ATC15.2 — Arrival Management Extended to En-route Airspace

Download Progress Report

This Implementation Objective addresses the implementation of extended arrival management by the en-route ATS units feeding the traffic to the busiest airports in Europe.

The Arrival Manager extended to en-route airspace requires an extension of AMAN advisories up to a minimum of 180 nautical miles from the arrival airport. Shorter horizon distance will be considered when, due to the geographical location of the arrival airport, the extension of the AMAN horizon does not provide additional performance benefits. Traffic sequencing/metering should be conducted in the en-route before top-of-descent, to improve predictability and smooth the flow of traffic. Extending the AMAN horizon may affect the airspace design, and it is therefore essential that all stakeholders, including military authorities are consulted.

ATS units implementing extended AMAN operations shall coordinate with Air Traffic Services (ATS) units responsible for adjacent and up-stream en-route sectors as well as ATS units responsible for inbound traffic originating from airports impacted by the Extended AMAN horizon. Input data to Extended AMAN need to be provided by the most accurate trajectory prediction information available (including EFD or flight data available via the NM B2B publish/subscribe mechanism).
ATSU should exchange the relevant Extended AMAN data with the Network Manager for the improved ATFCM and arrival sequencing, overall network impact assessment and relevant network optimisations using Arrival Planning Information (API).

System requirements:

An ATSU operating an Extended AMAN shall be able to communicate with the relevant sectors (not restricted to adjacent ones) by SWIM service when it is available. Until SWIM is available, ATSUs may send and receive the OLDI AMA message to and from adjacent sectors and forward OLDI AMA messages further upstream to communicate with the relevant sectors (not restricted to adjacent ones).

In order to facilitate a timely implementation of the arrival sequence, a sector receiving arrival messages shall display arrival management information for the controller.

ATM systems shall be upgraded to provide coverage to a minimum of 180 nautical miles (or shorter distance as indicated in the relevant SDP Family description) from the arrival airport and the impacted en-route sectors in order to be able to generate, communicate, receive, acknowledge and display arrival management information (i.e. SWIM services or AMA message). Bilateral agreements will be established between all concerned sectors that could be under the responsibility of different ATS units as well as located in different countries.

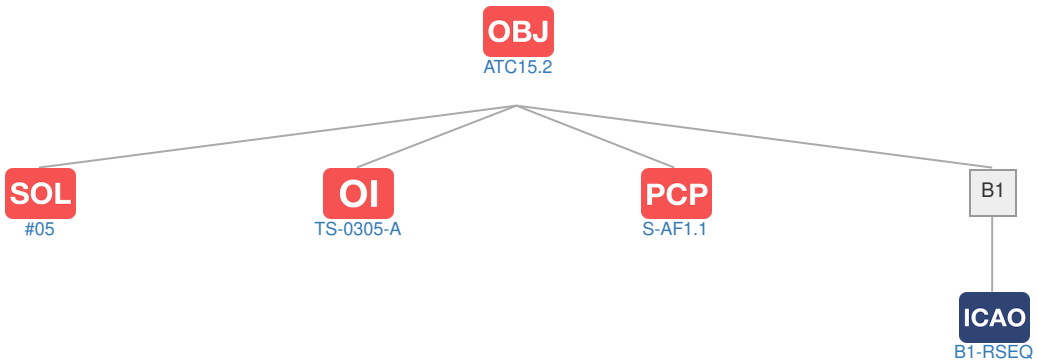
NOTE: List of ACCs potentially impacted (to be used for LSSIP monitoring purposes): Amsterdam ACC; Brussels ACC; Maastricht UAC; Karlsruhe UAC; Bremen ACC; Munich ACC; Langen ACC; London ACC; Prestwick ACC; Reims ACC; Bordeaux ACC; Marseille ACC; Brest ACC; Paris ACC; Barcelona ACC; Palma ACC; Madrid ACC; Seville ACC; Malmo ACC; Stockholm ACC; Oslo ACC; Stavanger ACC; Bodo ACC; Dublin ACC; Shannon ACC; Milan ACC; Rome ACC; Padua ACC; Zurich ACC; Geneva ACC; Warsaw ACC; Copenhagen ACC; Vienna ACC; Zagreb ACC; Ljubljana ACC; Stockholm ACC; Helsinki ACC; Tallinn ACC; Riga ACC; Prague ACC; Bratislava ACC; Budapest ACC;)

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each military authority to review this Objective IN ITS ENTIRETY and address each of the SLoAs that the military authority considers RELEVANT for itself. This has to be done on top and above of the review of "MIL" SLoAs which identify actions EXCLUSIVE to military authorities.

