

Airbus Engineering unlimited performance inspired



New technologies in ATM: Safety Assurance through Proof of Concept

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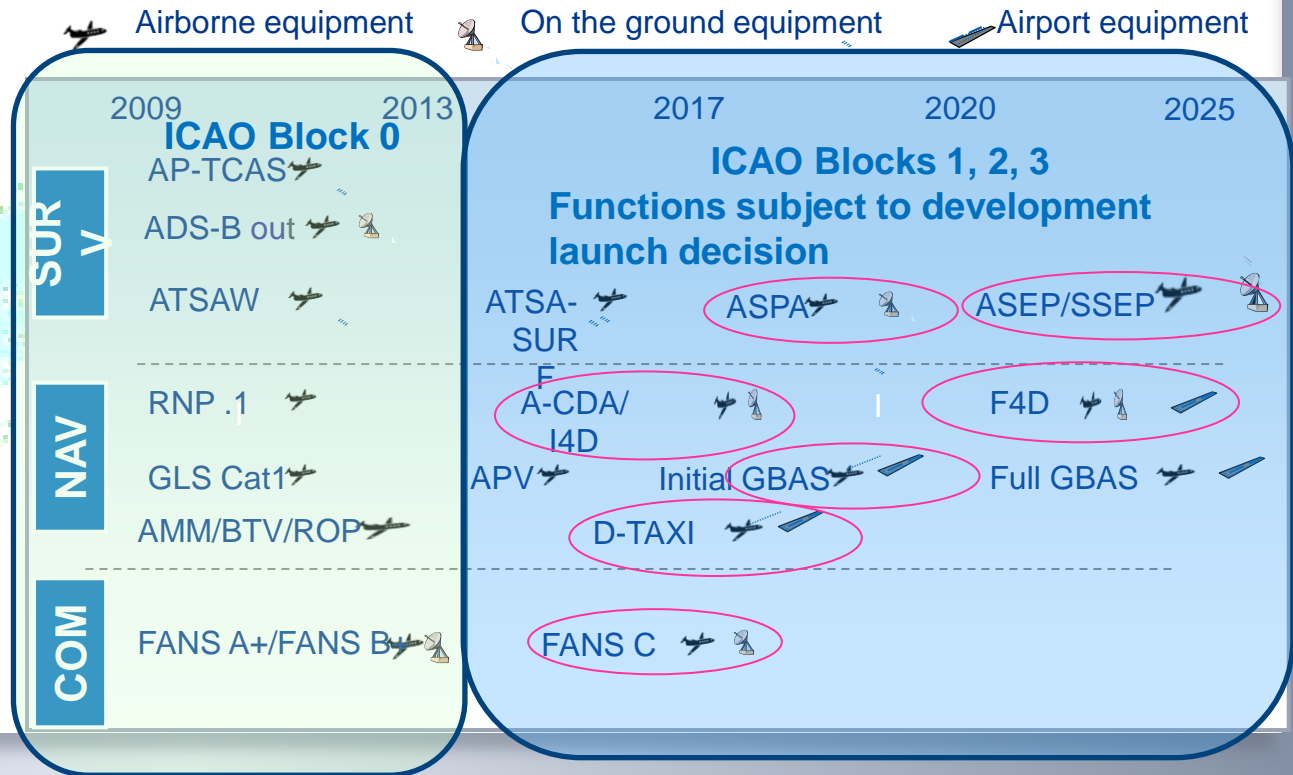
Paris, 13th June 2013

New technologies in ATM

New CNS/ATM technology

Merging on-ground and on-board technology

ICAO initiative to develop standard for harmonized implementation and operation (SARPS & Manual) in a timely manner for the technology that can be implemented globally.

