



PJ14 EECNS COM Open Day

SESAR Strategic Overview

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Founding Members



SESAR vision

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OUR VISION

With SESAR, the future of air traffic management is characterised by:

Increased **virtualisation**, regarding provision of services irrespective of the location of physical infrastructure

Integration of all vehicles into Europe's airspace, including drones

Flight-centric operations, so airlines can fly their preferred routes

Improved information sharing, creating an intranet of services and applications accessible by all aviation stakeholders

Interoperable systems, allowing connectivity of systems across borders

Reminder



CNS Roadmap & Strategy within Master Plan

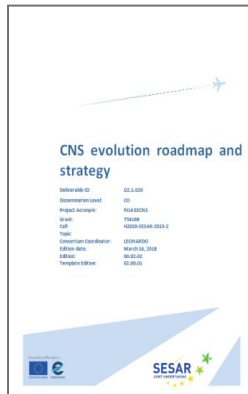
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Strategy for
Future CNS
Evolution

Combining Top-Down &
Bottom-Up

CNS
Roadmap &
Strategy



EUROPEAN ATM MASTER PLAN

Executive view

Digitalising
Europe's
Aviation
Infrastructure



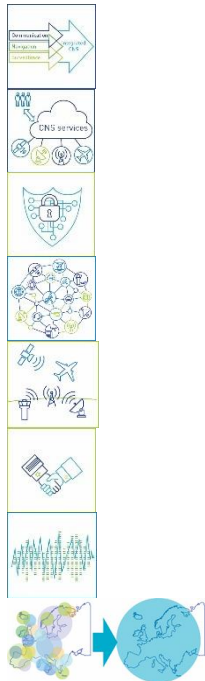
CNS
Solutions



EASA
& Regulation



European
Global Navigation
Satellite Systems
Agency



SESAR iCNSS - Target Architecture

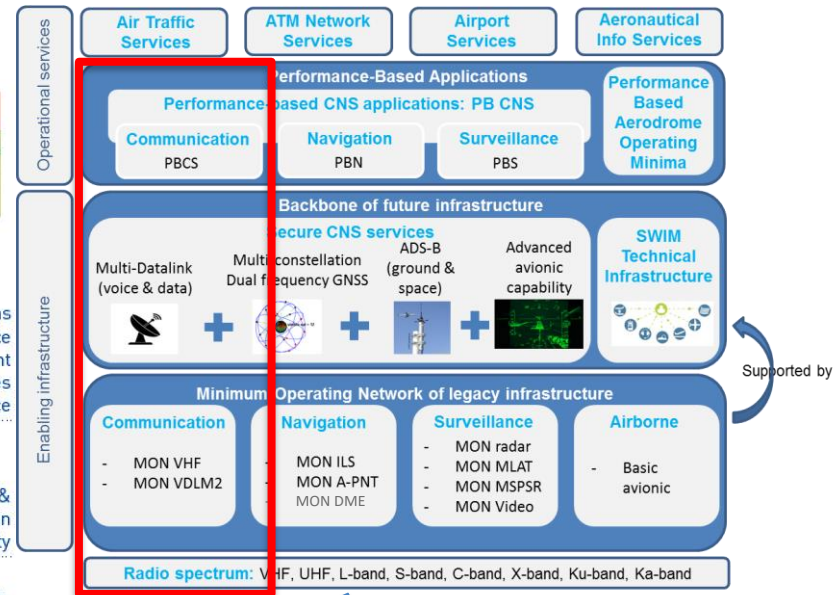
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Target Architecture - AAS

CNS Architecture – SESAR PJ14

Airspace Architecture - Study



SESAR iCNSS - Target Maturity

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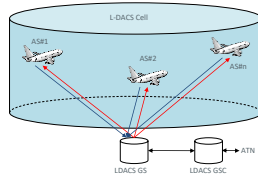
SESAR
JOINT UNDERTAKING

