

Established on RNP (AR) approach concept

RNP AR Operational Approval

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Jorge Blanco Monge
Services Delivery
NAVBLUE - AIRBUS

ICAO APAC PBN ICG 10 / Bangkok

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Approval for RNP AR operations (*based on EASA AIR-OPS Nov 2022*)

01 PBN specific approval

Delivered by the CAA of the State of the operator.

It addresses operator's capability to fly RNP AR in general:

- Aircraft preparation
- Flight preparation
- Crew preparation
- Operating procedures
- Safety assessment in accordance with the complexity of the procedure
- Operations monitoring

02 Procedure-specific approval

Delivered by the CAA of the State of the operator in coordination with the competent authorities of the aerodrome.

Required in case of:

- Private procedure, or
- Procedure with design criteria deviations, or
- Identified as special in the AIP, or
- Identified by the airport competent authority

It addresses operator's capability to fly a particular RNP AR procedure

- Compliance to specific local regulation
- Additional particular flight crew training
- Overall analysis and demonstration of means to safely operate this procedure (**specific FOSA**)

RNP AR general requirements

Refer to applicable regulation for an accurate list of requirements. This slide lists the usual (according to major regulators) topics to address to get a PBN specific Approval



Aircraft readiness

RNP AR certification (in the AFM)

MEL - Equipment



Flight preparation

Normal, abnormal and contingency procedures

Navigation database validation

GNSS availability prediction (RAIM)

Dispatch procedures

Flight Crew composition



Crew preparation

Initial training: ground class and flight training

Recurrent training



Ops monitoring

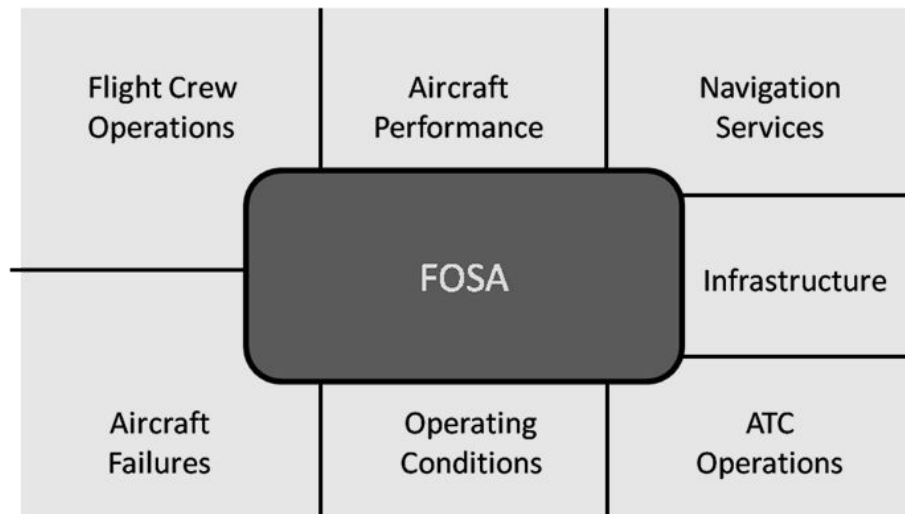
Monitoring program

List of reportable events

FOSA

Each RNP AR procedure has its specificities. A thorough analysis must be performed to demonstrate it can be operated safely. This analysis is developed in the Flight Operations Safety Assessment (FOSA).

A FOSA analyses all aspects of the operation with an impact on safety. It demonstrates how the procedure may be flown, and clearly indicates what operational measures shall be taken to operate (such as weight limitations, extraction maneuvers...)



FOSA elements

Here are a few examples of items that must be addressed in a procedure-specific FOSA:



Applicable aircraft

Clearly identify which aircraft in the operator fleet are covered by this demonstration

-> A FOSA update is required for any new aircraft configuration in the fleet!

Performance configuration:

Aircraft Model	Engine type	Performance Data Base	MTOW & MLW
A320-251N	CFM LEAP-1A26	AE251A05	MTOW = 79 000 kg MLW = 67 400 kg

System configuration:

Aircraft	FMS	TAWS	RNP AR capability
A320 type	Honeywell H3 PC19	HONEYWELL EGPWS 89000942-151	RNP AR <0.3 (MOD 161574)



Procedure deviations

For any design criteria deviation in the published procedure, FOSA shall demonstrate that the procedure can be flown safely.



Aircraft performance

FOSA shall demonstrate that the procedure can be flown with the required terrain and obstacle clearance, and provide the associated environmental limitations (weight, wind, temperature...)



Failures

FOSA shall demonstrate that the procedure can be flown (or that efficient contingency procedures are set in place) in case of aircraft failures. This generally requires simulator or in-flight demonstrations.



Thank you



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