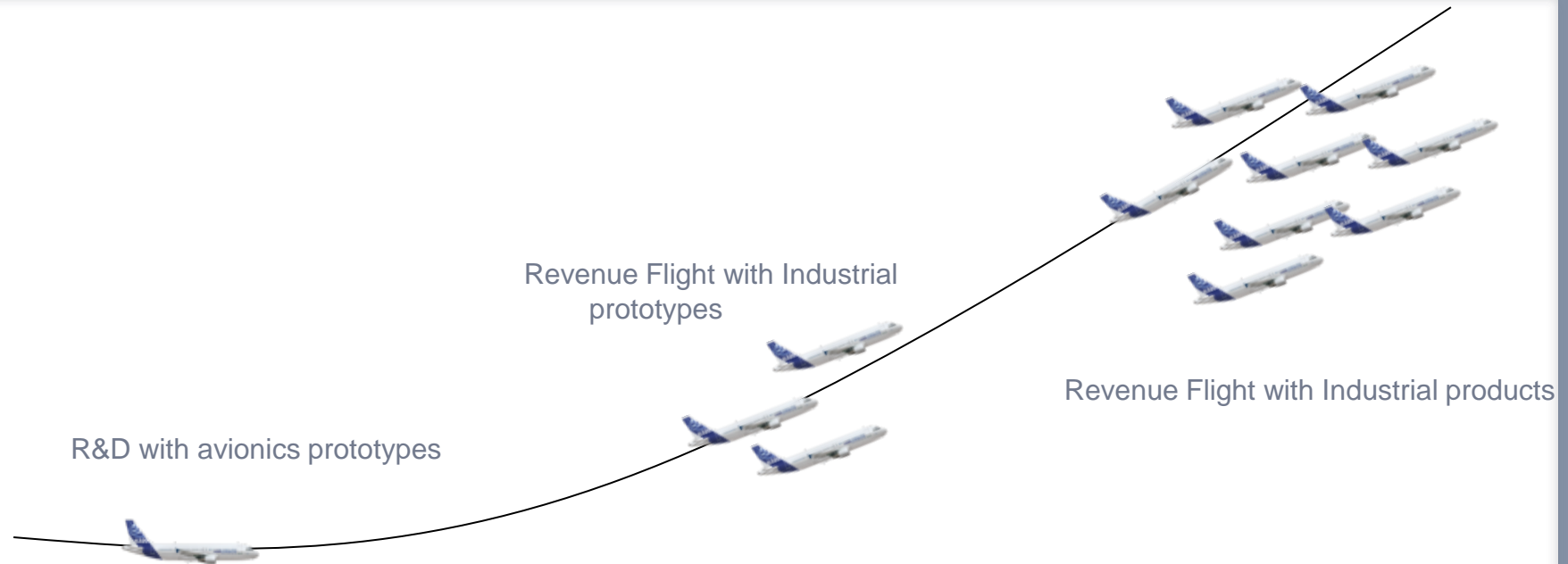


Key Drivers for Proof of Concept

Making best use of new technologies in ATM is the challenge that aviation industry has to face. Key drivers for Proof of concept:

- **New Certification Approach:** New technologies merging airborne & ground avionics, introducing new dependencies necessitate a more integrated certification approach
- **New Implementation approach** New technologies will help shape new concepts to achieve higher performance targets. But decision to deploy should be made when there is evidence that the performance targets are achievable in actual environment which necessitates credible business case.

Proof of Concept



Proof of Concept / Large Scale Demonstrations

Integration

Industrialization &
Approval

Implementation

**Proof of Concept
in support of
Integrated Aviation System
and
Integrated Regulatory Framework**

End-to-End Aspects validated by Proof of Concept

CNS/ATM Technology Prototypes (A/C, OPS & ATM)

SAFETY & PERFORMANCE & INTEROPERABILITY
Requirements (A/C, OPS & ATM))

Initial Standards + SESAR outputs

Proof of Concept

International
standard
validated by POC

Industry Standard
validated by POC

End-to End
Regulatory Material
Initiated by POC

**Risk-based approach = Collaborative Process for Risk Assessment
for A/C, OPS & ATM - Common understanding of overall risk**

SESAR Approach for Proof of Concept

Proof of concept to gradually pave way for Integrated Aviation System:

- **Coordinate approval processes with up-front involvement of the competent authorities (EASA, NSAs),**
- **Establish collaborative framework between industry and regulators (SESAR POC Approach) to:**
 - 1. Design a new regulatory framework integrating capacity and safety objectives (SESAR POC GM)**
 - 2. Validate this approach using Proof of Concept results (SESAR POC Lessons Learnt)**

Thank you



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