for the Single European Sky](#)

Derogations : It shall not apply to flight data processing systems for which the flight data are synchronised by means of a common system

Supporting material(s) : EUROCONTROL - SPEC 107 - EUROCONTROL Specification for ATS Data Exchange Presentation (ADEXP) - Edition 3.1 - OJ 2008/C 68/03 / 10/2007

Url : <http://www.eurocontrol.int/publications/ats-data-exchange-presentation-adexp-specification>

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 Logon Forward process has been implemented documented and is in operational use.

ITY-COTR-ASP09	Implement Next Authority Notified process	From:	By:
			05/02/2018

Action by : **ANS Providers**

Description & purpose : Implement a process for the transmission of information of flight data between ATC units as specified in the Annex to Regulation (EC) No 30/2009 amending Regulation (EC) No 1032/2006.

Information subject to the next authority notified process shall provide as a minimum: aircraft identification, departure aerodrome, destination aerodrome.

This process shall comply with the interoperability and performance requirements specified in Art. 3 of Regulation (EC) No 1032/2006.

Specific applicability: [Related to Commission Regulation 29/2009 laying down requirements on datalink services for the Single European Sky](#)

Derogations : It shall not apply to flight data processing systems for which the flight data are synchronised by means of a common system.

Supporting material(s) : EUROCONTROL - SPEC 107 - EUROCONTROL Specification for ATS Data Exchange Presentation (ADEXP) - Edition 3.1 - OJ 2008/C 68/03 / 10/2007

Url : <http://www.eurocontrol.int/publications/ats-data-exchange-presentation-adexp-specification>

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 Next Authority Notified process has been implemented, documented and is in operational use with all partners within the applicability area.

ITY-COTR-ASP10	Develop safety assessment	From:	By:
			01/01/2009 31/12/2012

Action by : **ANS Providers**

Description & purpose : Develop a safety assessment of system's changes to support notification, coordination and transfer of flights between ATC units.

This safety assessment shall be carried out in accordance with Art. 6 of Commission Regulation (EC) No 1032/2006 (coordination and transfer) and Commission Implementing Regulation (EC) No 1034/2011 (safety oversight).

Derogations : None

ITY-COTR	Implementation of ground-ground automated co-ordination processes
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Supporting material(s) : EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006
 Url : <http://www.eurocontrol.int/articles/safety-assessment-methodology-sam>
 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/LexUriServ/LexUriServ.do?uri=OJ:L:2011:271:0023:0041:EN:PDF>

Finalisation criteria : 1 - Safety assessment has been performed.
 2 - If the conditions specified in Art. 9 of Regulation (EC) 1034/2011 are fulfilled: - Safety argument to be reviewed by the NSA; - Introduction into service of changes has been accepted by the NSA.

ITY-COTR-ASP11	Organise training to Air Traffic Control personnel	From:	By:
			05/02/2018

Action by : **ANS Providers**
Description & purpose : In line with the date of applicability for the putting into service of the system, develop and maintain operations manuals and ensure that:
 - All personnel are made aware of the requirements laid down in Regulation (EC) No 1032/2006 and adequately trained;
 - Operations manuals and working methods comply with requirements specified in Regulation (EC) No 1032/2006 Annex I, Parts A, B and D.
Derogations : None
Finalisation criteria : 1 - Air Navigation Service Providers have produced the operations manuals and the training programmes.
 2 - All relevant personnel have been trained.

ITY-COTR-MIL01	Implement Basic Flight Data process	From:	By:
			01/01/2009 31/12/2012

Action by : **Military Authorities**
Description & purpose : Implement a process for the transmission of basic flight data between ATC units (civil and military) which:
 - Forwards basic flight data from civil units to military units and, if bilaterally agreed, from military units to civil units;
 - Forwards basic flight data to an ATSU which requires information on the flight but whose airspace is not planned to be penetrated by the flight, e.g. where the route takes the flight close to the boundary and a LoA exists requiring such flights to be notified of coordinated;
 - Identifies the controller/console having the flight under control, particularly where it may not be apparent from the current position of the flight as is the case at a number of military units;
 - Activates the system flight plan in the receiving unit, if necessary;
 - Allows correlation of radar data with flight plan data.
 Information subject to the basic flight data process shall provide as a minimum: aircraft identification, SSR mode and code. This process shall comply with the interoperability and performance requirements specified in Art. 3 of Regulation (EC) No 1032/2006.

Derogations : It shall not apply to flight data processing systems for which the flight data are synchronised by means of a common system.
Supporting material(s) : EUROCONTROL - SPEC 107 - EUROCONTROL Specification for ATS Data Exchange Presentation (ADEXP) - Edition 3.1 - OJ 2008/C 68/03 / 10/2007
 Url : <http://www.eurocontrol.int/publications/ats-data-exchange-presentation-adexp-specification>
 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 Basic Flight Data process has been implemented, documented and is in operational use.

ITY-COTR-MIL02	Implement Change to Basic Flight Data process	From:	By:
			01/01/2009 31/12/2012

Action by : **Military Authorities**
Description & purpose : Implement a process for the transmission of changes to basic flight data between ATC units (civil and military).
 The Change to Basic Flight Data process is for the unit controlling the flight to notify the interested unit of:
 - All significant changes to flight data previously sent to this unit with a Basic Flight Data / Change to Basic Flight Data ;
 - All flight data required to be notified by bilateral agreement and not included in the Basic Flight Data or previous Change to Basic Flight Data
 Information subject to the basic flight data process shall provide as a minimum: aircraft identification, SSR mode and code. The process shall comply with the interoperability and performance requirements specified in Art. 3 of Commission Regulation (EC) No 1032/2006.

ITY-COTR	Implementation of ground-ground automated co-ordination processes
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<u>Derogations</u> :	It shall not apply to flight data processing systems for which the flight data are synchronised by means of a common system.
<u>Supporting material(s)</u> :	EUROCONTROL - SPEC 107 - EUROCONTROL Specification for ATS Data Exchange Presentation (ADEXP) - Edition 3.1 - OJ 2008/C 68/03 / 10/2007 Url : http://www.eurocontrol.int/publications/ats-data-exchange-presentation-adexp-specification 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
<u>Finalisation criteria</u> :	1 - The Change to Basic Flight Data process has been implemented, documented and is in operational use.

PCP		Active					ECAC	
ITY-FMTP		Apply a common flight message transfer protocol (FMTP)						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This objective is functionally related to ATM Functionality 5 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates.

This SES-related implementation objective is derived from Regulation (EC) No 633/2007 of 7 June 2007 laying down requirements for the application of a flight message transfer protocol (FMTP) for information exchanges between flight data processing systems for the purpose of notification, coordination and transfer of flights between air traffic control units and for the purposes of civil-military coordination, in accordance with Regulation (EC) No 1032/2006 [Ref. Article 1(1)].

Regulation (EC) No 633/2007 applies to [Ref. Article 1(2)]:

- a) Communication systems supporting the coordination procedures between air traffic control units using a peer-to-peer communication mechanism and providing services to general air traffic;
- b) Communication systems supporting the coordination procedures between air traffic services units and controlling military units, using a peer-to-peer communication mechanism and providing services to general air traffic.

The terms used in this objective are defined in Article 2 of Regulation (EC) No 549/2004, complemented by Article 2 of Regulation (EC) No 633/2007.

This implementation objective has been amended in order to introduce the new optional conditional transitional arrangements defined in Regulation (EU) No 283/2011 of 22 March 2011.

This SES-related implementation objective does not replace the EC legislation. It aims at facilitating the monitoring and reporting of the implementation of a common flight message transfer protocol in European ATM in line with the EC regulations and through the SES implementation monitoring and reporting mechanism.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

	From:	By:	Applicable to:
Entry into force of regulation	28/06/2007		Applicability Area
All EATMN systems put into service after 01/01/09	01/01/2009		Applicability Area
All EATMN systems in operation by 20/04/11		20/04/2011	Applicability Area
Transitional arrangements		31/12/2012	Applicability Area
Transitional arrangements when bilaterally agreed between ANSPs		31/12/2014	Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -							
Enablers -	CTE-C06							
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan		

Applicable legislation

Regulation (EC) No 633/2007 of 07 June 2007;
Regulation (EC) No 283/2011 of 22 March 2011 amending Regulation No 633/2007;
Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project
Commission Communication (OJ No 2007/C 188/03) concerning the implementation of Article 4 of Regulation (EC) No 552/2004 referring to EUROCONTROL Spec-0100 Edition No 2.0 as Community Specification

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
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ITY-FMTP		Apply a common flight message transfer protocol (FMTP)	
ITY-FMTP-REG02	Ensure that the verification of systems has been conducted	DELETED	
ITY-FMTP-REG03	Conduct safety oversight of the changes	DELETED	
ITY-FMTP-ASP01	Upgrade and put into service communication systems to support information exchange via FMTP between FDPS(s) for the purpose of notification, coordination and transfer of the flights between ATC units		20/04/2011
			31/12/2012
			31/12/2014
ITY-FMTP-ASP02	Develop safety assessment for the changes		20/04/2011
			31/12/2012
			31/12/2014
ITY-FMTP-ASP03	Train technical staff		20/04/2011
			31/12/2012
			31/12/2014
ITY-FMTP-MIL01	Upgrade and put into service communication systems to support information exchange via FMTP between FDPS(s) for the purpose of notification, coordination, transfer of the flights and civil-military coordination between ATS units and controlling military units		20/04/2011
			31/12/2012
			31/12/2014

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	N/A
Capacity :	N/A
Cost effectiveness :	More cost efficient as X.25 maintenance costs are increasing while TCP/IP costs are lower. CBA or business case reference: (if available).
Environment :	N/A
Security :	N/A

Detailed SLoA descriptions

ITY-FMTP-ASP01	Upgrade and put into service communication systems to support information exchange via FMTP between FDPS(s) for the purpose of notification, coordination and transfer of the flights between ATC units	From:	By:
			20/04/2011 31/12/2012 31/12/2014

Action by : **ANS Providers**

Description & purpose : Ensure that the communication systems supporting the coordination procedures between ATC units using a peer-to-peer communication mechanism and providing services to general air traffic shall apply the flight message transfer protocol (FMTP).

The tasks to be performed are as follows:

- Define requirements based on relevant standards/regulations;
- Upgrade communication systems to comply with defined requirements;
- Verify compliance with Interoperability Regulation(s);
- Integrate upgraded communication systems into the EATM Network;
- Put into service upgraded communication systems.

The application of FMTP shall be in accordance with the interoperability requirements specified in Annex I of Regulation (EC) No 633/2007.

The verification of the systems shall be done as defined in Annex II and IV of Regulation (EC) No 633/2007.

