User Requirements for Air Traffic Services (URAT)

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IATA

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Presentation Overview

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ICAO EUR/MID Radio Navigation Symposium, Antalya, 6-8 February 2024

About IATA

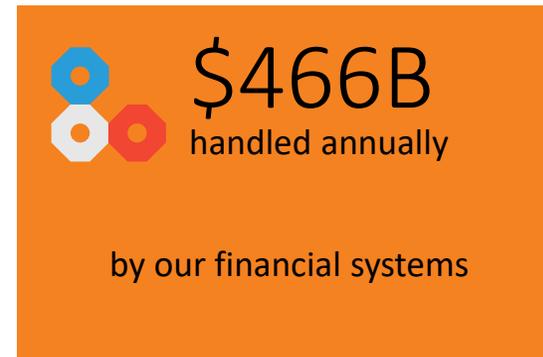# Our mission is to represent, lead & serve the industry

- Who we are

Since 1945, we are the leading **air transport** non-profit association that helps formulate industry policy and develops global commercial standards upon which the air transport industry is built.

- Our vision

To work together to shape the future growth of a safe, secure, and sustainable air transport industry that connects and enriches our world.

- IATA in numbers

322 member airlines	$466B handled annually	1,500 full-time staff
83% of total air traffic	by our financial systems	in 56 offices

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User Requirements for Air Traffic Services (URAT)

URAT provides **international Airlines perspectives** on Communications, Navigation and Surveillance (CNS) technologies

- Introduction of new technological solutions must be based on a positive airline business case.

- New revision Ed.4.0 Dec.2023.

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Navigation Domain

Navigation technology and related infrastructure should:

- o Have measurable safety /operational improvements agreed by airlines.
- o Follow an inclusive airline consultation process.
- o Be supported by cost-benefit analysis.
- o Follow ICAO user charges principles.
- o Ensure **Interoperability** between **regional implementations** of core technologies.

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DME & VOR

DME & VOR / Minimum Operational Networks (MON)

DME and VOR installations should be reduced in number with the goal of establishing **a Minimum Operational Networks** of operationally useful ground stations **including those justified as backup for GNSS.**

DVOR (Doppler VOR) ground station, collocated with DME.

2 nm (12,000 feet)

5,4 nm

2 nm (12,00 feet)

5 nm

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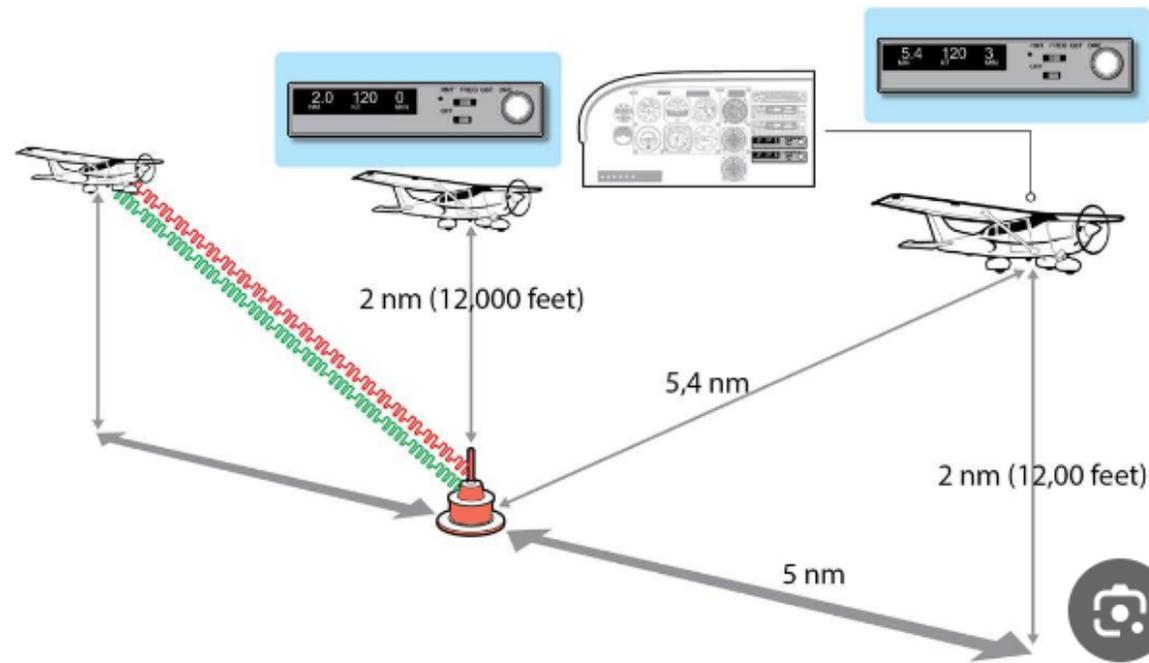
Non-Directional Beacon (NDB)

- Support **immediate decommissioning of NDBs** and removal from airline user charges.

- Airports with only NDB non-precision approach
  - ADF procedure should **be replaced by a GNSS-based RNP APCH** with vertical guidance.

- NDBs used for en-route operations should be replaced **by PBN waypoints.**

Global Navigation Satellite System (GNSS)

- Preferred navigation infrastructure to enable the full benefits of PBN, especially RNP for all phases of flight

- GNSS Augmentations

ABAS: Receiver Autonomous Integrity Monitoring (RAIM).

Position: Support ABAS as preferred augmentation.

Ground-Based Augmentation System (GBAS)

GBAS facilitates precision approach to multiple runways from a single base station

- **Short to mid-term:** Support GBAS as a supplement to ILS for precision approach.
- **Longer term:** Support GBAS to replace ILS while keeping an ILS MON for back up purposes.

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Global Navigation Satellite System (GNSS)

SBAS

- Airlines equipping with SBAS do so based on their operational requirements and specific business case.

General Principles:

- SBAS mandates are operationally unjustified. **SBAS should be supported as a non-mandated technology.**

- Operational restrictions due to lack of SBAS equipage are unjustified.

- SBAS costs should not be imposed directly or indirectly on airlines that do not use the technology.

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Dual-Frequency Multi-Constellation (DFMC) GNSS

DFMC reduces ionospheric error and increases service availability, reliability and resilience

- Operational and technical requirements for use of DFMC GNSS should be performance-based.
- States should refrain from mandating sole use of own State constellation.
- Providing that required navigation performance can be met, airlines should be allowed to navigate using all available on-board capability.

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Summary of Position on Navigation

Technology / Application	Support	Maintain	Neutral	Do not support
ABAS	X			
DFMC	X*			
DME		X*		
GBAS	X			
GNSS	X			
ILS	X			
MLS				X
NDB				X*
PBN	X			
SBAS			X*	
TACAN				X
VOR		X*		
WGS-84	X			

* Use with limitations

Thank You!