

SES		Active							ECAC+	
NAV12		ATS IFR Routes for Rotorcraft Operations								
REG	ASP	MIL	APO	USE	INT	IND	NM	MET	AIS	USP

Subject matter and scope

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:

- ATS routes for rotorcraft operations,
- SID and STAR for rotorcraft to instrument RWYs,
- 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.

Applicability Area(s) & Timescale(s)

Applicability Area 1	All EU SES States except: Bulgaria, Croatia, Czech Republic, France, Germany, Hungary, Latvia, Lithuania, Maastricht UAC, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden		
Applicability Area 2 (Other ECAC+ States not listed in Applicability Area 1)	Albania, Bosnia and Herzegovina, Moldova, Serbia, Türkiye		
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
One rotorcraft RNP0.3, RNP01 or RNAV1 SID and STAR per instrument RWY, where established.		25/01/2024	Applicability Area 1
Rotorcraft RNP0.3, RNP1 or RNAV1 ATS routes below FL150, 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

References

European ATM Master Plan

Ol step -	[AOM-0810]-Integration into the TMA route structure of optimised Low Level IFR route network for rotorcraft using RNP-1/RNP-0.3								
Enablers -	A/C-04b	PRO-258							

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

Commission Implementing Regulation (EU) 2018/1048 of 18 July 2018 laying down airspace usage requirements and operating procedures concerning performance-based navigation

Essential Operational Changes

Multimodal Mobility and integration of all Airspace Users

SESAR Solution

#113 - Optimised low-level instrument flight rules (IFR) routes for rotorcraft

ICAO GANP - ASBUs

APTA-B0/6	PBN Helicopter Point in Space (PinS) Operations
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Deployment Programme

- none -

European Plan for Aviation Safety

MST.031	Implementation of SESAR solutions aiming to facilitate safe IFR operations
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Operating Environments

En-Route
Terminal Airspace

Stakeholder Lines of Action (SLoAs)

SLoA ref.	Title	From	By
NAV12-REG01	Verify the transition plan for PBN in ANS provision	03/12/2020	06/06/2030
NAV12-ASP01	Implement low-level IFR routes (LLR) for rotorcraft operations		25/01/2024 06/06/2030
NAV12-ASP02	Train air traffic controllers procedures supporting low-level IFR routes (LLR) in TMA and other routes for rotorcraft operations		06/06/2030
NAV12-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
NAV12-ASP04	Implement Rotorcraft ATS routes above FL150		03/12/2020 06/06/2030
NAV12-ASP05	Implement Rotorcraft ATS routes below FL150		25/01/2024 06/06/2030
NAV12-ASP06	Implement one rotorcraft RNP0.3, RNP01 or RNAV1 SID and STAR per instrument RWY		25/01/2024 06/06/2030
NAV12-ASP07	Implement all rotorcraft RNP0.3, RNP01 or RNAV1 SID and STAR per instrument RWY		06/06/2030 06/06/2030
NAV12-ASP08	Establish the transition plan for PBN in ANS provision	03/12/2020	06/06/2030
NAV12-USE01	Install appropriate RNP equipment		06/06/2030
NAV12-USE02	Train flight crews in RNP ATS routes		06/06/2030

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

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).

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Operational Efficiency:	Improved through: <ul style="list-style-type: none"> - 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:	-