Derogations :

None

Supporting material(s) :

EUROCONTROL - EUROCONTROL Inter Centre Test Tool (ETIC) - Version 3.2.2. / 08/2012

Url : <http://www.eurocontrol.int/articles/network>

EUROCONTROL - SPEC 100 - EUROCONTROL Specification of Interoperability and Performance Requirements for the Flight Message Transfer Protocol (FMTP) - Edition 2.0 - OJ 2007/C 188/03 / 06/2007

Url : <http://www.eurocontrol.int/publications/flight-message-transfer-protocol-fmtp-specification>

EUROCONTROL - Guidelines for Implementation Support (EGIS) Part 5 Communication & Navigation Specifications Chapter 13 Flight Message Transfer Protocol (FMTP) - Edition 2.0 / 12/2008

Url : http://www.eurocontrol.int/sites/default/files/field_tabs/content/documents/communications/121208-egis-fmtp.pdf
[\[CTE-C06\]-Ground ATM Data communication Network](#)

ATM Master Plan
relationship :

ITY-FMTP	Apply a common flight message transfer protocol (FMTP)
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Finalisation criteria :

- 1 - Communications systems have been upgraded.
- 2 - The technical file (TF) with evidences of compliance and the EC declaration of verification of systems (DoV) has been delivered to the competent National Supervisory Authority (NSA).
- 3 - Upgraded communication systems have been put into service.
- 4 - Note: For states where Regulation (EC) No 552/2004 on the interoperability of the European Air Traffic Management network does not apply, ANSPs should apply compliance procedures as defined by their competent National Authority.

ITY-FMTP-ASP02	Develop safety assessment for the changes	From:	By:
			20/04/2011 31/12/2012 31/12/2014

Action by : **ANS Providers**

Description & purpose : Notify the NSA of planned changes and develop safety assessments of the changes for the upgrades of communication systems which support information exchange using a peer-to-peer communication mechanism via FMTP between FDPS(s).

The tasks to be performed are as follows:

- Notify the NSA of planned changes;
- Conduct hazard identification, risk assessment in order to define safety objectives and safety requirements mitigating the risks;
- Develop safety assessment;
- Deliver a safety assessment report 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.

Derogations :

None

Supporting material(s) :

EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006
 Url : <http://www.eurocontrol.int/articles/safety-assessment-methodology-sam>

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 100 - EUROCONTROL Specification of Interoperability and Performance Requirements for the Flight Message Transfer Protocol (FMTP) - Edition 2.0 - OJ 2007/C 188/03 / 06/2007
 Url : <http://www.eurocontrol.int/publications/flight-message-transfer-protocol-fmtp-specification>

EUROCONTROL - Guidelines for Implementation Support (EGIS) Part 5 Communication & Navigation Specifications Chapter 13 Flight Message Transfer Protocol (FMTP) - Edition 2.0 / 12/2008
 Url : http://www.eurocontrol.int/sites/default/files/field_tabs/content/documents/communications/121208-egis-fmtp.pdf

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/LexUriServ/LexUriServ.do?uri=OJ:L:2011:271:0023:0041:EN:PDF>

Finalisation criteria : 1 - Safety assessment report including safety arguments for the changes has been submitted to the NSA.

ITY-FMTP-ASP03	Train technical staff	From:	By:
			20/04/2011 31/12/2012 31/12/2014

Action by : **ANS Providers**

ITY-FMTP	Apply a common flight message transfer protocol (FMTP)
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Description & purpose : Train technical staff to supervise and maintain communication systems which support information exchange via FMTP between FDPS(s).

The tasks to be done are as follows:
- Develop a training package (material);
- Update the training plans;
- Determine staff population to be trained;
- Apply the training plans.

Derogations : None

Supporting material(s) : EUROCONTROL - SPEC 100 - EUROCONTROL Specification of Interoperability and Performance Requirements for the Flight Message Transfer Protocol (FMTP) - Edition 2.0 - OJ 2007/C 188/03 / 06/2007

Url : <http://www.eurocontrol.int/publications/flight-message-transfer-protocol-fmtp-specification>

EUROCONTROL - Guidelines for Implementation Support (EGIS) Part 5 Communication & Navigation Specifications Chapter 13 Flight Message Transfer Protocol (FMTP) - Edition 2.0 / 12/2008

Url : http://www.eurocontrol.int/sites/default/files/field_tabs/content/documents/communications/121208-egis-fmtp.pdf

Finalisation criteria :
1 - The training plans have been updated and a training package has been developed by the ANSP.
2 - All concerned personnel has been trained.

ITY-FMTP-MIL01	Upgrade and put into service communication systems to support information exchange via FMTP between FDPS(s) for the purpose of notification, coordination, transfer of the flights and civil-military coordination between ATS units and controlling military units	From:	By:
			20/04/2011 31/12/2012 31/12/2014

Action by : **ANS Providers**

Description & purpose : Ensure that the communication systems supporting the coordination procedures between ATC units and controlling military units using a peer-to-peer communication mechanism shall apply the flight message transfer protocol (FMTP).

The application of FMTP shall be in accordance with the interoperability requirements specified in Annex I of Regulation (EC) No 633/2007.

The verification of the systems shall be done as defined in Annex II and IV of Regulation (EC) No 633/2007.

The tasks to be done are as follows:
- Define requirements based on relevant standards/regulations;
- Upgrade communication systems to comply with defined requirements;
- Verify compliance with Interoperability Regulation(s);
- Integrate upgraded communication systems into the EATM Network;
- Put into service upgraded communication systems.

Derogations : None

Finalisation criteria :
1 - Communications systems upgraded.
2 - Demonstration of compliance with the essential requirements as laid out in Regulation (EC) No 552/2004 and relevant implementing rules delivered to the competent National Authority.
3 - Upgraded communication systems put into service.

SES	Active						EU+	
ITY-SPI	Surveillance performance and interoperability							
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

This SES-related implementation objective is derived from Regulation (EU) No 1207/2011 (as amended), laying down requirements on the systems contributing to the provision of surveillance data, their constituents and associated procedures in order to ensure the harmonisation of performance, the interoperability and the efficiency of these systems within the European air traffic management network (EATMN) and for the purpose of civil- military coordination (SPI-IR).

Regulation (EU) No 1207/2011 (as amended) applies to the surveillance chain (as defined in Article 3(6) of the Regulation) constituted of:

- (a) airborne surveillance systems, their constituents and associated procedures;
- (b) ground-based surveillance systems, their constituents and associated procedures;
- (c) surveillance data processing systems, their constituents and associated procedures;
- (d) ground-to-ground communications systems used for distribution of surveillance data, their constituents and associated procedures.

Regulation (EU) No 1207/2011 (as amended) applies to all flights operating as general air traffic in accordance with instrument flight rules within the airspace provided for in Article 1(3) of Regulation (EC) No 551/2004 with the exception of Articles 7(3) and 7(4) which apply to all flights operating as general air traffic. This Regulation applies to air traffic service providers which provide air traffic control services based on surveillance data, and to communication, navigation or surveillance service providers which operate systems laid down in paragraph 1 of the Regulation itself.

Regulation (EU) No 1207/2011 (as amended) should be read in conjunction with the existing locally published requirements that European States already have in force on the subject matter.

This SES-related implementation objective does not replace the EU legislation. It aims at facilitating the monitoring and reporting of the implementation of surveillance performance and interoperability in European ATM in line with the EU regulations and through the SES implementation monitoring and reporting mechanism.

The timescales identified in the objective reflect the amendments published through the Commission Implementing Regulation (EU) No 1028/2014 published in September 2014.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities

Applicability Area(s) & Timescale(s)

Applicability Area

All EU+ States

Timescales:

	From:	By:	Applicable to:
Entry into force of regulation	13/12/2011		Applicability Area
ATS unit operational capability		12/12/2013	Applicability Area
New aircraft capability	08/06/2016		Applicability Area
ELS in transport-type State aircraft		07/12/2017	Applicability Area
EHS and ADS-B Out in transport-type State aircraft		07/06/2020	Applicability Area
Ensure training of MIL personnel		07/06/2020	Applicability Area
Retrofit aircraft capability		07/06/2020	Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -								
Enablers -	GSURV-010 1								
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan		

Applicable legislation

Regulation (EC) No 1207/2011 of 22 November 2011 for the performance and the interoperability of surveillance (SPI-IR)

ITY-SPI	Surveillance performance and interoperability
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Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
ITY-SPI-REG01	Conduct safety oversight for the existing surveillance chain		05/02/2015
ITY-SPI-ASP01	Ensure interoperability of surveillance data		12/12/2013
ITY-SPI-ASP02	Conduct Safety Assessment for the existing surveillance chain		05/02/2015
ITY-SPI-ASP03	Conduct Safety Assessment for changes introduced to the surveillance infrastructure		12/12/2013
ITY-SPI-ASP04	Ensure the training of personnel		12/12/2013
ITY-SPI-MIL01	Carriage and operation of Mode S Elementary Surveillance avionics		07/12/2017
ITY-SPI-MIL02	Carriage and operation of Mode S Enhanced Surveillance and ADS-B Out avionics		07/06/2020
ITY-SPI-MIL03	Ensure the training of personnel		07/06/2020
ITY-SPI-USE01	Carriage and operation of Mode S Elementary Surveillance avionics by aircraft with an individual certificate of airworthiness first issued on or after 8 January 2015	08/01/2015	
ITY-SPI-USE02	Carriage and operation of ADS-B Out avionics by aircraft with an individual certificate of airworthiness first issued on or after 8 June 2016	08/06/2016	
ITY-SPI-USE03	Carriage and operation of Mode S Enhanced Surveillance avionics by aircraft with an individual certificate of airworthiness first issued on or after 8 June 2016	08/06/2016	
ITY-SPI-USE04	Carriage and operation of Mode S Elementary Surveillance avionics by aircraft with an individual certificate of airworthiness first issued before 8 January 2015		07/12/2017
ITY-SPI-USE05	Carriage and operation of ADS-B Out avionics by aircraft with an individual certificate of airworthiness first issued before 8 June 2016		07/06/2020
ITY-SPI-USE06	Carriage and operation of Mode S Enhanced Surveillance avionics by aircraft with an individual certificate of airworthiness first issued before 8 June 2016		07/06/2020
ITY-SPI-USE07	Ensure the training of personnel		07/06/2020

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Improved safety through the deployment of surveillance solutions in non-radar areas.
Capacity :	Potential for capacity increase through the deployment of surveillance solutions in areas where currently procedural separation is applied.
Cost effectiveness :	Facilitate the deployment of the most efficient surveillance solutions by the ANSPs.
Environment :	N/A
Security :	N/A

Detailed SLoA descriptions

ITY-SPI-REG01	Conduct safety oversight for the existing surveillance chain	From:	By:
			05/02/2015

Action by :	National Supervisory Authorities (NSAs)
Description & purpose :	Verify that the necessary safety assessments for the existing surveillance chain (systems identified in Art. 2.1 (b), (c) and (d) of Regulation (EU) No 1207/2011 (SPI-IR)), as required by Art 9.1 of the Regulation are conducted by the parties concerned and review, as appropriate, the safety assessment report(s) before their acceptance. Note : 'existing' refers to systems in place at the date of entry into force of Regulation (EU) 1207/2011
Derogations :	None
Supporting material(s) :	EC - Regulation (EU) No 1034/2011-(OJ L 271, 18.10.2011, p.15) - Regulation (EU) No 1034/2011 of 17 October 2011 on safety oversight in air traffic management and air navigation services and amending Regulation (EU) No 691/2010 10/2011 Url : http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:271:0015:0022:EN:PDF
Finalisation criteria :	1 - Safety assessment to existing surveillance chain (see SLoA description) has been conducted by the ANSP and delivered to the NSA. The NSA has reviewed the safety assessment as appropriate and the outcome of the assessment has been communicated to the ANSP.

