NAV12 — ATS IFR Routes for Rotorcraft Operations

Download Progress Report

The implementation objective is aligned to Commission Implementing Regulation (EU) 2018/1048 of 18 July 2018 laying down requirements for PBN.

The objective describes the implementation of:

a) ATS routes for rotorcraft operations,
b) SID and STAR for rotorcraft to instrument RWYs,
c) Low-level IFR routes (LLR) for rotorcraft.

PBN Regulation (EU) 2018/1048 of 18 July 2018, does not impose obligatory establishment of ATS routes, SID or STAR for rotorcraft operations. However, the regulation does prescribe obligatory set of specifications to be complied with, where a stakeholder had decided to establish ATS routes, SID or STAR for rotorcraft operations.

Where ANSPs have established ATS routes, SID or STAR for rotorcraft operations, they shall implement those routes in accordance with the requirements of the RNP 0.3, or RNP 1, or RNAV 1 specifications. In that case, they shall be entitled to decide which of those three requirements (specifications) they comply with.

This Objective supports implementation of SESAR Solution #113 “Low-level IFR routes (LLR) for rotorcraft” which improves connectivity between the airports included into the TMA airspace and also introduces the use of "Standard PinS - Point In Space" procedures concept. The PinS procedures consist in flying under instrument flight rules (IFR) to/from a Point-In-Space in the proximity of the landing/departure site using very high accuracy (RNP0.3 or better).

The segment joining the 'PinS" and the landing/departure site (FATO - Final Approach & Take-Off areas) is flown visually. The point-in-space procedures allow an easier way to manage both traffic flows - fixed-wing aircraft and rotorcraft - at medium and large airports, simultaneously and in a non-interfering way (SNI operations). If this objective is implemented where NAV03.2 is also applied, it should be part of the airspace concept developed in SLoA NAV03.2-ASP01.

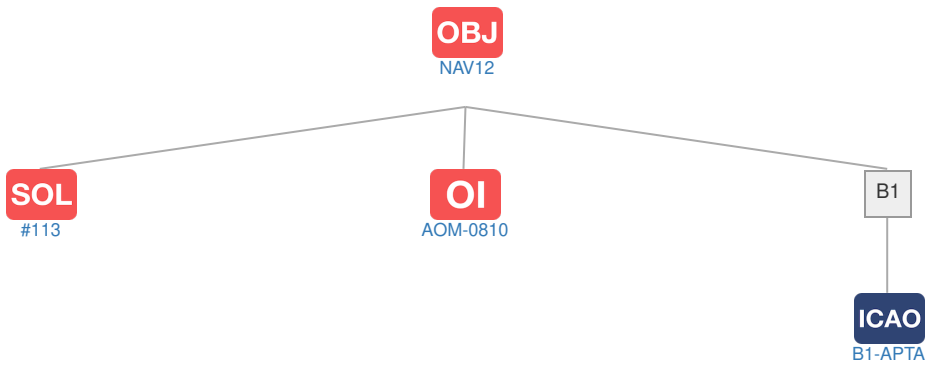
NOTE: System improvements for controller support tools which may be required are covered by other Implementation Objectives like ATC12.1 (MTCD, conflict resolution support info and MONA), ATC02.9 (STCA) and ATC02.8 (APW).

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each military authority to review this implementation 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	Regulator / Air Navigation Service Provider / Airspace Users
Type	SES
Scope	ECAC+
Status	Active

Context

Related Elements



Applicability Area(s) and Timescales

Applicability Area 1: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, Greece, Ireland, Italy, Luxembourg, Norway, Poland, Slovak Republic, Spain, Switzerland
(EU SES States)

Applicability Area 2: Albania, Georgia, Moldova, North Macedonia
(Other ECAC+ States not listed in Applicability Area 1)

Timescales	From	By	Applicable to
Entry in force of regulation	01-08-2018	-	
Rotorcraft RNP0.3, RNP1 or RNAV1 ATS routes above FL150, where established.	-	03-12-2020	Applicability Area 1
Rotorcraft RNP0.3, RNP1 or RNAV1 ATS routes below FL150, where established.	-	25-01-2024	Applicability Area 1
One rotorcraft RNP0.3, RNP01 or RNAV1 SID and STAR per instrument RWY, where established.	-	25-01-2024	Applicability Area 1
All rotorcraft RNP0.3, RNP01 or RNAV1 SIDs and STARs per instrument RWY, where established.	-	06-06-2030	Applicability Area 1
IFR ATS route above/below FL150, SID and STAR for Rotorcraft Operations, where established	-	06-06-2030	Applicability Area 2

Links to ATM Master Plan Level 2

OI Operational Improvment Steps

Code	Title	IOC	FOC	Related Elements
AOM-0810	Integration into the TMA route structure of optimised Low Level IFR route network for rotorcraft using RNP-1/RNP-0.3	31-12-2020	31-12-2026	SOL EN OBJ DS

SOL Links to SESAR Solutions

Code	Title	Program	Related Elements
#113	Optimised low-level instrument flight rules (IFR) routes for rotorcraft	SESAR1	OI OBJ DS EOC

PCP Links to PCP ATM Sub-Functionalities

Code	Title	Related Elements
No record found		

ICAO Block Modules

Designator	Title	Related Elements
B1		
B1-APTA	Optimised Airport Accessibility	SOL OI OBJ PCP

References

Applicable legislation
Commission Implementing Regulation (EU) 2018/1048 of 18 July 2018 laying down airspace usage requirements and operating procedures concerning performance-based navigation
Applicable ICAO Annexes and other references
None
Deployment Programme 2022
-
Operating Environments
Terminal Airspace
En-Route