Detailed SLoA Descriptions

NAV12-REG01	Verify the transition plan for PBN in ANS provision	From: 03/12/2020	By: 06/06/2030
Action by:	National Supervisory Authorities (NSAs)		
Description & purpose:	<p>This SLoA is mandatory only for the States subject to Commission Implementing Regulation (EU) 2018/1048 of 18 July 2018.</p> <p>Verify whether the draft transition plan, or the draft significant update thereof, complies with the requirements of PBN Implementing Regulation and in particular whether it takes account of the views of airspace users where appropriate, including those operating State aircraft.</p> <p>Inform the providers of ATM/ANS of the outcome of that verification without undue delay.</p>		
	<p>Note : This SLoA is recommended as the best practice to the States which are not subject to Commission Implementing Regulation (EU) 2018/1048 of 18 July 2018.</p>		
Supporting material(s):	<p>EUROCONTROL - Airspace Concept Handbook for the Implementation of Performance Based Navigation (PBN) - Edition 4.0 / 04/2021 Url : https://www.eurocontrol.int/publication/airspace-concept-handbook-implementation-performance-based-navigation-pbn</p> <p>ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : https://store.icao.int/en/performance-based-navigation-pbn-manual-doc-9613</p> <p>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 Url : https://www.easa.europa.eu/sites/default/files/dfu/Annexes%20to%20EDD%202018-013-R.pdf</p> <p>ICAO - Doc 9992 - Manual on the Use of Performance-based Navigation (PBN) in Airspace Design - First Edition / 01/2013 Url : http://store1.icao.int/</p> <p>ICAO - Doc 7030 - Regional supplementary Procedures - Edition 5 / 07/2011 Url : https://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx</p> <p>SJU - SESAR Solution 113: Data Pack for Optimised Low Level IFR routes for rotorcraft Url : https://www.sesarju.eu/cesar-solutions/optimised-low-level-ifr-routes-rotorcraft</p> <p>ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Edition 5 / 11/2011 Url : https://store.icao.int/</p>		
Finalisation criteria:	1 - The outcome of the verification has been notified to ANSP.		
NAV12-ASP01	Implement low-level IFR routes (LLR) for rotorcraft operations	From: -	By: Applicability Area 1: 25/01/2024 Applicability Area 2: 06/06/2030
Action by:	ANS Providers		
Description & purpose:	<p>This SLoA is focused at implementation of SESAR Solution #113 "Low-level IFR routes (LLR) for rotorcraft". Implement IFR LLR for rotorcraft between the airports included into the TMA airspace, and also implement "Standard PinS - Point In Space" procedures concept. The LLR departure and arrival procedures should comply with normal climb and descent profiles for the operation considered and identify minimum segment altitude requirements.</p> <p>Where NAV03.2 is implemented, these routes should be part of the airspace concept developed in SLoA NAV03.2 - ASP01.</p>		
	<p>Note : Note 1: The deadline of 25/01/2024 does not apply to other ECAC+ (non-EU SES states), in LSSIP context they should not be labelled as being "Late "against this deadline.</p> <p>Note 2: In the context of LSSIP reporting, this SLoA may be reported, as "Not Applicable" where there is no any business need or intention to implement it.</p> <p>Note 3: In LSSIP reporting, the implemented PBN Specification should be listed/stated in the LSSIP comment field of this SLoA.</p>		