ITY-SPI	Surveillance performance and interoperability		
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ITY-SPI-ASP01	Ensure interoperability of surveillance data	From:	By:
			12/12/2013

Action by : **ANS Providers**

Description & purpose : As required by Article 5(1) of the Regulation (EU) No 1207/2011 (SPI-IR) , air navigation service providers shall ensure interoperability of all surveillance data transferred from their ground-based surveillance systems and their surveillance data processing systems to other navigation service providers are subject to a common protocol.

Note: The ASTERIX Standard has been transposed into a EUROCONTROL Specification which may be considered for recognition as Community Specification by the European Commission.

Derogations : None

Supporting material(s) : EUROCONTROL - SPEC 147 - EUROCONTROL ATM Surveillance System Performance Specification (Volume 1 & Volume 2) - Edition 1.0 / 03/2012

Url : <http://www.eurocontrol.int/publications/eurocontrol-specification-atm-surveillance-system-performance>

EUROCONTROL - The EUROCONTROL ASTERIX Standard All Purpose Structured Eurocontrol Surveillance Information Exchange, including its categories - Edition 1.3 / 11/2007

Url : <http://www.eurocontrol.int/articles/previous-editions-asterix-documents>

Finalisation criteria : 1 - All surveillance data transferred from their ground-based surveillance systems and their surveillance data processing systems to other navigation service providers:

- a) are subject to a data format that is agreed between the parties concerned;
- b) allow identification of the data source and identification of the type of data;
- c) are time stamped and expressed as coordinated universal time (UTC).

ITY-SPI-ASP02	Conduct Safety Assessment for the existing surveillance chain	From:	By:
			05/02/2015

Action by : **ANS Providers**

Description & purpose : Conduct a safety assessment: for all existing ground-based surveillance systems, surveillance data processing systems and ground-to-ground communications systems used for the distribution and processing of surveillance data, as required in Art. 9.1 and Annex VI of SPI-IR.

Note : 'existing' refers to systems in place at the date of entry into force of Regulation (EU) 1207/2011

Derogations : The SLoA does not apply to ANSP which do not use or do not provide surveillance data.

Supporting material(s) : EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006

Url : <http://www.eurocontrol.int/articles/safety-assessment-methodology-sam>

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 147 - EUROCONTROL ATM Surveillance System Performance Specification (Volume 1 & Volume 2) - Edition 1.0 / 03/2012

Url : <http://www.eurocontrol.int/publications/eurocontrol-specification-atm-surveillance-system-performance>

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/LexUriServ/LexUriServ.do?uri=OJ:L:2011:271:0023:0041:EN:PDF>

Finalisation criteria : 1 - Safety assessment to all existing systems (see SLoA description) has been developed and delivered to the NSA.

ITY-SPI-ASP03	Conduct Safety Assessment for changes introduced to the surveillance infrastructure	From:	By:
			12/12/2013

Action by : **ANS Providers**

Description & purpose : Conduct a safety assessment of the changes introduced to systems and associated procedures, identified in Art. 2.1 (b), (c) and (d) of SPI-IR in order to achieve compliance with Article 9.2 of the aforementioned regulation.

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 a safety assessment report 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.

Derogations : The SLoA does not apply to ANSP which do not use or do not provide surveillance data.

ITY-SPI	Surveillance performance and interoperability
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Supporting material(s) : EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006
 Url : <http://www.eurocontrol.int/articles/safety-assessment-methodology-sam>
 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 147 - EUROCONTROL ATM Surveillance System Performance Specification (Volume 1 & Volume 2) - Edition 1.0 / 03/2012
 Url : <http://www.eurocontrol.int/publications/eurocontrol-specification-atm-surveillance-system-performance>
 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/LexUriServ/LexUriServ.do?uri=OJ:L:2011:271:0023:0041:EN:PDF>

Finalisation criteria : 1 - The safety assessment report including safety arguments for the changes has been delivered to the NSA and a notification of acceptance was received as appropriate.

ITY-SPI-ASP04	Ensure the training of personnel	From:	By:
			12/12/2013

Action by : **ANS Providers**

Description & purpose : Ensure the training of their personnel affected by system and procedural changes introduced by compliance to SPI-IR.

The tasks to be done are as follows:
 - Develop a training package (material);
 - Update the training plans;
 - Determine staff population to be trained;
 - Apply the training plans.

Derogations : None

Finalisation criteria : 1 - The training plans have been updated and a training package has been developed.
 2 - All personnel affected by the changes to the surveillance infrastructure have been trained.

ITY-SPI-MIL01	Carriage and operation of Mode S Elementary Surveillance avionics	From:	By:
			07/12/2017

Action by : **Military Authorities**

Description & purpose : Equip and certify for operational use of secondary surveillance radar transponders having the Mode S Elementary Surveillance capability, as set out in Part A of Annex II of the SPI-IR, the State aircraft operating as GAT in accordance with IFR rules.

Derogations : In line with Art. 8.3 of SPI-IR and communication to the European Commission:
 a) compelling technical reasons;
 b) State aircraft out of service by 01 January 2020;
 c) Procurement constraints.

Supporting material(s) : EUROCAE - ED-73E - Minimum Operational Performance Specification for Secondary Surveillance Radar Mode S Transponders 05/2011
 Url : <http://boutique.eurocae.net/catalog/index.php>
 ICAO - Doc 9871 - Technical Provisions for Mode S Services and Extended Squitter - Advanced Edition / 04/2012
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

Finalisation criteria : 1 - Aircraft have been equipped with Mode S Elementary Surveillance equipment and certified for operational use.

ITY-SPI-MIL02	Carriage and operation of Mode S Enhanced Surveillance and ADS-B Out avionics	From:	By:
			07/06/2020

Action by : **Military Authorities**

Description & purpose : Equip with and certify for operational use of Mode S Enhanced Surveillance and ADS-B Out on 1090 Extended Squitter avionics, as set out in Part B and Part C of Annex II of the SPI-IR the transport-type State aircraft operating as GAT in accordance with IFR rules with a maximum certified take-off mass exceeding 5 700 kg or having a maximum cruising true airspeed capability greater than 250 knots. This is in addition to the capability set out in Part A of that Annex (Mode S Elementary Surveillance).

Derogations : In line with Art. 8.3 of SPI-IR and communication to the European Commission:
 a) compelling technical reasons;
 b) State aircraft out of service by 01 January 2020;
 c) Procurement constraints.

ITY-SPI	Surveillance performance and interoperability
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Supporting material(s) : EASA - Certification Specifications for Airborne Communications Navigation and Surveillance - Initial Issue / 12/2013
 Url : <http://easa.europa.eu/document-library/certification-specifications/cs-acns-initial-issue>
 EUROCAE - ED-102A - Minimum Operational Performance Specification for 1090 MHz Extended Squitter Automatic Dependant Surveillance - Broadcast (ADS-B) & Traffic Information Services – Broadcast (TIS-B) with Corrigendum 1 01/2012
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-73E - Minimum Operational Performance Specification for Secondary Surveillance Radar Mode S Transponders 05/2011
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-126 - Safety, Performance and Interoperability Requirements Document for ADS-B-NRA Application 12/2006
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-161 - Safety, Performance and Interoperability Requirements Document for ADS-B-RAD Application 09/2009
 Url : <http://boutique.eurocae.net/catalog/index.php>
 ICAO - Doc 9871 - Technical Provisions for Mode S Services and Extended Squitter - Advanced Edition / 04/2012
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

Finalisation criteria : 1 - Aircraft have been equipped with Mode S Enhanced Surveillance and ADS-B Out (1090 extended squitter) equipment, and certified for operational use.

ITY-SPI-MIL03	Ensure the training of personnel	From:	By:
			07/06/2020

Action by : **Military Authorities**

Description & purpose : Ensure the training of all their personnel affected by changes introduced by compliance to SPI-IR.

The tasks to be done are as follows:
 - Develop a training package (material);
 - Update the training plans;
 - Determine staff population to be trained;
 - Apply the training plans.

Derogations : None

Finalisation criteria : 1 - The training plans have been updated and a training package has been developed.
 2 - All personnel affected by the changes to the surveillance ground infrastructure have been trained.

ITY-SPI-USE01	Carriage and operation of Mode S Elementary Surveillance avionics by aircraft with an individual certificate of airworthiness first issued on or after 8 January 2015	From:	By:
		08/01/2015	

Action by : **Airspace Users**

Description & purpose : Equip with secondary surveillance radar transponders having the Mode S Elementary Surveillance capability, as set out in Part A of Annex II of Regulation (EU) No 1207/2011 (SPI-IR) the aircraft operating as GAT in accordance with IFR rules with an individual certificate of airworthiness first issued on or after 8 January 2015.

Derogations : None

Supporting material(s) : EUROCAE - ED-82A - Minimum Operational Performance Specification for Mode S Aircraft Data Link Processors 11/1999
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-73E - Minimum Operational Performance Specification for Secondary Surveillance Radar Mode S Transponders 05/2011
 Url : <http://boutique.eurocae.net/catalog/index.php>
 ICAO - Doc 9871 - Technical Provisions for Mode S Services and Extended Squitter - Advanced Edition / 04/2012
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 EASA - Certification Specifications for Airborne Communications Navigation and Surveillance - Initial Issue / 12/2013
 Url : <http://easa.europa.eu/document-library/certification-specifications/cs-acns-initial-issue>

Finalisation criteria : 1 - Aircraft have been equipped with Mode S Elementary Surveillance equipment and certified as appropriate.
 2 - Aircraft have obtained airworthiness approval.