Expected Performance Benefits

Safety	Improved through airspace de-confliction of low altitude airways. It can provide more visibility into planning of those sectors (up-stream sectors) where the ATCO is arranging the arrivals sequence.
Capacity	The point-in-space procedures have the potential to enable an increasing of passenger throughput at medium and large airports, removing IFR rotorcraft from active runways (no low performance/low speed movements into the approach sequence to runway).
Operational efficiency	Improved through: - Reduced track mileage, resulting in less fuel consumption and associated CO2 emissions; - Enhanced transition from the en-route phase (flying the Low Level IFR routes) to the approach phase (e.g Point In Space IFR rotorcraft procedures) to the final approach and take-off area (FATO) and vice versa; - More direct routing in dense terminal airspace (obstacle-rich or noise-sensitive terminal environment).
Cost efficiency	-
Environment	Reduced track mileage, resulting in less fuel consumption and associated CO2 emissions.
Security	-

Stakeholder Lines of Action

Code	Title	From	By	Related Enablers
REG01	Verify the transition plan for PBN in ANS provision	03-12-2020	06-06-2030	
ASP01	Implement low-level IFR routes (LLR) for rotorcraft operations		25-01-2024 06-06-2030	
ASP02	Train air traffic controllers procedures supporting low-level IFR routes (LLR) in TMA and other routes for rotorcraft operations		06-06-2030	
ASP03	Develop a local safety assessment for the implementation of low-level IFR routes (LLR) in TMA and other ATS routes for rotorcraft operations		06-06-2030	
ASP04	Implement Rotorcraft ATS routes above FL150		03-12-2020 06-06-2030	
ASP05	Implement Rotorcraft ATS routes below FL150		25-01-2024 06-06-2030	
ASP06	Implement one rotorcraft RNP0.3, RNP01 or RNAV1 SID and STAR per instrument RWY		25-01-2024 06-06-2030	
ASP07	Implement all rotorcraft RNP0.3, RNP01 or RNAV1 SID and STAR per instrument RWY		06-06-2030	
ASP08	Establish the transition plan for PBN in ANS provision	03-12-2020	06-06-2030	
USE01	Install appropriate RNP equipment		06-06-2030	EN
USE02	Train flight crews in RNP ATS routes		06-06-2030	

Supporting Material

Title	Related SLoAs
EASA - EASA Decision 2018/013/R - AMC & GM to Regulation (EU) 2018/1048 (PBN IR) – Annex II to EASA Decision 2018/013/R 11/2018 https://www.easa.europa.eu/sites/default/files/dfu/Annexes%20to%20EDD%202018-013-R.pdf	ASP04, ASP05, ASP06, ASP07, ASP08, REG01
EC - COMMISSION IMPLEMENTING REGULATION (EU) 2017/373 - (OJ L 62, 8.03.2017, p. 1) - COMMISSION IMPLEMENTING REGULATION (EU) 2017/373 of 1 March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011 03/2017 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R0373&from=EN	ASP03
EUROCONTROL - Airspace Concept Handbook for the Implementation of Performance Based Navigation (PBN) - Edition 4.0 / 04/2021 https://www.eurocontrol.int/publication/airspace-concept-handbook-implementation-performance-based-navigation-pbn	ASP01, ASP02, ASP03, ASP04, ASP05, ASP06, ASP07, ASP08, REG01
EUROCONTROL - Helicopter low level route operations in controlled and uncontrolled airspace - Edition 1.3 / 10/2019 Url: https://www.eurocontrol.int/publication/helicopter-low-level-route-operations-controlled-and-uncontrolled-airspace	ASP03
EUROCONTROL - Helicopter point in space operations in controlled and uncontrolled airspace - Edition 1.4 / 10/2019 https://www.eurocontrol.int/publication/helicopter-point-space-operations-controlled-and-uncontrolled-airspace	ASP03
ICAO - Doc 4444 - Air Traffic Management - Edition 16 / 11/2016 https://store.icao.int/	ASP02
ICAO - Doc 7030 - Regional supplementary Procedures - Edition 5 / 07/2011 https://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx	ASP01, ASP02, ASP03, ASP04, ASP05, ASP06, ASP07, ASP08, REG01
ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Edition 5 / 11/2011 https://store.icao.int/	ASP01, ASP02, ASP03, ASP04, ASP05, ASP06, ASP07, ASP08, REG01, USE01
ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 https://store.icao.int/en/performance-based-navigation-pbn-manual-doc-9613	ASP01, ASP02, ASP03, ASP04, ASP05, ASP06, ASP07, ASP08, REG01, USE01, USE02
ICAO - Doc 9992 - Manual on the Use of Performance-based Navigation (PBN) in Airspace Design - First Edition / 01/2013 http://store1.icao.int/	ASP01, ASP03, ASP04, ASP05, ASP06, ASP07, ASP08, REG01
SJU - SESAR Solution 113: Data Pack for Optimised Low Level IFR routes for rotorcraft https://www.sesarju.eu/sesar-solutions/optimised-low-level-ifr-routes-rotorcraft	ASP01, ASP04, ASP05, REG01

Consultation & Approval

Working Arrangement in charge	NSG - Navigation Steering Group
Outline description approved in	-
Latest objective review at expert level	12/2018
Commitment Decision Body	Provisional Council (PC)
Objective approved/endorsed in	09/2017
Latest change to objective approved/endorsed in	05/2019