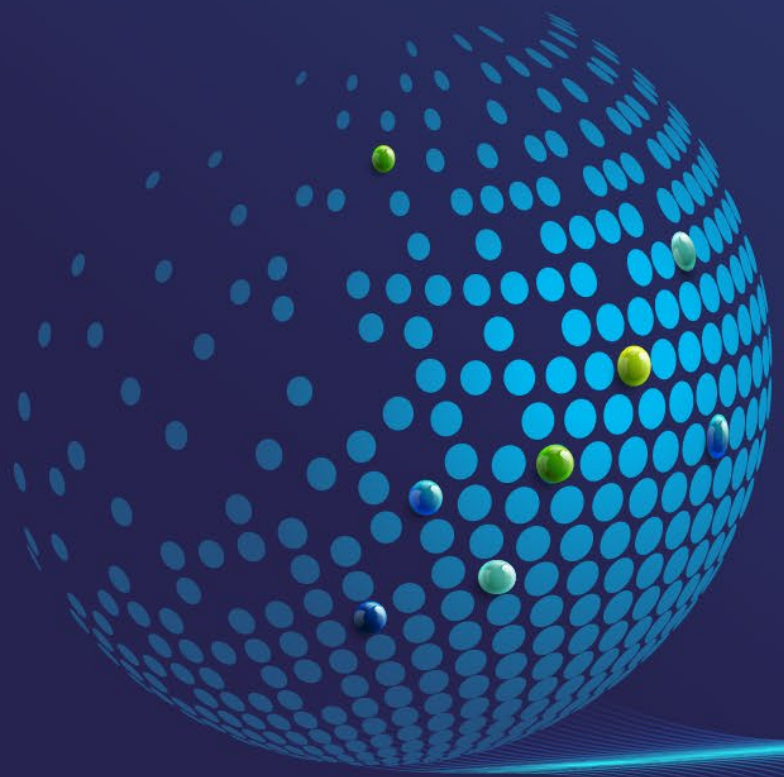


HyperConnected ATM Concept

Stéphane Tamalet - Airbus

SESAR 2020 SHOWCASE

#SESARShowcase

#EuropeForAviation

Context

ATC and AOC datalink traffic congestions

- Current communication systems reaching their limits, both in terms of capacity & performance
- ATC and AOC data traffic will increase (EPP, B2, future ATM concepts)

Booming of aircraft connectivity solutions for non-safety (e.g. passengers') communications

- 4G/5G at Airports, Ka/Ku broadband Satcom or Air-to-Ground In Flight Connectivity
- Additional potential solutions are coming: Starlink, OneWeb, Amazon Kuiper, 6G …
- Impressive performance in nominal conditions (low latency, high capacity, business critical availability)

In Flight Connectivity market is predicted to skyrocket

- In Flight Connectivity is now very frequently installed on new aircraft

Could we use these « commercial » solutions as complementary links to support ATC and AOC datalink traffic ?

SESAR2020 PJ.14 /Solution 61 Hyper Connected ATM

PJ.14 W2 I-CNSS

sesar JOINT UNDERTAKING

Scope of the solution

Explore the possibility to **use commercial public radio links** and "open" network services **to support safety-related communications**.