ITY-SPI-USE02	Carriage and operation of ADS-B Out avionics by aircraft with an individual certificate of airworthiness first issued on or after 8 June 2016	From:	By:
		08/06/2016	

Action by : **Airspace Users**

ITY-SPI	Surveillance performance and interoperability
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Description & purpose : Equip with secondary surveillance radar transponders having the ADS-B Out on 1090 Extended Squitter capability, as set out in Part B of Annex II of the SPI-IR, the aircraft with a maximum certified take-off mass exceeding 5 700 kg or having a maximum cruising true airspeed capability greater than 250 knots, operating as GAT in accordance with IFR rules with an individual certificate of airworthiness first issued on or after 8 June 2016.

Derogations : None

Supporting material(s) : EASA - Certification Specifications for Airborne Communications Navigation and Surveillance - Initial Issue / 12/2013
 Url : <http://easa.europa.eu/document-library/certification-specifications/cs-acns-initial-issue>
 EUROCAE - ED-102A - Minimum Operational Performance Specification for 1090 MHz Extended Squitter Automatic Dependant Surveillance - Broadcast (ADS-B) & Traffic Information Services – Broadcast (TIS-B) with Corrigendum 1 01/2012
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-73E - Minimum Operational Performance Specification for Secondary Surveillance Radar Mode S Transponders 05/2011
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-126 - Safety, Performance and Interoperability Requirements Document for ADS-B-NRA Application 12/2006
 Url : <http://boutique.eurocae.net/catalog/index.php>
 EUROCAE - ED-161 - Safety, Performance and Interoperability Requirements Document for ADS-B-RAD Application 09/2009
 Url : <http://boutique.eurocae.net/catalog/index.php>
 ICAO - Doc 9871 - Technical Provisions for Mode S Services and Extended Squitter - Advanced Edition / 04/2012
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

Finalisation criteria : 1 - Aircraft have been equipped with ADS-B Out on 1090 Extended Squitter equipment certified as appropriate.
 2 - Aircraft have obtained airworthiness approval.

ITY-SPI-USE03	Carriage and operation of Mode S Enhanced Surveillance avionics by aircraft with an individual certificate of airworthiness first issued on or after 8 June 2016	From:	By:
		08/06/2016	

Action by : Airspace Users

Description & purpose : Equip with secondary surveillance radar transponders having the Mode S Enhanced Surveillance capability, as set out in Part C of Annex II of the SPI-IR the fixed wing aircraft with a maximum certified take-off mass exceeding 5 700 kg or having a maximum cruising true airspeed capability greater than 250 knots operating as GAT in accordance with IFR rules with an individual certificate of airworthiness first issued on or after 8 June 2016.

Derogations : None

Supporting material(s) : EASA - Certification Specifications for Airborne Communications Navigation and Surveillance - Initial Issue / 12/2013
 Url : <http://easa.europa.eu/document-library/certification-specifications/cs-acns-initial-issue>
 EUROCAE - ED-73E - Minimum Operational Performance Specification for Secondary Surveillance Radar Mode S Transponders 05/2011
 Url : <http://boutique.eurocae.net/catalog/index.php>
 ICAO - Doc 9871 - Technical Provisions for Mode S Services and Extended Squitter - Advanced Edition / 04/2012
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

Finalisation criteria : 1 - Aircraft have been equipped with Mode S Enhanced Surveillance equipment certified as appropriate.
 2 - Aircraft have obtained airworthiness approval.

ITY-SPI-USE04	Carriage and operation of Mode S Elementary Surveillance avionics by aircraft with an individual certificate of airworthiness first issued before 8 January 2015	From:	By:
			07/12/2017

Action by : Airspace Users

Description & purpose : Equip with secondary surveillance radar transponders having the Mode S Elementary Surveillance capability, as set out in Part A of Annex II of the SPI-IR the aircraft operating as GAT in accordance with IFR rules with an individual certificate of airworthiness first issued before 8 January 2015.

Derogations : None

Supporting material(s) : EUROCAE - ED-73E - Minimum Operational Performance Specification for Secondary Surveillance Radar Mode S Transponders 05/2011
 Url : <http://boutique.eurocae.net/catalog/index.php>
 ICAO - Doc 9871 - Technical Provisions for Mode S Services and Extended Squitter - Advanced Edition / 04/2012
 Url : <http://www.icao.int/publications/Pages/catalogue.aspx>
 EASA - Certification Specifications for Airborne Communications Navigation and Surveillance - Initial Issue / 12/2013
 Url : <http://easa.europa.eu/document-library/certification-specifications/cs-acns-initial-issue>

ITY-SPI	Surveillance performance and interoperability
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Finalisation criteria : 1 - Aircraft have been equipped with Mode S Elementary Surveillance equipment certified as appropriate.
2 - Aircraft have obtained airworthiness approval.

ITY-SPI-USE05	Carriage and operation of ADS-B Out avionics by aircraft with an individual certificate of airworthiness first issued before 8 June 2016	From:	By:
			07/06/2020

Action by : **Airspace Users**

Description & purpose : Equip with secondary surveillance radar transponders having the ADS-B Out on 1090 Extended Squitter capability, as set out in Part B of Annex II of the SPI-IR, the aircraft with a maximum certified take-off mass exceeding 5 700 kg or having a maximum cruising true airspeed capability greater than 250 knots, operating as GAT in accordance with IFR rules with an individual certificate of airworthiness first issued before 8 June 2016.

Derogations : None

Supporting material(s) : EASA - Certification Specifications for Airborne Communications Navigation and Surveillance - Initial Issue / 12/2013

Url : <http://easa.europa.eu/document-library/certification-specifications/cs-acns-initial-issue>

EUROCAE - ED-102A - Minimum Operational Performance Specification for 1090 MHz Extended Squitter Automatic Dependant Surveillance - Broadcast (ADS-B) & Traffic Information Services – Broadcast (TIS-B) with Corrigendum 1 01/2012

Url : <http://boutique.eurocae.net/catalog/index.php>

EUROCAE - ED-73E - Minimum Operational Performance Specification for Secondary Surveillance Radar Mode S Transponders 05/2011

Url : <http://boutique.eurocae.net/catalog/index.php>

EUROCAE - ED-126 - Safety, Performance and Interoperability Requirements Document for ADS-B-NRA Application 12/2006

Url : <http://boutique.eurocae.net/catalog/index.php>

EUROCAE - ED-161 - Safety, Performance and Interoperability Requirements Document for ADS-B-RAD Application 09/2009

Url : <http://boutique.eurocae.net/catalog/index.php>

ICAO - Doc 9871 - Technical Provisions for Mode S Services and Extended Squitter - Advanced Edition / 04/2012

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

Finalisation criteria : 1 - Aircraft have been equipped with ADS-B Out on 1090 Extended Squitter equipment and certified as appropriate.
2 - Aircraft have obtained airworthiness approval.

ITY-SPI-USE06	Carriage and operation of Mode S Enhanced Surveillance avionics by aircraft with an individual certificate of airworthiness first issued before 8 June 2016	From:	By:
			07/06/2020

Action by : **Airspace Users**

Description & purpose : Equip with secondary surveillance radar transponders having the Mode S Enhanced Surveillance capability, as set out in Part C of Annex II of the SPI-IR the fixed wing aircraft with a maximum certified take-off mass exceeding 5 700 kg or having a maximum cruising true airspeed capability greater than 250 knots operating as GAT in accordance with IFR rules with an individual certificate of airworthiness first issued before 8 June 2016.

Derogations : Aircraft of specific types with a first certificate of airworthiness issued before 8 June 2016 that have a maximum take-off mass exceeding 5 700 kg or a maximum cruising true airspeed greater than 250 knots that do not have the complete set of parameters detailed in Part C of Annex II available on a digital bus on-board the aircraft may be exempted by the European Commission from complying with the requirements of point (c) of Article 5(5) of the SPI-IR.

Supporting material(s) : EASA - Certification Specifications for Airborne Communications Navigation and Surveillance - Initial Issue / 12/2013

Url : <http://easa.europa.eu/document-library/certification-specifications/cs-acns-initial-issue>

EUROCAE - ED-73E - Minimum Operational Performance Specification for Secondary Surveillance Radar Mode S Transponders 05/2011

Url : <http://boutique.eurocae.net/catalog/index.php>

ICAO - Doc 9871 - Technical Provisions for Mode S Services and Extended Squitter - Advanced Edition / 04/2012

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

Finalisation criteria : 1 - Aircraft have been equipped with Mode S Enhanced Surveillance equipment certified as appropriate.
2 - Aircraft have obtained airworthiness approval.

ITY-SPI-USE07	Ensure the training of personnel	From:	By:
			07/06/2020

Action by : **Airspace Users**

ITY-SPI	Surveillance performance and interoperability
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Description & purpose : Ensure the training of all their personnel affected by changes introduced by compliance to SPI-IR.

The tasks to be done are as follows:

- Develop a training package (material);
- Update the training plans;
- Determine staff population to be trained;
- Apply the training plans.

Derogations : None

Finalisation criteria :
 1 - The training plans have been updated and a training package has been developed.
 2 - All personnel affected by the changes to the surveillance infrastructure have been trained.

PCP	Active						ECAC
NAV03	Implementation of P-RNAV						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

This objective is functionally related to ATM Functionality 1 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates.

Implement P-RNAV procedures to capitalise on the performance benefits offered by approved aircraft. This is an interim objective aimed towards establishing a global RNP-RNAV environment, and individual States, airports and aircraft operators will need to evaluate the business need for P-RNAV procedures according to local circumstances.

(1). From 10/2005 all new RNAV implementation should be in accordance with the RNAV Integrated Initiative. The business case for RNAV procedures will need to be determined locally. This objective does not make RNAV mandatory in terminal airspace, however where RNAV procedures are provided, they shall be P-RNAV unless they are above MRA/MSA and designed in accordance with en-route design principles in respect of maximum turn angle and minimum straight legs and the minimum number of waypoints.

Note: (2). Procedures will need to be designed in accordance with EUROCONTROL guidance material and JAA TGL10 as appropriate.

Note: (3). This is an interim step on the path towards a global RNAV environment based on the Performance Based Navigation concept and is aimed at providing short term operational benefits to aircraft equipped with appropriately approved RNAV equipment. No specific or co-ordinated time for the change is planned and it is expected that airports will implement RNAV procedures in accordance with the findings of local business cases.

Note: (4). Aircraft operators who wish to equip their aircraft to derive benefit from the P-RNAV procedures are encouraged to consider the business case for fitting RNP equipment that will enable them to eventually proceed to the RNP environment.