Edition	2022
Stakeholders	Air Navigation Service Provider / Network Manager
Type	CP1
Scope	Airport
Status	Active

Context

Related Elements



Applicability Area(s) and Timescales

Applicability Area 1: See list of airports in MP Level 3 Implementation Plan - Annexes

Applicability Area 2: See list of airports in MP Level 3 Implementation Plan - Annexes

Timescales	From	By	Applicable to
Initial Operational Capability	01-01-2021	-	Applicability Area 1 + Applicability Area 2
Full Operational Capability / Target Date	-	31-12-2024	Applicability Area 1 + Applicability Area 2

Links to ATM Master Plan Level 2

OI Operational Improvment Steps

Code	Title	IOC	FOC	Related Elements
TS-0305-A	Arrival Management Extended to En-Route Airspace - single TMA	31-12-2021	31-12-2025	SOL OI EN OBJ DS PCP ICAO

SOL Links to SESAR Solutions

Code	Title	Program	Related Elements
#05	Extended Arrival Management (AMAN) horizon	SESAR1	SOL OI OBJ DS EOC PCP ICAO

PCP Links to PCP ATM Sub-Functionalities

Code	Title	Related Elements
S-AF1.1	AMAN extended to En-Route Airspace	SOL OI EN OBJ ICAO

ICAO Block Modules

Designator	Title	Related Elements
B1		
B1-RSEQ	Improved Airport operations through Departure, Surface and Arrival Management	SOL OI OBJ PCP

References

Applicable legislation
Regulation (EU) 2021/116 on the establishment of the Common Project One
Applicable ICAO Annexes and other references
None
Deployment Programme 2022
Family 1.1.1 - Arrival Management extended to en-route airspace
Operating Environments
Terminal Airspace
En-Route

Expected Performance Benefits

Safety	Maintained or improved
Capacity	Optimal use of TMA capacity
Operational efficiency	Improved arrival flow.
Cost efficiency	-
Environment	Delays are resolved by reducing speed in early phases of arrivals leading to reduction of holding and vectoring, which has a positive environmental impact in terms of fuel savings.
Security	-

Stakeholder Lines of Action

Code	Title	From	By	Related Enablers
ASP01	Upgrade ATC systems to support extended AMAN	01-01-2021	31-12-2024	EN
ASP02	Implement ATC procedures to support extended AMAN	01-01-2021	31-12-2024	EN
ASP03	Establish Bilateral agreements	01-01-2021	31-12-2024	EN
ASP04	Safety assessment	01-01-2021	31-12-2024	
ASP05	Training	01-01-2021	31-12-2024	
ASP06	Operational use	01-01-2021	31-12-2024	
NM01	Upgrade NM systems to support extended AMAN	01-01-2021	31-12-2024	
NM02	Establish Bilateral agreements	01-01-2021	31-12-2024	
NM03	Implement ATFCM procedures for management of extended AMAN info	01-01-2021	31-12-2024	

Supporting Material

Title	Related SLoAs
EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006 https://www.eurocontrol.int/tool/safety-assessment-methodology	ASP04
SJU - SESAR Solution 05: Data Pack for Extended Arrival Management (AMAN) horizon https://www.sesarju.eu/sesar-solutions/extended-arrival-management-aman-horizon	ASP01, ASP02, ASP03

Consultation & Approval

Working Arrangement in charge	NETOPS
Outline description approved in	-
Latest objective review at expert level	05/2016
Commitment Decision Body	Provisional Council (PC)
Objective approved/endorsed in	09/2016
Latest change to objective approved/endorsed in	-