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Supporting material(s):	<p>EUROCONTROL - Airspace Concept Handbook for the Implementation of Performance Based Navigation (PBN) - Edition 4.0 / 04/2021 Url : https://www.eurocontrol.int/publication/airspace-concept-handbook-implementation-performance-based-navigation-pbn</p> <p>ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : https://store.icao.int/en/performance-based-navigation-pbn-manual-doc-9613</p> <p>ICAO - Doc 9992 - Manual on the Use of Performance-based Navigation (PBN) in Airspace Design - First Edition / 01/2013 Url : http://store1.icao.int/</p> <p>ICAO - Doc 7030 - Regional supplementary Procedures - Edition 5 / 07/2011 Url : https://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx</p> <p>SJU - SESAR Solution 113: Data Pack for Optimised Low Level IFR routes for rotorcraft Url : https://www.sesarju.eu/sesar-solutions/optimised-low-level-ifr-routes-rotorcraft</p> <p>ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Edition 5 / 11/2011 Url : https://store.icao.int/</p>		
Finalisation criteria:	1 - RNP1.0 or RNP0.3 or RNAV 1 low level IFR routes in TMA have been published in AIP and implemented.		
NAV12-ASP02	Train air traffic controllers procedures supporting low-level IFR routes (LLR) in TMA and other routes for rotorcraft operations	From: -	By: 06/06/2030
Action by:	ANS Providers		
Description & purpose:	Air traffic controllers who provide ATC services where RNP 1.0 / RNP 0.3 or RNAV 1 is implemented should have completed training specific to the RNP 1.0 / RNP0.3 or RNAV 1 navigation specification.		
Supporting material(s):	<p>EUROCONTROL - Airspace Concept Handbook for the Implementation of Performance Based Navigation (PBN) - Edition 4.0 / 04/2021 Url : https://www.eurocontrol.int/publication/airspace-concept-handbook-implementation-performance-based-navigation-pbn</p> <p>ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : https://store.icao.int/en/performance-based-navigation-pbn-manual-doc-9613</p> <p>ICAO - Doc 4444 - Air Traffic Management - Edition 16 / 11/2016 Url : https://store.icao.int/</p> <p>ICAO - Doc 7030 - Regional supplementary Procedures - Edition 5 / 07/2011 Url : https://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx</p> <p>ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Edition 5 / 11/2011 Url : https://store.icao.int/</p>		
Finalisation criteria:	1 - The necessary training has been given to controllers responsible for the operation of RNP 1.0/RNP 0.3 or RNAV 1.		
NAV12-ASP03	Develop a local safety assessment for the implementation of low-level IFR routes (LLR) in TMA and other ATS routes for rotorcraft operations	From: -	By: 06/06/2030
Action by:	ANS Providers		
Description & purpose:	Develop a safety study for the intended operations (which will depend on the route configuration, air traffic density and intervention capability, etc.). Horizontal separation standards are published in PANS-ATM (Doc 4444). Guidance on obstacle clearance is provided in PANS-OPS (Doc 8168, Volume II).		

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Supporting material(s):	<p>EUROCONTROL - Airspace Concept Handbook for the Implementation of Performance Based Navigation (PBN) - Edition 4.0 / 04/2021 Url : https://www.eurocontrol.int/publication/airspace-concept-handbook-implementation-performance-based-navigation-pbn</p> <p>EC - COMMISSION IMPLEMENTING REGULATION (EU) 2017/373 - (OJ L 62, 8.03.2017, p. 1) - COMMISSION IMPLEMENTING REGULATION (EU) 2017/373 of 1 March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011 03/2017 Url : https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R0373&from=EN</p> <p>ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : https://store.icao.int/en/performance-based-navigation-pbn-manual-doc-9613</p> <p>ICAO - Doc 9992 - Manual on the Use of Performance-based Navigation (PBN) in Airspace Design - First Edition / 01/2013 Url : http://store1.icao.int/</p> <p>ICAO - Doc 7030 - Regional supplementary Procedures - Edition 5 / 07/2011 Url : https://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx</p> <p>EUROCONTROL - Helicopter low level route operations in controlled and uncontrolled airspace - Edition 1.3 / 10/2019 Url : Url: https://www.eurocontrol.int/publication/helicopter-low-level-route-operations-controlled-and-uncontrolled-airspace</p> <p>EUROCONTROL - Helicopter point in space operations in controlled and uncontrolled airspace - Edition 1.4 / 10/2019 Url : https://www.eurocontrol.int/publication/helicopter-point-space-operations-controlled-and-uncontrolled-airspace</p> <p>ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Edition 5 / 11/2011 Url : https://store.icao.int/</p>		
Finalisation criteria:	1 - Local safety assessment has been finalised and delivered to the National Supervisory Authority as necessary.		
NAV12-ASP04	Implement Rotorcraft ATS routes above FL150	From: -	By: Applicability Area 1: 03/12/2020 Applicability Area 2: 06/06/2030
Action by:	ANS Providers		
Description & purpose:	Where providers of ATM/ANS have established ATS routes above FL150, for rotorcraft operations, they shall implement those routes in accordance with the requirements of the RNP 0.3, RNP 1 or RNAV 1 specifications. The providers are entitled to decide which of those three sets of requirements (specifications) they will comply with.		
	<p>Note :Note 1: The deadline of 03/12/2020 does not apply to other ECAC (non-EU member) states, in LSSIP context they should not be labelled as being "Late "against this deadline. Note 2: In the context of LSSIP reporting, this SLoA may be reported, as "Not Applicable" where there is no any business need or intention to implement it. Note 3: In LSSIP reporting, the implemented PBN Specification should be listed/stated in the LSSIP comment field of this SLoA.</p>		
Supporting material(s):	<p>EUROCONTROL - Airspace Concept Handbook for the Implementation of Performance Based Navigation (PBN) - Edition 4.0 / 04/2021 Url : https://www.eurocontrol.int/publication/airspace-concept-handbook-implementation-performance-based-navigation-pbn</p> <p>ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : https://store.icao.int/en/performance-based-navigation-pbn-manual-doc-9613</p> <p>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 Url : https://www.easa.europa.eu/sites/default/files/dfu/Annexes%20to%20EDD%202018-013-R.pdf</p> <p>ICAO - Doc 9992 - Manual on the Use of Performance-based Navigation (PBN) in Airspace Design - First Edition / 01/2013 Url : http://store1.icao.int/</p> <p>ICAO - Doc 7030 - Regional supplementary Procedures - Edition 5 / 07/2011 Url : https://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx</p> <p>SJU - SESAR Solution 113: Data Pack for Optimised Low Level IFR routes for rotorcraft Url : https://www.sesarju.eu/cesar-solutions/optimised-low-level-ifr-routes-rotorcraft</p> <p>ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Edition 5 / 11/2011 Url : https://store.icao.int/</p>		
Finalisation criteria:	1 - RNP03, RNP1 or RNAV 1 ATS routes for rotorcraft above FL150 have been published in AIP and implemented.		
NAV12-ASP05	Implement Rotorcraft ATS routes below FL150	From:	By:

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	-	Applicability Area 1: 25/01/2024 Applicability Area 2: 06/06/2030
Action by:	ANS Providers	
Description & purpose:	Where providers of ATM/ANS have established ATS routes below FL150, for rotorcraft operations, they shall implement those routes in accordance with the requirements of the RNP 0.3, RNP 1 or RNAV 1 specifications. The providers are entitled to decide which of those three sets of requirements (specifications) they will comply with.	
	<p>Note :Note 1: The deadline of 25/01/2024 does not apply to other ECAC+ (non-EU SES) states, in LSSIP context they should not be labelled as being "Late "against this deadline.</p> <p>Note 2: In the context of LSSIP reporting, this SLoA may be reported, as "Not Applicable" where there is no any business need or intention to implement it.</p> <p>Note 3: In LSSIP reporting, the implemented PBN Specification should be listed/stated in the LSSIP comment field of this SLoA.</p>	
Supporting material(s):	<p>EUROCONTROL - Airspace Concept Handbook for the Implementation of Performance Based Navigation (PBN) - Edition 4.0 / 04/2021 Url : https://www.eurocontrol.int/publication/airspace-concept-handbook-implementation-performance-based-navigation-pbn</p> <p>ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : https://store.icao.int/en/performance-based-navigation-pbn-manual-doc-9613</p> <p>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 Url : https://www.easa.europa.eu/sites/default/files/dfu/Annexes%20to%20EDD%202018-013-R.pdf</p> <p>ICAO - Doc 9992 - Manual on the Use of Performance-based Navigation (PBN) in Airspace Design - First Edition / 01/2013 Url : http://store1.icao.int/</p> <p>ICAO - Doc 7030 - Regional supplementary Procedures - Edition 5 / 07/2011 Url : https://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx</p> <p>SJU - SESAR Solution 113: Data Pack for Optimised Low Level IFR routes for rotorcraft Url : https://www.sesarju.eu/sesar-solutions/optimised-low-level-ifr-routes-rotorcraft</p> <p>ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Edition 5 / 11/2011 Url : https://store.icao.int/</p>	
Finalisation criteria:	1 - RNP03, RNP1 or RNAV1 ATS routes for rotorcraft below FL150 have been published in AIP and implemented.	
NAV12-ASP06	Implement one rotorcraft RNP0.3, RNP01 or RNAV1 SID and STAR per instrument RWY	Applicability Area 1: 25/01/2024 Applicability Area 2: 06/06/2030
Action by:	ANS Providers	
Description & purpose:	Where SID or STAR are established for rotorcraft operations, at least one RNP03, RNP1 or RNAV 1 SID or STAR shall be implemented at all instrument runway ends by 25 January 2024.	
	<p>Note :Note 1: The deadline of 25/01/2024 does not apply to other ECAC+ (non-EU SES) states, in LSSIP context they should not be labelled as being "Late "against this deadline.</p> <p>Note 2: In the context of LSSIP reporting, this SLoA may be reported, as "Not Applicable" where there is no any business need or intention to implement it.</p> <p>Note 3: In LSSIP reporting, the implemented PBN Specification should be listed/stated in the LSSIP comment field of this SLoA.</p>	