Note: (5). The continuation of this ESSIP objective will be re-assessed on publication of the PBN Implementing Rule targeting RNP implementation in the 2020 time frame. This IR is currently under development.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States except: Slovak Republic

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/01/2001

Full operational capability

31/12/2023

Applicability Area

Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -							
Enablers -	CTE-N08							
OI step -	[AOM-0601]-Terminal Airspace Organisation Adapted through Use of Best Practice							
Enablers -	A/C-71	PRO-021						
OI step -	[AOM-0602]-Enhanced terminal operations with APV using Barometric VNAV							
Enablers -	A/C-04	A/C-05a NAV10	A/C-71	CTE-N06 NAV10	MIL-STD-02	PRO-AC-05 a		
Legend:	WXYZ-001	Covered by SLoA(s) in this objective		WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan

Applicable legislation

NAV03	Implementation of P-RNAV
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Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
NAV03-REG01	Ensure suppliers of navigation databases are accredited	DELETED	
NAV03-REG02	Ensure quality of published Navigation Data	DELETED	
NAV03-ASP01	Develop and implement RNAV arrival and departure procedures for P-RNAV approved aircraft	01/01/2001	31/12/2023
NAV03-ASP02	Provide appropriate terrestrial navigation infrastructure to support RNAV operations	01/01/2001	31/12/2023
NAV03-ASP03	Train air traffic controllers in RNAV procedures	01/01/2003	31/12/2023
NAV03-ASP04	Train procedure designers in RNAV capabilities	FINALISED	
NAV03-ASP05	Implement P-RNAV routes where identified as providing benefit	01/01/2001	31/12/2023
NAV03-ASP06	Publish in AIPs all co-ordinate data in WGS-84 meeting the quality requirements set out in ICAO Annex 15	FINALISED	
NAV03-ASP07	Define all RNAV procedures to be for P-RNAV approved aircraft and designed in accordance with the EUROCONTROL guidelines and ICAO PANS OPS	DELETED	
NAV03-ASP08	Adapt ATS automated systems to ensure the availability of information regarding aircraft RNAV equipage for systematic display to relevant control positions	FINALISED	
NAV03-ASP09	Implement adaptations to ATS systems to permit the display on flight strips (and extended track labels) radar labels and/or radar position symbols, of aircraft RNAV equipage	DELETED	
NAV03-ASP10	Recommend to adapt ATS radar display systems to permit the display, on radar labels and/or radar position symbols, of aircraft RNAV equipage. Such display should be automatic. Manual updates should be possible	DELETED	
NAV03-ASP11	Develop a Local P-RNAV Safety Case	01/01/2001	31/12/2023
NAV03-USE01	Install appropriate RNAV equipment	01/01/2001	31/12/2023
NAV03-USE02	Train aircrews in RNAV TMA procedures	01/01/2001	31/12/2023
NAV03-USE03	Ensure correctness of data before use	FINALISED	
NAV03-IND01	Ensure that data meets specification of ED77 and is managed according to ED76	FINALISED	
NAV03-IND02	Ensure that the navigation database is not corrupted when installed	FINALISED	
NAV03-AGY01	Identify applicability of P-RNAV routes to en-route applications	FINALISED	
NAV03-AGY02	Investigate the requirements for additional R/T phraseology and flight planning methodology for RNAV operations in terminal airspace and develop as necessary	FINALISED	
NAV03-AGY03	Produce and maintain guidelines for the application and design of P-RNAV procedures	FINALISED	
NAV03-AGY04	Adapt OLDI Standard to ensure the automatic transfer of the FPL Item 10 Letters "S", "R", and "P"	FINALISED	
NAV03-AGY05	Develop Outline for TMA RNAV training material for ATC	FINALISED	

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety : Increase safety of flight operations by increased situational awareness and indirect benefit to both ATC and pilot through reduction of workload during RNAV operations.

Capacity : Indirect benefit by enabling optimisation of En-Route and terminal airspace.

NAV03	Implementation of P-RNAV
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Cost effectiveness :	Fuel cost reduction through optimised routes and TMA procedures.
Environment :	Emissions and noise nuisance reduced by use of optimal flight procedures and routings.
Security :	N/A

Detailed SLoA descriptions

NAV03-ASP01	Develop and implement RNAV arrival and departure procedures for P-RNAV approved aircraft	From:	By:
		01/01/2001	31/12/2023

Action by :	ANS Providers
Description & purpose :	Design, develop and implement RNAV arrival and departure procedures, and continuous descent approaches and declare these in the appropriate AIPs.
Derogations :	None
Supporting material(s) :	ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Air Navigation Services - Aircraft Operations (PANS-OPS) Software - Edition 5 / 04/2012 Url : http://www.icao.int/publications/Pages/catalogue.aspx EUROCONTROL - Airspace Concept Handbook for the Implementation of Performance Based Navigation (PBN) - Edition 2.0 Url : http://www.eurocontrol.int/articles/performance-based-navigation-pbn-applications ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 7030 - Regional supplementary Procedures - Edition 5 / 07/2011 Url : http://www.icao.int/publications/Pages/catalogue.aspx
Finalisation criteria :	1 - RNAV arrival and departures have been implemented in accordance with EUROCONTROL guidance material and JAA TGL 10 and declared in national AIP.

NAV03-ASP02	Provide appropriate terrestrial navigation infrastructure to support RNAV operations	From:	By:
		01/01/2001	31/12/2023

Action by :	ANS Providers
Description & purpose :	Implement P-RNAV using basic GNSS (i.e. standalone GPS without ground or space based augmentations with RAIM and possibly also with Inertial Augmentation) or DME/DME modes of navigation. However, RNAV procedures are dependent upon sufficient DME transponders being distributed geographically to allow for DME/DME navigation in the absence of onboard GNSS equipment or GNSS failure. This requirement may mean new DME stations and/or the relocation of existing stations. This SLoA is a pre-requisite to NAV03-ASP01.
Derogations :	None
Supporting material(s) :	EUROCONTROL - Distance Measuring Equipment Tracer (DEMETER) Tool - Version 1.0.4 / 01/2012 Url : http://www.eurocontrol.int/publications/demeter-distance-measuring-equipment-tracer EUROCONTROL - GUID-0114 - Guidelines for P-RNAV Infrastructure Assessment - Edition V1.2 / 04/2008 Url : http://www.eurocontrol.int/articles/performance-based-navigation-pbn-applications ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : http://www.icao.int/publications/Pages/catalogue.aspx [CTE-N08]-DME Ground Infrastructure optimisation
ATM Master Plan relationship :	
Finalisation criteria :	1 - Infrastructure has been assessed and modified if required to meet the requirements for DME/DME procedures.

NAV03-ASP03	Train air traffic controllers in RNAV procedures	From:	By:
		01/01/2003	31/12/2023

Action by :	ANS Providers
Description & purpose :	Train ATCOs in RNAV capabilities and new methods of managing TMA traffic to ensure safe and expeditious operations. RNAV procedures could reduce the need for radar vectors up to the FAP. This SLoA is a pre-requisite to NAV03-ASP01.
Derogations :	None
Supporting material(s) :	ICAO - Doc 4444 - Air Traffic Management - Edition 15 / 11/2010 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Air Navigation Services - Aircraft Operations (PANS-OPS) Software - Edition 5 / 04/2012 Url : http://www.icao.int/publications/Pages/catalogue.aspx ICAO - Doc 7030 - Regional supplementary Procedures - Edition 5 / 07/2011 Url : http://www.icao.int/publications/Pages/catalogue.aspx
Finalisation criteria :	1 - The necessary training has been given to controllers responsible for the operation of RNAV terminal procedures.

NAV03	Implementation of P-RNAV		
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NAV03-ASP05	Implement P-RNAV routes where identified as providing benefit	From:	By:
		01/01/2001	31/12/2023

Action by : **ANS Providers**

Description & purpose : Implement P-RNAV routes where such implementation can be demonstrated to provide additional capacity and where the implementation of such routes can be identified as operationally acceptable.

Derogations : None

Supporting material(s) : EUROCONTROL - Airspace Concept Handbook for the Implementation of Performance Based Navigation (PBN) - Edition 2.0

Url : <http://www.eurocontrol.int/articles/performance-based-navigation-pbn-applications>

JAA - TGL 10 Revision 1 - Airworthiness and Operational Approval for Precision RNAV Operations in Designated European Airspace 02/2005

Url : <https://www.eurocontrol.int/sites/default/files/content/documents/navigation/tgl-10-jaa.pdf>

Finalisation criteria : 1 - P-RNAV routes have been implemented in ECAC states in accordance with criteria developed in guidance material of the implementation of P-RNAV routes, and in use.

NAV03-ASP11	Develop a Local P-RNAV Safety Case	From:	By:
		01/01/2001	31/12/2023

Action by : **ANS Providers**

Description & purpose : Demonstrate that the implementation of the new P-RNAV procedures designed is safe. The Safety Case shall comply with the ESARRs and shall take into account the national requirements established by the Regulatory Authorities. The P-RNAV Safety Argument could be used as a basis for the development of the Local P-RNAV Safety Case.

Derogations : None

Supporting material(s) : EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006

Url : <http://www.eurocontrol.int/articles/safety-assessment-methodology-sam>

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 - Safety Argument for Precision RNAV in Terminal Airspace - Edition 3.2

Url : <http://www.skybrary.aero/bookshelf/books/990.pdf>

Finalisation criteria : 1 - Local P-RNAV Safety Case has been finalised and approved by the National Supervisory Authority.

NAV03-USE01	Install appropriate RNAV equipment	From:	By:
		01/01/2001	31/12/2023

Action by : **Airspace Users**

Description & purpose : Install equipment meeting TGL 10. Where existing RNAV/FMS equipment meets only B-RNAV requirements, there will be a need to update or replace the systems. Many aircraft are already equipped with RNAV/FMS meeting TGL 10. For these it will be necessary to gain regulatory approval which will include operational approval for the application of the system on P-RNAV routes.

Derogations : None

Supporting material(s) : ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Air Navigation Services - Aircraft Operations (PANS-OPS) Software - Edition 5 / 04/2012

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

JAA - TGL 10 Revision 1 - Airworthiness and Operational Approval for Precision RNAV Operations in Designated European Airspace 02/2005

Url : <https://www.eurocontrol.int/sites/default/files/content/documents/navigation/tgl-10-jaa.pdf>

ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

ATM Master Plan relationship : [\[A/C-04\]-Flight management and guidance for improved lateral navigation in approach via RNP](#)

[\[A/C-71\]-Aircraft-based augmentation system \(ABAS\)](#)

Finalisation criteria : 1 - All civil transport aircraft operating in ECAC states are capable of P-RNAV operations.

NAV03-USE02	Train aircrews in RNAV TMA procedures	From:	By:
		01/01/2001	31/12/2023

Action by : **Airspace Users**

Description & purpose : Train aircrew in the application of RNAV TMA procedures.