Future Communication Infrastructure

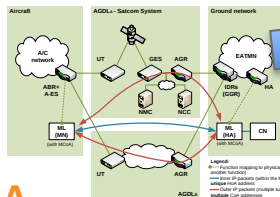
Multi Link Management



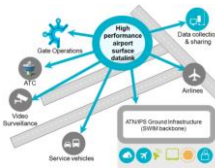
Future Terrestrial LDACS



Future Satellite SATCOM Class B + A



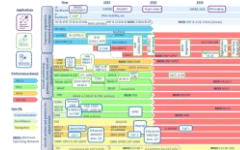
AeroMACS ATN/IPS ATN/OSI + Multilink



GA TIS/FIS



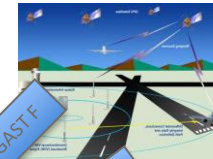
CNS Environment Evolution



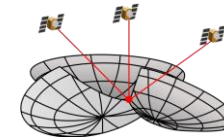
Wave 1 Data Packs towards Wave 2 Call

Future Navigation Infrastructure

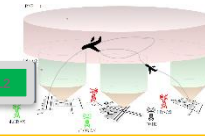
GBAS



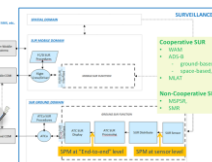
MC/MF GNSS



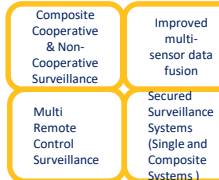
A-PNT



Surveillance Performance Monitoring



Evolution of Coop. and Non-Coop. Surveillance



Future Surveillance Infrastructure



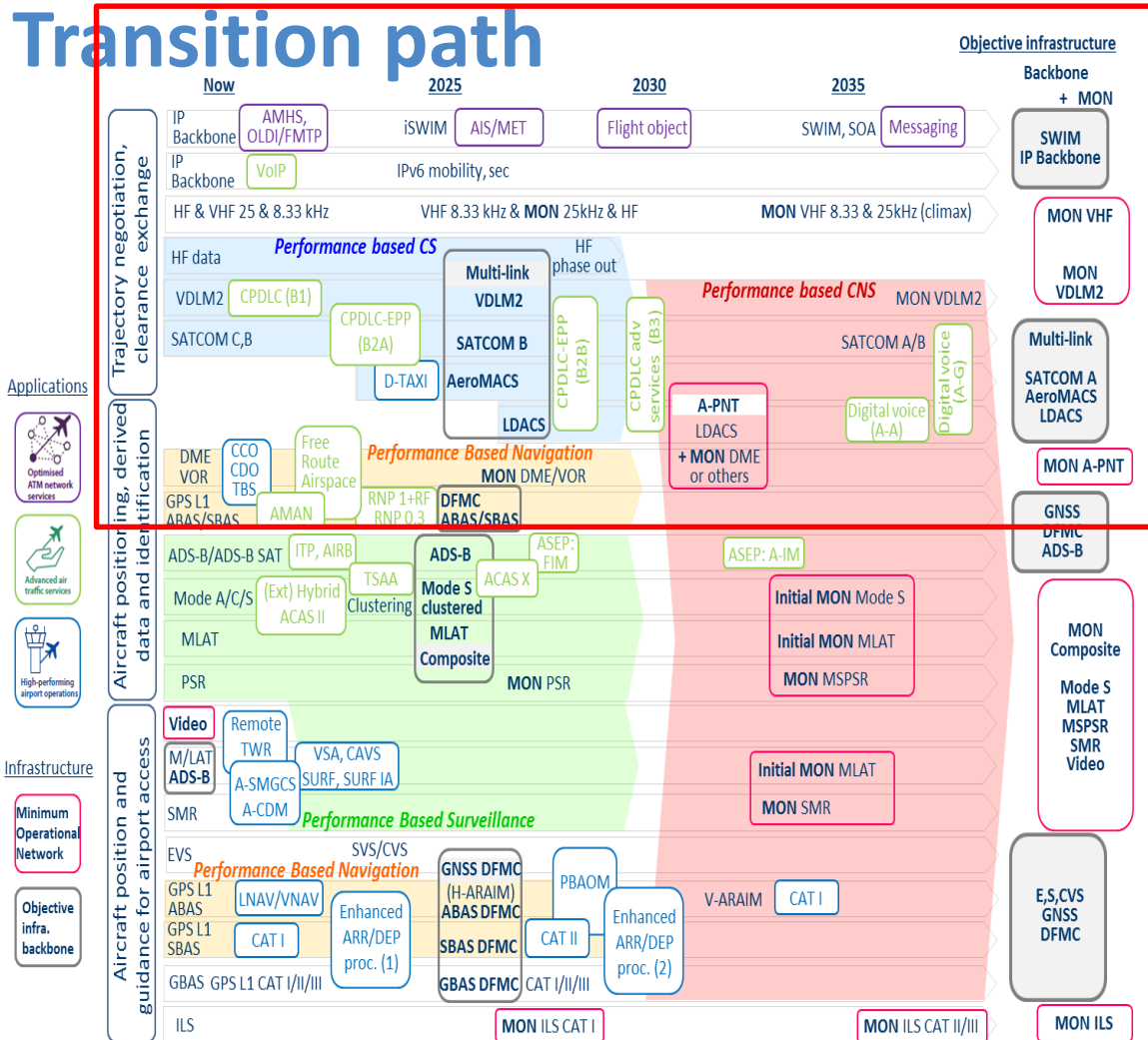
SESAR iCNS - Roadmap: COM

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Transition path



Main highlights for COM:

1. From 2025 Multi-link based on:

- Terrestrial
 - VDL2 (capacity limit 2024)
 - and LDACS from 2025
- Satellite
 - SATCOM Class B
- Airport Surface
 - AeroMACS

2. Gradual development of

- CPDLC: B1
- CPDLC-EPP: B2A, B2B,
- CPDLC Adv: B3

3. From 2035/2035+

- MON VHF 8.33 kHz & 25kHz Climax
- MON VDL2
- SATCOM Class B to Class A
- Digital Voice (A-A, A-G)

SESAR iCNSS – S2020 Wave 2 COM



FCI Services: The Mobile Communication System of Systems

- Multi-link for Terrestrial / Satellite (Oceanic & Terrestrial) / Airport (Surface)
- Enhancing with Digital Voice and Security aspects

L-DACS: The Wide Band successor of VDL Mode 2

- A/G LDACS for Data and Voice. A/A LDACS started

Future Satellite Comm.: Connecting mobiles almost everywhere

- Moving from SATCOM Class B to SATCOM Class A (IPS)

Hyper Connected ATM: Considering all connectivity opportunities

- Including combining with Commercial Technologies
- Broadband

Integrated CNS&S - Cross CNS domain consistencies and opportunities

- Including Spectrum Efficiency
- iCNSS Service Based Approach
- iCNSS Performance Based Approach



SESAR Strategic Overview

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Thank you very much for your attention!



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