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Supporting material(s):	<p>EUROCONTROL - Airspace Concept Handbook for the Implementation of Performance Based Navigation (PBN) - Edition 4.0 / 04/2021 Url : https://www.eurocontrol.int/publication/airspace-concept-handbook-implementation-performance-based-navigation-pbn</p> <p>ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : https://store.icao.int/en/performance-based-navigation-pbn-manual-doc-9613</p> <p>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 Url : https://www.easa.europa.eu/sites/default/files/dfu/Annexes%20to%20EDD%202018-013-R.pdf</p> <p>ICAO - Doc 9992 - Manual on the Use of Performance-based Navigation (PBN) in Airspace Design - First Edition / 01/2013 Url : http://store1.icao.int/</p> <p>ICAO - Doc 7030 - Regional supplementary Procedures - Edition 5 / 07/2011 Url : https://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx</p> <p>ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Edition 5 / 11/2011 Url : https://store.icao.int/</p>		
Finalisation criteria:	1 - At least one SID and STAR have been implemented per instrument RWY.		
NAV12-ASP07	Implement all rotorcraft RNP0.3, RNP01 or RNAV1 SID and STAR per instrument RWY	From: -	By: 06/06/2030
Action by:	ANS Providers		
Description & purpose:	Where SID or STAR are established for rotorcraft operations, all SID and STAR shall be implemented as RNP03, RNP1 or RNAV 1 at all instrument runway ends by 06 June 2030.		
	<p>Note :Note 1: The deadline of 06/06/2030 does not apply to other ECAC+ (non-EU SES) states, in LSSIP context they should not be labelled as being "Late "against this deadline.</p> <p>Note 2: In the context of LSSIP reporting, this SLoA may be reported, as "Not Applicable" where there is no any business need or intention to implement it.</p> <p>Note 3: In LSSIP reporting, the implemented PBN Specification should be listed/stated in the LSSIP comment field of this SLoA.</p>		
Supporting material(s):	<p>EUROCONTROL - Airspace Concept Handbook for the Implementation of Performance Based Navigation (PBN) - Edition 4.0 / 04/2021 Url : https://www.eurocontrol.int/publication/airspace-concept-handbook-implementation-performance-based-navigation-pbn</p> <p>ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : https://store.icao.int/en/performance-based-navigation-pbn-manual-doc-9613</p> <p>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 Url : https://www.easa.europa.eu/sites/default/files/dfu/Annexes%20to%20EDD%202018-013-R.pdf</p> <p>ICAO - Doc 9992 - Manual on the Use of Performance-based Navigation (PBN) in Airspace Design - First Edition / 01/2013 Url : http://store1.icao.int/</p> <p>ICAO - Doc 7030 - Regional supplementary Procedures - Edition 5 / 07/2011 Url : https://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx</p> <p>ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Edition 5 / 11/2011 Url : https://store.icao.int/</p>		
Finalisation criteria:	1 - All SID and STAR have been implemented at all instrument RWYs.		
NAV12-ASP08	Establish the transition plan for PBN in ANS provision	From: 03/12/2020	By: 06/06/2030
Action by:	ANS Providers		
Description & purpose:	<p>This SLoA is mandatory only for the States subject to Commission Implementing Regulation (EU) 2018/1048 of 18 July 2018.</p> <p>Establish and implement a transition plan for using PBN. The transition plan shall be kept up-to-date. The transition plan shall be consistent with the European ATM Master Plan and the common projects referred to in Article 15a of Regulation (EC) No 550/2004 of the European Parliament and of the Council.</p> <p>Consult all of the following parties on the draft transition plan and the draft of any significant updates thereof and take account of their views where appropriate:</p> <p>(a) aerodrome operators, airspace users and representative organisations of such airspace users affected by the provision of ANS services;</p> <p>(b) the Network Manager;</p> <p>(c) ANS providers in adjacent airspace blocks.</p> <p>Submit the results of the consultation, as well as the draft transition plan, or the draft significant update thereof, for approval to the competent authority.</p>		