Derogations : None

Supporting material(s) : JAA - TGL 10 Revision 1 - Airworthiness and Operational Approval for Precision RNAV Operations in Designated European Airspace 02/2005

Url : <https://www.eurocontrol.int/sites/default/files/content/documents/navigation/tgl-10-jaa.pdf>

NAV03	Implementation of P-RNAV
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Finalisation criteria :

- 1 - Training manuals have been updated to include RNAV TMA procedures.
- 2 - The aircrew has been trained accordingly

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PCP	Active					ECAC	
NAV10	Implement APV procedures						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

This objective is functionally related to ATM Functionality 1 of Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project, but it is not bound to its deployment target dates.

Implement RNAV(GNSS) APV procedures based on APV/Baro and/or APV/SBAS. The intention is to transition from conventional NPA to APV procedures.

The primary objective to enhance safety but there are potential benefits in terms of reduced minima and better access to airports without precision approach and landing capabilities. This objective is in line with the ICAO 37th Assembly resolution which recommends States to implement APV procedures at all IFR runways by 2016. It also supports the Performance Based Navigation implementation and harmonisation strategy of the ICAO European Region.

The implementation of APV/SBAS procedures may be restricted by the coverage limitation of EGNOS satellite signal within the concerned airspace.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/06/2011

Applicability Area

Full operational capability

31/12/2016

Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -							
Enablers -	CTE-N06a	CTE-N06b						

OI step -	[AOM-0602]-Enhanced terminal operations with APV using Barometric VNAV							
Enablers -	A/C-04 NAV03	A/C-05a	A/C-71 NAV03	CTE-N06	MIL-STD-02	PRO-AC-05 a		

OI step -	[AOM-0604]-Enhanced terminal operations with LPV using SBAS							
Enablers -	A/C-01	A/C-06	CTE-N06	MIL-STD-02	PRO-AC-06			

Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler	WXYZ-003	Not covered in the ESSIP Plan
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Applicable legislation

Council Decision of 30 March 2009 endorsing the European Air traffic Management Master Plan of the Single European Sky ATM Research (SESAR) project (2009/320/EC)

Commission Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

Stakeholder Lines of Action (SLoA)

SLoA ref.	Title	From	By
NAV10-REG01	Apply EASA material to local national regulatory activities	01/06/2010	30/04/2016
NAV10-ASP01	Design and Publish APV/Baro and/or APV/SBAS procedures	01/06/2008	31/12/2016

NAV10	Implement APV procedures		
NAV10-ASP02	Provide an approved SBAS Service to support APV/SBAS and declare the Service area	FINALISED	
NAV10-ASP03	Develop National safety case for APV/Baro operations and/or APV/SBAS operations	01/01/2009	30/04/2015
NAV10-ASP04	Publish in AIPs all coordinates data in WGS-84 in accordance with ICAO Annex 15 requirements and Article 14 of Regulation (EU) No 73/2010	01/01/2009	31/12/2016
NAV10-USE01	Equip aircraft with systems approved for APV/Baro and/or APV/SBAS	01/04/2006	31/12/2016
NAV10-USE02	Get airworthiness certification and operational approval	01/04/2006	31/12/2016

Description of finalised SLOAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Reduction in CFIT occurrences. Improved pilot situation awareness and reduced crew workload.
Capacity :	Provides a procedure with potential to enhance capacity due to lower minima than can be achieved through conventional NPA.
Cost effectiveness :	Improved operation for runways with only conventional NPA fall back during PA system outages
Environment :	Emissions and noise nuisance reduced by use of optimal flight procedures and routings and the elimination of step-down approach procedures.
Security :	N/A

Detailed SloA descriptions

NAV10-REG01	Apply EASA material to local national regulatory activities	From:	By:
		01/06/2010	30/04/2016

Action by :	State Authorities
Description & purpose :	Publish national regulatory material for APV procedures based on Airworthiness Approval and Operational Criteria for RNP APPROACH (RNP APCH) Operations including APV Baro-VNAV Operations (EASA AMC 20-27) and Airworthiness approval and Operational criteria for RNAV GNSS approach operation to LPV minima using SBAS (EASA AMC 20-28).
Derogations :	None
Supporting material(s) :	EASA - AMC 20-27 - Airworthiness Approval and Operational Criteria for RNP APPROACH (RNP APCH) Operations Including APV BARO- NAV Operations - ED Decision 2009/019/R / 12/2009 Url : https://www.easa.europa.eu/agency-measures/docs/agency-decisions/2009/2009-019-R/Annex%20III%20-%20AMC%2020-27.pdf EASA - AMC 20-28 - Airworthiness Approval and Operational Criteria related to Area Navigation for Global Navigation Satellite System approach operation to Localiser Performance with Vertical guidance minima using Satellite Based Augmentation System ED Decision 2009/014/R 09/2012 Url : http://www.easa.europa.eu/system/files/dfu/Annex II - AMC 20-28.pdf
Finalisation criteria :	1 - National regulatory material for APV procedures based on EASA AMC 20-27 and EASA AMC 20-28 has been published.

NAV10-ASP01	Design and Publish APV/Baro and/or APV/SBAS procedures	From:	By:
		01/06/2008	31/12/2016

Action by :	ANS Providers
Description & purpose :	Develop APV procedures at all instrument runway ends, either as the primary approach or as a back-up for precision approaches. The APV level to be implemented at different locations depends upon local requirements. This action includes the following tasks: - Identify runways where APV should be introduced; - Design APV procedures; - Publish APV procedures in national AIPs.
Derogations :	None
Supporting material(s) :	ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Air Navigation Services - Aircraft Operations (PANS-OPS) Software - Edition 5 / 04/2012 Url : http://www.icao.int/publications/Pages/catalogue.aspx
Finalisation criteria :	1 - APV/Baro and/or APV/SBAS Procedures have been implemented in accordance with guidance material and published in the National AIP, and are in use.

NAV10-ASP03	Develop National safety case for APV/Baro operations and/or APV/SBAS operations	From:	By:
		01/01/2009	30/04/2015

NAV10	Implement APV procedures
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Action by :	ANS Providers
Description & purpose :	<p>Develop a generic safety case for APV/Baro and/or APV/SBAS procedures developed upon the EASA AMC for RNP APCH.</p> <p>Identify and develop a means for mitigation of any issues requiring remedial action to ensure safety targets are met.</p> <p>The material will be developed in a manner, and approval sought through the appropriate bodies, that will enable cross reference to be made by States in their implementation of APV.</p> <p>Get an operational approval for APV/Baro and/or APV/SBAS operations.</p>
Derogations :	None
Supporting material(s) :	<p>EUROCONTROL - EAM 4 - ESARR 4 - Risk Assessment and Mitigation in ATM - Edition 1.0 / 04/2001</p> <p>Url : http://www.eurocontrol.int/articles/esarr-4-risk-assessment-and-mitigation-atm</p> <p>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</p> <p>Url : http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:271:0023:0041:EN:PDF</p> <p>EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006</p> <p>Url : http://www.eurocontrol.int/articles/safety-assessment-methodology-sam</p>
Finalisation criteria :	1 - National Safety case for APV/Baro and/or APV/SBAS has been produced and an operational approval was issued by the regulator.

NAV10-ASP04	Publish in AIPs all coordinates data in WGS-84 in accordance with ICAO Annex 15 requirements and Article 14 of Regulation (EU) No 73/2010	From:	By:
		01/01/2009	31/12/2016

Action by :	ANS Providers
Description & purpose :	It is an essential requirement for RNAV procedures that all coordinates data published in AIPs, e.g. Runway Thresholds, Navigation Aids, Waypoints, etc, are surveyed with reference to the WGS84 standard. Following survey which must be undertaken in accordance with the Eurocontrol standard for WGS 84 survey (Doc 006), the data must be maintained with adequate integrity.
Derogations :	None
Supporting material(s) :	<p>EC - Regulation (EU) No 73/2010-(OJ L 23, 27.1.2010, p.6) - Regulation (EU) No 73/2010 of 26 January 2010 laying down requirements on the quality of aeronautical data and aeronautical information 01/2010</p> <p>Url : http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:023:0006:0027:EN:PDF</p> <p>ICAO - Doc 9674 - World Geodetic System - 1984 (WGS-84) Manual - Edition 2 / 12/2002</p> <p>Url : http://www.icao.int/publications/Pages/catalogue.aspx</p>
Finalisation criteria :	1 - AIP Updated accordingly

NAV10-USE01	Equip aircraft with systems approved for APV/Baro and/or APV/SBAS	From:	By:
		01/04/2006	31/12/2016

Action by :	Airspace Users
Description & purpose :	<p>Fit the aircraft with suitably approved equipment (Stand alone or integrated with existing FMS) as follows:</p> <ul style="list-style-type: none"> - APV/Baro equipment compliant to AMC 20-27; - APV/SBAS SBAS compliant to AMC 20-28. <p>For new or modified aircraft, the Aircraft Flight Manual (AFM) or the Pilot's Operating Handbook (POH), whichever is applicable, should be updated according to AMC 20-27 and AMC 20-28.</p>
Derogations :	None
Supporting material(s) :	<p>EASA - AMC 20-28 - Airworthiness Approval and Operational Criteria related to Area Navigation for Global Navigation Satellite System approach operation to Localiser Performance with Vertical guidance minima using Satellite Based Augmentation System ED Decision 2009/014/R 09/2012</p> <p>Url : http://www.easa.europa.eu/system/files/dfu/Annex II - AMC 20-28.pdf</p> <p>EASA - AMC 20-27 - Airworthiness Approval and Operational Criteria for RNP APPROACH (RNP APCH) Operations Including APV BARO- NAV Operations - ED Decision 2009/019/R / 12/2009</p> <p>Url : https://www.easa.europa.eu/agency-measures/docs/agency-decisions/2009/2009-019-R/Annex%20III%20-%20AMC%2020-27.pdf</p> <p>FAA - AC 20-138C - Airworthiness Approval of Positioning and Navigation Systems 05/2012</p> <p>Url : http://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.list/parentTopicID/101</p> <p>FAA - AC 90-105 - Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System 01/2009</p> <p>Url : http://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.list/parentTopicID/128</p>

NAV10	Implement APV procedures
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ATM Master Plan relationship :

[\[A/C-05a\]-APV Barometric VNAV](#)
[\[CTE-N06a\]-EGNOS V2.4.X](#)
[\[CTE-N06b\]-EGNOS V3](#)
[\[CTE-N06\]-Space Based Augmentation System \(SBAS\)](#)

Finalisation criteria :

1 - Aircraft have been fitted with suitable APV/Baro equipment compliant to AMC 20-27 or APV/SBAS compliant to AMC 20-28.
2 - The AFM or the POH, whichever is applicable, have been updated according to AMC 20-27 and AMC 20-28.

NAV10-USE02	Get airworthiness certification and operational approval	From:	By:
		01/04/2006	31/12/2016

Action by :

Airspace Users

Description & purpose :

Apply for approval against EASA AMC 20-27 and 20-28.