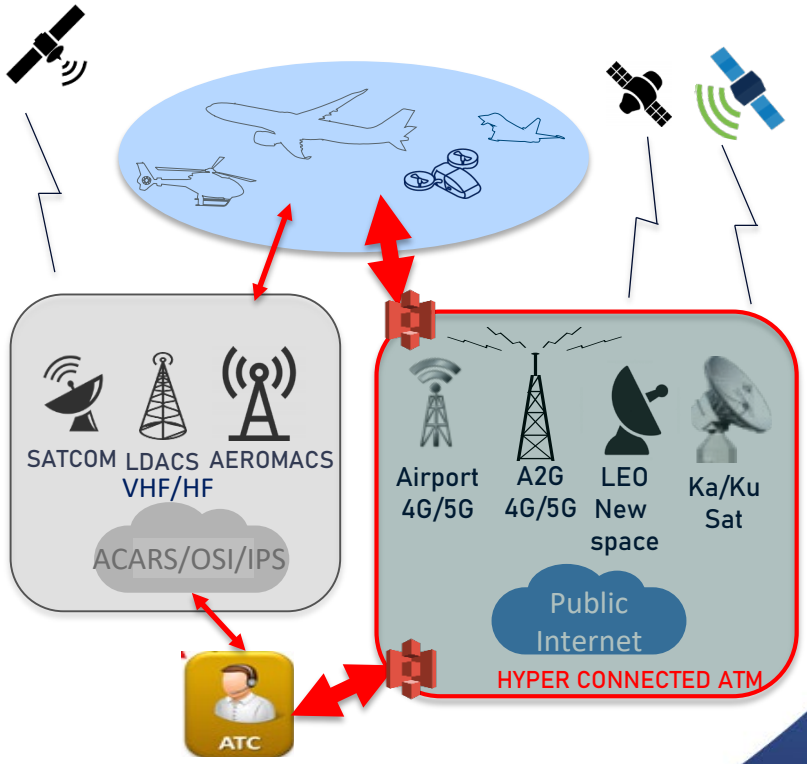
Partners

AIRBUS, ENAIRE, EUROCONTROL, FREQUENTIS, INDRA, LEONARDO, THALES AVS

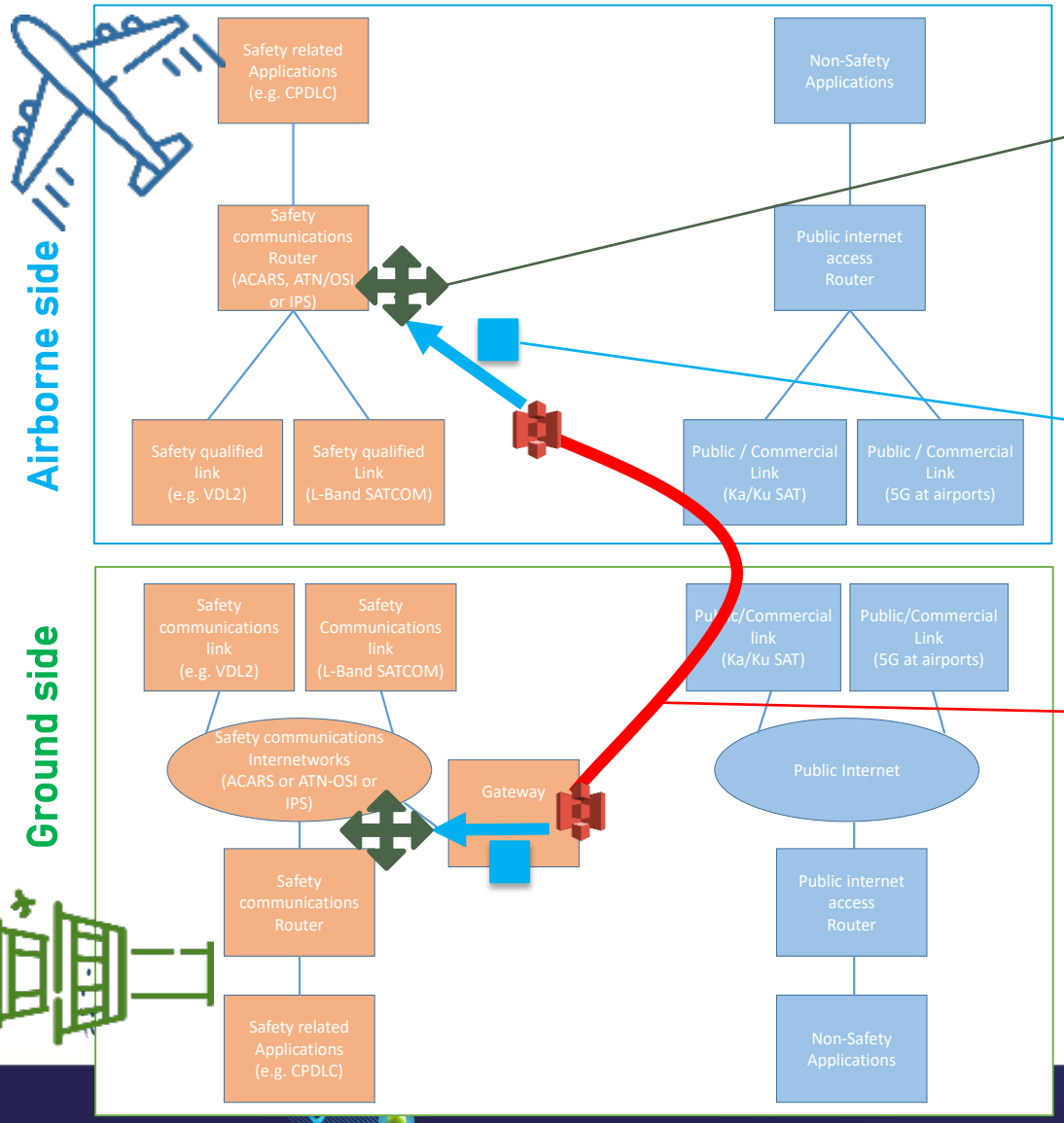
Maturity Level

Starting at TRL0 -> TRL 2 reached

Noting that the solution leverage an already deployed and mature public radio communication infrastructures



Hyperconnected ATM overview



3 **SAFETY & PERFORMANCE BASED MULTILINK with FALL BACK**

2 **ADEQUATE LINK STATUS AND PERFORMANCE MONITORING**

1 **APPROPRIATE SECURITY PROTECTIONS**

NOTE: Public / Commercial links & systems are used « as they are »

Next steps

- SESAR 3 Industrial Research (2023 – 2026)
  - FCDI project – WP3 “Hyper Connectivity Percursor”
  - FCDI project – WP4 “IPS Enhancements”
- ESA IRIS Phase 3 – Global Solution (2022 – 2025)
  - WP3.6 – “Safety over Ka”
- Standardisation of the concept to be started