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	<p>Note :Note: This SLoA is recommended as the best practice to the States which are not subject to Commission Implementing Regulation (EU) 2018/1048 of 18 July 2018.</p>		
Supporting material(s):	<p>EUROCONTROL - Airspace Concept Handbook for the Implementation of Performance Based Navigation (PBN) - Edition 4.0 / 04/2021 Url : https://www.eurocontrol.int/publication/airspace-concept-handbook-implementation-performance-based-navigation-pbn ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : https://store.icao.int/en/performance-based-navigation-pbn-manual-doc-9613 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 Url : https://www.easa.europa.eu/sites/default/files/dfu/Annexes%20to%20EDD%202018-013-R.pdf ICAO - Doc 9992 - Manual on the Use of Performance-based Navigation (PBN) in Airspace Design - First Edition / 01/2013 Url : http://store1.icao.int/ ICAO - Doc 7030 - Regional supplementary Procedures - Edition 5 / 07/2011 Url : https://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Edition 5 / 11/2011 Url : https://store.icao.int/</p>		
Finalisation criteria:	1 - The draft transition plan, or the draft significant update thereof, has been submitted to the competent authority for approval.		
NAV12-USE01	Install appropriate RNP equipment	From: -	By: 06/06/2030
Action by:	Airspace Users		
Description & purpose:	Install equipment meeting operational requirements for RNP operations.		
Supporting material(s):	<p>ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : https://store.icao.int/en/performance-based-navigation-pbn-manual-doc-9613 ICAO - Doc 8168-Volume II - Aircraft Operations - Volume II - Construction of Visual and Instrument Flight Procedures - Edition 5 / 11/2011 Url : https://store.icao.int/</p>		
ATM Master Plan relationship:	[A/C-04b]-Flight management and guidance for RNP 0.3 (Category H(rotorcraft)) in all phases of flight, except final approach and initial missed approach		
Finalisation criteria:	1 - Aircraft have been fitted with suitable RNP aircraft equipment.		
NAV12-USE02	Train flight crews in RNP ATS routes	From: -	By: 06/06/2030
Action by:	Airspace Users		
Description & purpose:	Provide sufficient training to crew (e.g. simulator, training device, or aircraft) on the aircraft RNP system to the extent that the pilot is familiar with RNP equipment operating procedures and system-specific information.		
	<p>Note :Operators need not establish a separate training programme if they already integrate RNAV training as an element of their training programme. However, the operator should be able to identify the aspects of RNP 0.3 operations covered within their training programme.</p>		
Supporting material(s):	<p>ICAO - Doc 9613 - Performance-based Navigation (PBN) Manual - Edition 4 / 03/2013 Url : https://store.icao.int/en/performance-based-navigation-pbn-manual-doc-9613</p>		
Finalisation criteria:	1 - Training manuals have been updated to include RNP equipment operating procedures. 2 - The aircrew has been trained accordingly.		