The applicant needs to submit, to the competent National Authorities, a compliance statement which shows how the criteria of the AMC 20-27 and 20-28 have been satisfied.

Derogations :

None

Supporting material(s) :

ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Edition 5 / 11/2011

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

EASA - AMC 20-27 - Airworthiness Approval and Operational Criteria for RNP APPROACH (RNP APCH) Operations Including APV BARO- NAV Operations - ED Decision 2009/019/R / 12/2009

Url :

<https://www.easa.europa.eu/agency-measures/docs/agency-decisions/2009/2009-019-R/Annex%20III%20-%20AMC%2020-27.pdf>

EASA - AMC 20-28 - Airworthiness Approval and Operational Criteria related to Area Navigation for Global Navigation Satellite System approach operation to Localiser Performance with Vertical guidance minima using Satellite Based Augmentation System ED Decision 2009/014/R 09/2012

Url : <http://www.easa.europa.eu/system/files/dfu/Annex II - AMC 20-28.pdf>

ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013

Url : <http://www.icao.int/publications/Pages/catalogue.aspx>

Finalisation criteria :

1 - The airworthiness and operational approval has been granted by the competent National Authorities to the operator.

SESAR		Active					ECAC	
SAF10		Implement measures to reduce the risk to aircraft operations caused by airspace infringements						
REG	ASP	MIL	APO	USE	INT	IND	NM	

Subject matter and scope

Involved aviation stakeholders should implement measures to reduce the risk to aircraft operations caused by airspace infringements. Airspace infringement occurrences include: unauthorised penetration of controlled airspace (ICAO classes A to E), restricted airspace (Temporary Reserved Airspaces, Prohibited, Restricted and Danger Areas) and Aerodrome Traffic Zones.

This work is conducted under the auspices of the PC-approved EUROCONTROL European Safety Programme for ATM Plus (ESP+) which seeks to facilitate safety management support in the deployments required by ATM Master Plan IP1, and to ensure that safety approaches are formalised and fully prepared to accommodate future ATM systems. As such, implementation of SAF10 acts as a bridge between current ATM operations and those foreseen from 2015.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States except: France

Timescales:

	From:	By:	Applicable to:
Initial operational capability	01/06/2008		Applicability Area
Full operational capability		31/12/2011	Applicability Area

References

European ATM Master Plan relationship

OI step - [CM-0801]-Ground Based Safety Nets (TMA, En Route)									
	Enablers -	CTE-S01 AOP04.1	CTE-S01a AOP04.1	ER APP ATC 133 ATC02.2, ATC02.5, ATC02.6, ATC02.7	PRO-059	PRO-219			
Legend:	WXYZ-001	Covered by SLoA(s) in this objective		WXYZ-002 zzz	Covered by SLoA(s) in another objective ESSIP objective covering the enabler		WXYZ-003	Not covered in the ESSIP Plan	

Applicable legislation

-none-

Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
SAF10-REG01	Promulgate and verify the implementation of the European Action Plan - Airspace Infringement Risk Reduction	DELETED	
SAF10-REG02	Implement the appropriate parts of the European Action Plan - Airspace Infringement Risk Reduction	01/06/2008	31/12/2011
SAF10-REG03	Monitor the implementation of planned airspace infringement risk reduction measures	01/06/2008	31/12/2011
SAF10-ASP01	Implement the appropriate parts of the European Action Plan - Airspace Infringement Risk Reduction	01/01/2006	31/12/2011
SAF10-MIL01	Implement, as necessary, the appropriate parts of the European Action Plan - Airspace Infringement Risk Reduction	01/06/2008	31/12/2011
SAF10-USE01	Implement the appropriate parts of the European Action Plan - Airspace Infringement Risk Reduction	01/06/2008	31/12/2011
SAF10-AGY01	Develop a European action plan for reducing the risk of airspace infringements	FINALISED	

SAF10	Implement measures to reduce the risk to aircraft operations caused by airspace infringements
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SAF10-AGY02 Implement the appropriate parts of the European Action Plan - Airspace Infringement Risk Reduction 01/06/2008 31/12/2011

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety : Significant due to the reduction of a major key risk to aircraft operations.
Capacity : Increased through reduction in controller workload caused by airspace infringements.
Cost effectiveness : Significant:
- Significant reduction of the risk of accident/serious incident;
- Reduced fuel burn caused by arrivals delay or hold;
- Reduced negative financial impact on airport and aircraft operators caused by departure and arrival delays.
Environment : Moderate resulting from reduction in extra fuel burn and noise caused by flights' deviation from arrival route, delays or holdings.
Security : N/A

Detailed SloA descriptions

SAF10-REG02	Implement the appropriate parts of the European Action Plan - Airspace Infringement Risk Reduction	From:	By:
		01/06/2008	31/12/2011

Action by : **State Authorities**
Description & purpose : Verify that ANSPs and national airlines adapt according to the local needs and comply with the respective measures of the European Action Plan- Airspace Infringement Risk Reduction.
Derogations : None
Supporting material(s) : EUROCONTROL - European Action Plan for Airspace Infringement Risk Reduction and Guidance Material
Url :
<http://www.eurocontrol.int/sites/default/files/content/documents/nm/safety/european-action-plan-for-airsapce-infringement-risk-reduction.pdf>
Finalisation criteria :
1 - The applicable measures of the Action plan have been implemented.
2 - Implementation is reported through the appropriate mechanism.

SAF10-REG03	Monitor the implementation of planned airspace infringement risk reduction measures	From:	By:
		01/06/2008	31/12/2011

Action by : **State Authorities**
Description & purpose : Ensure that respective risk mitigation measures are being implemented by the concerned stakeholders in line with the agreed plan.
Appropriate follow-up and corrective actions might be identified if found necessary.
Derogations : None
Supporting material(s) : EUROCONTROL - European Action Plan for Airspace Infringement Risk Reduction and Guidance Material
Url :
<http://www.eurocontrol.int/sites/default/files/content/documents/nm/safety/european-action-plan-for-airsapce-infringement-risk-reduction.pdf>
Finalisation criteria :
1 - Established monitoring arrangements.
2 - Monitoring reports published, including corrective actions if applicable.

SAF10-ASP01	Implement the appropriate parts of the European Action Plan - Airspace Infringement Risk Reduction	From:	By:
		01/01/2006	31/12/2011

Action by : **ANS Providers**
Description & purpose : Adapt according to the local operational environment and implement the respective measures of European Action Plan - Airspace Infringement Risk Reduction
Derogations : None
Supporting material(s) : EUROCONTROL - European Action Plan for Airspace Infringement Risk Reduction and Guidance Material
Url :
<http://www.eurocontrol.int/sites/default/files/content/documents/nm/safety/european-action-plan-for-airsapce-infringement-risk-reduction.pdf>
ATM Master Plan relationship : [\[PRO-059\]-ATC Procedures to provide a systematic and common response to ground based Safety Net alerts](#)

SAF10	Implement measures to reduce the risk to aircraft operations caused by airspace infringements
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Finalisation criteria :
 1 - The applicable measures of the Action plan have been implemented.
 2 - Implementation is reported through the appropriate mechanism.

SAF10-MIL01	Implement, as necessary, the appropriate parts of the European Action Plan - Airspace Infringement Risk Reduction	From:	By:
		01/06/2008	31/12/2011

Action by : **Military Authorities**
Description & purpose : Adapt according to the military needs and specific environment and implement the applicable measures of European Action Plan - Airspace Infringement Risk Reduction.
Derogations : None
Supporting material(s) : EUROCONTROL - European Action Plan for Airspace Infringement Risk Reduction and Guidance Material
 Url : <http://www.eurocontrol.int/sites/default/files/content/documents/nm/safety/european-action-plan-for-airsapce-infringement-risk-reduction.pdf>
Finalisation criteria :
 1 - The applicable measures of the Action plan have been implemented.
 2 - Implementation is reported through the appropriate mechanism.

SAF10-USE01	Implement the appropriate parts of the European Action Plan - Airspace Infringement Risk Reduction	From:	By:
		01/06/2008	31/12/2011

Action by : **Airspace Users**
Description & purpose : Implement the applicable measures of European Action Plan.- Airspace Infringement Risk Reduction
 Civil users:
 Verify and ensure the appropriate follow-up for the implemented measures to reduce the likelihood and the severity of airspace infringement safety occurrences in accordance with the action plan.
 Military users:
 Apply the action plan and/or standard Military aircrew procedures, as appropriate.
Derogations : None
Supporting material(s) : EUROCONTROL - European Action Plan for Airspace Infringement Risk Reduction and Guidance Material
 Url : <http://www.eurocontrol.int/sites/default/files/content/documents/nm/safety/european-action-plan-for-airsapce-infringement-risk-reduction.pdf>
Finalisation criteria :
 1 - The applicable measures of the Action plan, part 5.1 have been implemented.
 2 - Implementation is reported through the appropriate mechanism.

SAF10-AGY02	Implement the appropriate parts of the European Action Plan - Airspace Infringement Risk Reduction	From:	By:
		01/06/2008	31/12/2011

Action by : **EUROCONTROL Agency**
Description & purpose : Implement the applicable measures of European Action Plan - Airspace Infringement Risk Reduction
Derogations : None
Supporting material(s) : EUROCONTROL - European Action Plan for Airspace Infringement Risk Reduction and Guidance Material
 Url : <http://www.eurocontrol.int/sites/default/files/content/documents/nm/safety/european-action-plan-for-airsapce-infringement-risk-reduction.pdf>
Finalisation criteria :
 1 - The measures assigned for implementation to the EUROCONTROL Agency have been implemented.
 2 - Report on the action plan implementation is produced.

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SESAR	Active					ECAC	
SAF11	Improve runway safety by preventing runway excursions						
REG	ASP	MIL	APO	USE	INT	IND	NM

Subject matter and scope

The EUROCONTROL "Study of Runway Excursions from a European Perspective" showed that the causal and contributory factors leading to a runway excursion were the same in Europe as in other regions of the world. The study findings made extensive use of lessons from more than a thousand accident and incident reports. Those lessons have been used to draft the recommendations contained in the European Action Plan for the Prevention of Runway Excursions, Edition 1.0 of which was published in January 2013.

The European Action Plan for the Prevention of Runway Excursions (EAPPRE) contains practical recommendations with guidance materials to assist operational staff with their implementation. According to ICAO, runway excursions are a persistent problem and their numbers have not decreased in more than 20 years.

The European Working Group for Runway Safety who developed the EAPPRE considered all practicable means available ranging from the design of aircraft, airspace, procedures and technologies to relevant training for operational staff associated with runway excursion prevention. The recommendations and guidance materials contained in the Action Plan are intended for implementation by the relevant stakeholder organisations with the aim of reducing the rate of runway excursions and the runway excursion risk incumbent upon them.

