

CONSTELLATIONS FOR AIR TRAFFIC MANAGEMENT

GAPS in current CNS infrastructure

Continuity with the same level of service cannot be achieved in oceanic and remote areas. The same tools are not available in all areas, and this leads to discontinuity in management processes and a lack of efficiency.



Surveillance

- ADS-B
- Space based
- Multilateration

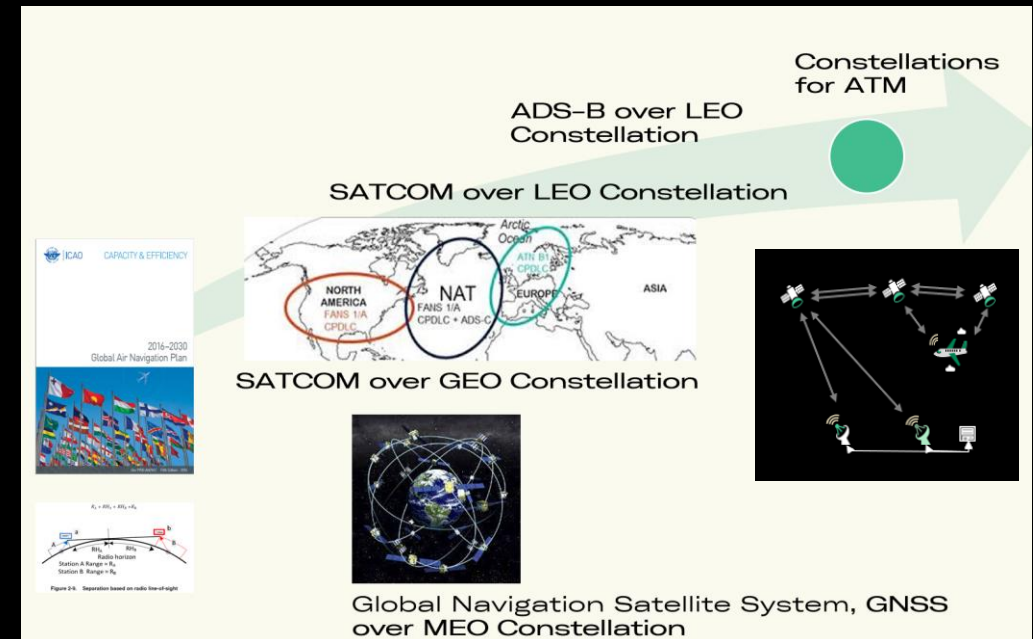
Communications

- VHF Voice
- VHF Data – ATS
- VHF Data - AOC



The FUTURE of Space-based services

Constellations designed specifically for ATM needs.



Interoperability with existing systems.

Constellation renewal, adaptation to existing & future services.

ROAD TO SPACE BASED CNS SERVICES

HOW TO INCREASE PENETRATION OF SB-CNS SERVICES?

- Ensure interoperability
- Work on Regulation
 - ICAO Manuals & SARPS
 - Harmonization
- Demonstration projects



The European Entities know in deep the situation and the challenges we are facing.



ICAO as global Coordinator for Regulation Specifications and Practices.



Other Regional Organizations, USA, China, Japan as Airlines Associations following ICAO Recommendations.

OPPORTUNITIES

- Use LEO constellations for new uses in ATM.
 - Quick adoption of technologies globally
- ANSPs
 - Solve existing and future problems.
- AIRLINES
 - Fly preferred routes, reducing flight time, fuel & emissions