This European Action Plan, directed to all providers and users of European aerodromes and all European aircraft operators, is the result of the combined and sustained efforts of organisations involved in all areas of runway operations and has been co-developed with the European Commercial Aviation Safety Team (ECAST) which is the first pillar of the European Strategic Safety Initiative (ESSI). The EAPPRE is a deliverable of the European Aviation Safety Plan, Edition 2011-2014.

Additionally, the Network Strategy Plan (NSP), Edition 2012 - 2019 published in November 2012 addresses strategic objectives for runway excursions as part of the Operational Pan-European safety improvement action plans.

Note: Central to the recommendations contained in this Action Plan is the uniform and consistent application of ICAO provisions. The applicability area of this objective is all ECAC States. Nevertheless, it is for the individual National Safety Authority to decide upon the strategy of implementation by the applicable organisations within its own State.

FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this ESSIP 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 MIL Authorities.

Applicability Area(s) & Timescale(s)

Applicability Area

All ECAC States

Timescales:

From:

By:

Applicable to:

Initial operational capability

01/09/2013

Applicability Area

Full operational capability

31/01/2018

Applicability Area

References

European ATM Master Plan relationship

OI step -	- No OI Link -							
	Enablers -	PRO-006a						
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002	Covered by SLoA(s) in another objective			WXYZ-003	Not covered in the ESSIP Plan
			zzz	ESSIP objective covering the enabler				

Applicable legislation

-none-

SAF11	Improve runway safety by preventing runway excursions
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Stakeholder Lines of Action (SLoA)

<u>SLoA ref.</u>	<u>Title</u>	<u>From</u>	<u>By</u>
SAF11-REG01	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions	01/09/2013	31/01/2018
SAF11-ASP01	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions	01/09/2013	31/12/2014
SAF11-ASP02	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions with regard to the provision of aeronautical information services	01/09/2013	31/12/2014
SAF11-ASP03	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions with regard to the provision of meteorological services for international aviation	01/09/2013	31/12/2014
SAF11-APO01	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions	01/09/2013	31/12/2014
SAF11-USE01	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions	01/09/2013	31/01/2018
SAF11-NM01	Maintain the European action plan for the Prevention of Runway Excursions	01/09/2013	31/01/2018
SAF11-NM02	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions	01/09/2013	31/01/2018

Description of finalised SLoAs is available on the PEPR website at <http://www.eurocontrol.int/articles/essip-plan/>

Expected performance benefits

Safety :	Significant, through reduced risk of incidents and accidents on runways
Capacity :	Indirect through prevention of delay problems caused by runway excursion incidents.
Cost effectiveness :	The prevention of accidents is a highly cost-effective measure and the application is based upon the implementation of existing ICAO provisions.
Environment :	Negligible.
Security :	N/A

Detailed SLoA descriptions

SAF11-REG01	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions	From:	By:
		01/09/2013	31/01/2018

Action by :	State Authorities
Description & purpose :	<ul style="list-style-type: none"> - Ensure that the European Action Plan for the Prevention of Runway Excursions is disseminated widely to increase understanding of runway excursion which includes the Recommendations of the Action Plan, i.e. Part 3.1 references 3.1.1 and Part 3.6 references 3.6.3; 3.6.8 and 3.6.9. - Regulators, i.e. National Supervisory Authorities (NSAs) should focus on runway safety in their oversight activities e.g. preventing runway excursion risks which includes the Recommendations of the Action Plan, i.e. Part 3.1 references 3.1.4; 3.1.5 and Part 3.6 reference 3.6.2. - Verify that aircraft operators, aerodrome operators and air navigation service providers adapt according to the local needs and comply with the respective measures of the European Action Plan for the Prevention of Runway Excursions which includes the Recommendations of the Action Plan, i.e. Part 3.6 references 3.6.1; 3.6.4; 3.6.5; 3.6.6 and 3.6.7.
Derogations :	None
Supporting material(s) :	EUROCONTROL - European Action Plan for the Prevention of Runway Excursions (EAPPRE) - 1.0 / 01/2013 Url : http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_(EAPPRE) ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015 Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf
Finalisation criteria :	1 - Documentation for the European Action Plan for the Prevention of Runway Excursions has been disseminated. 2 - Established oversight activities arrangements, e.g. audit plans, audit report published, including corrective actions if applicable. 3 - The applicable measures of the Action plan, Part 3.6 have been implemented. 4 - Implementation is reported through the appropriate mechanism.

SAF11	Improve runway safety by preventing runway excursions		
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SAF11-ASP01	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions	From:	By:
		01/09/2013	31/12/2014

Action by : **ANS Providers**

Description & purpose : Adapt according to the local operational environment and implement the respective measures of the European Action Plan for the Prevention of Runway Excursions which includes all recommendations of Part 3.3; Part 3.1 references 3.1.1; 3.1.3; 3.1.4; 3.1.5; 3.1.6 and 3.1.7; Part 3.2 references 3.2.8 and 3.2.9.

Derogations : None

Supporting material(s) : EUROCONTROL - European Action Plan for the Prevention of Runway Excursions (EAPPRE) - 1.0 / 01/2013
 Url : [http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_\(EAPPRE\)](http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_(EAPPRE))
 ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015
 Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf
[\[PRO-006a\]-ATC Procedures to standardise phraseology, altitude usage \(airport\)](#)

ATM Master Plan relationship :

Finalisation criteria : 1 - The applicable measures of the Action plan, Parts 3.1, 3.2 and 3.3 have been implemented.
 2 - Implementation is reported through the appropriate mechanism.

SAF11-ASP02	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions with regard to the provision of aeronautical information services	From:	By:
		01/09/2013	31/12/2014

Action by : **AIS Providers**

Description & purpose : Adapt according to the local operational environment and implement the respective measures of the European Action Plan for the Prevention of Runway Excursions which includes Recommendations of Part 3.3 references 3.3.4 and 3.3.5.

Derogations : None

Supporting material(s) : ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015
 Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf
 EUROCONTROL - European Action Plan for the Prevention of Runway Excursions (EAPPRE) - 1.0 / 01/2013
 Url : [http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_\(EAPPRE\)](http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_(EAPPRE))

Finalisation criteria : 1 - The applicable measures of the Action plan, Part 3.3 have been implemented.
 2 - Implementation is reported through the appropriate mechanism.

SAF11-ASP03	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions with regard to the provision of meteorological services for international aviation	From:	By:
		01/09/2013	31/12/2014

Action by :

Description & purpose : Adapt according to the local operational environment and implement the respective measures of the European Action Plan for the Prevention of Runway Excursions which includes Recommendations of Part 3.2 references 3.2.8 and 3.2.9.

Derogations : None

Supporting material(s) : EUROCONTROL - European Action Plan for the Prevention of Runway Excursions (EAPPRE) - 1.0 / 01/2013
 Url : [http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_\(EAPPRE\)](http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_(EAPPRE))
 ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015
 Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf

Finalisation criteria : 1 - The applicable measures of the Action plan, Part 3.2 have been implemented.
 2 - Implementation is reported through the appropriate mechanism.

SAF11-APO01	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions	From:	By:
		01/09/2013	31/12/2014

Action by : **Airport Operators**

Description & purpose : Implement the applicable measures of the European Action Plan for the Prevention of Runway Excursions which includes all recommendations of Part 3.2, Part 3.1 references 3.1.1; 3.1.3; 3.1.4; 3.1.5; 3.1.6 and 3.1.7, Part 3.3 references 3.3.4; 3.3.5 and 3.3.6.

For the Local Runway Safety Team implement the applicable measures of the Action Plan, recommendations 3.1.2; 3.1.4 and 3.1.6 of Part 3.1.

Derogations : None

Supporting material(s) : EUROCONTROL - European Action Plan for the Prevention of Runway Excursions (EAPPRE) - 1.0 / 01/2013
 Url : [http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_\(EAPPRE\)](http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_(EAPPRE))
 ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015
 Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf

SAF11	Improve runway safety by preventing runway excursions
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Finalisation criteria : 1 - The applicable measures of the Action plan, Parts 3.1, 3.2 and 3.3 have been implemented.
2 - Implementation is reported through the appropriate mechanism.

SAF11-USE01	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions	From:	By:
		01/09/2013	31/01/2018

Action by : **Airspace Users**
Description & purpose : Implement the applicable measures of the European Action Plan for the Prevention of Runway Excursions which includes all recommendations of Part 3.4, Part 3.1 references 3.1.1, 3.1.6, 3.1.7 and Part 3.3 reference 3.3.4.
Derogations : None
Supporting material(s) : EUROCONTROL - European Action Plan for the Prevention of Runway Excursions (EAPPRE) - 1.0 / 01/2013
 Url : [http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_\(EAPPRE\)](http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_(EAPPRE))
 ICAO - ICAO - Runway Safety Team Handbook – Second Edition 06/2015
 Url : http://www.icao.int/safety/RunwaySafety/Documents_and_Toolkits/ICAO_RST_Handbook_2nd_Edition_2015_REV2.pdf
Finalisation criteria : 1 - The applicable measures of the Action plan, Parts 3.1, 3.3 and 3.4 have been implemented.
2 - Implementation is reported through the appropriate mechanism.

SAF11-NM01	Maintain the European action plan for the Prevention of Runway Excursions	From:	By:
		01/09/2013	31/01/2018

Action by : **NM**
Description & purpose : A European action plan for the Prevention of Runway Excursions has to be produced by the Eurocontrol Agency through coordinated collaboration with concerned stakeholders within the ESSI, ECAS and EASp initiatives. The Action plan development lifecycle includes: (1) Identification of Safety Issues; (2) Initial Evaluation; (3) Analysis of the causal factors and elaboration of recommendations; (4) Development and adoption of an Action Plan; (5) Implementation and Monitoring. The action plan shall be reviewed in due time.
Derogations : None
Finalisation criteria : 1 - [http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_\(EAPPRE\)](http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_(EAPPRE))

SAF11-NM02	Implement the appropriate parts of the European Action Plan for the Prevention of Runway Excursions	From:	By:
		01/09/2013	31/01/2018

Action by : **NM**
Description & purpose : Implement the applicable measures of the European Action Plan for the Prevention of Runway Excursions which includes Part 3.1 reference 3.1.6.
Derogations : None
Supporting material(s) : EUROCONTROL - European Action Plan for the Prevention of Runway Excursions (EAPPRE) - 1.0 / 01/2013
 Url : [http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_\(EAPPRE\)](http://www.skybrary.aero/index.php/European_Action_Plan_for_the_Prevention_of_Runway_Excursions_(EAPPRE))
Finalisation criteria : 1 - The measures assigned for implementation to the EUROCONTROL Agency have been implemented.
2 - Report on the action plan implementation is produced.