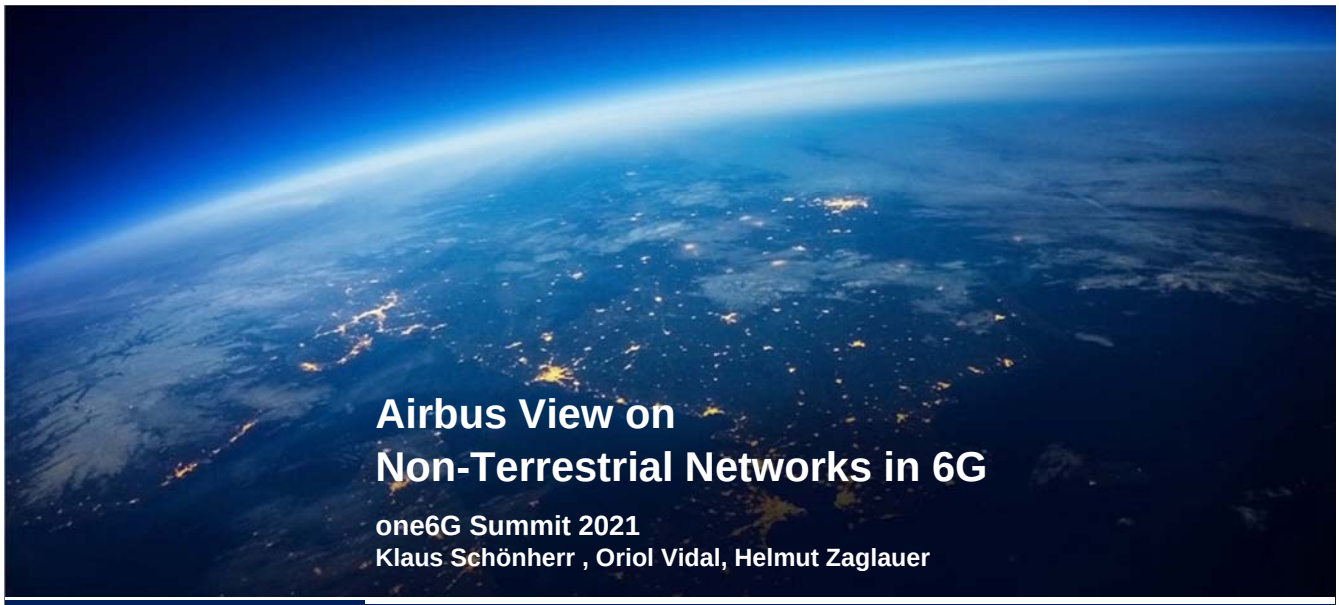


Airbus View on Non-Terrestrial Networks in 6G

one6G Summit 2021

Klaus Schönherr , Oriol Vidal, Helmut Zaglauer

DEFENCE AND SPACE

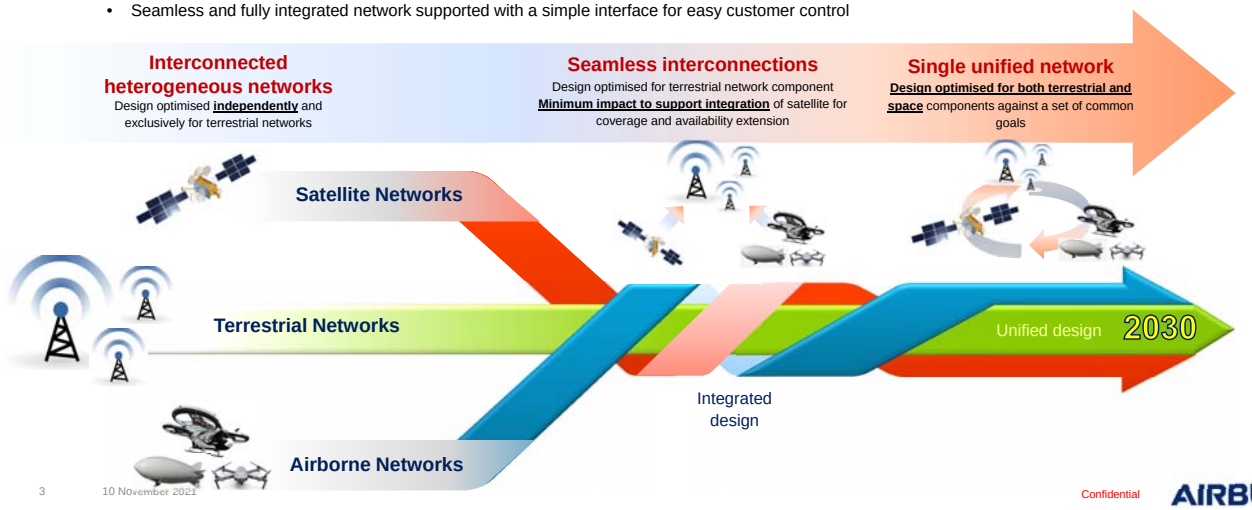
AIRBUS

Space Telecom future networks & E2E connectivity solutions

Airbus DS Vision

From satcom integration to "native" space network nodes

- Software-defined network solutions to streamline end-to-end connectivity
- Auto-adaptative system responding to internal & external stimuli
- Seamless and fully integrated network supported with a simple interface for easy customer control

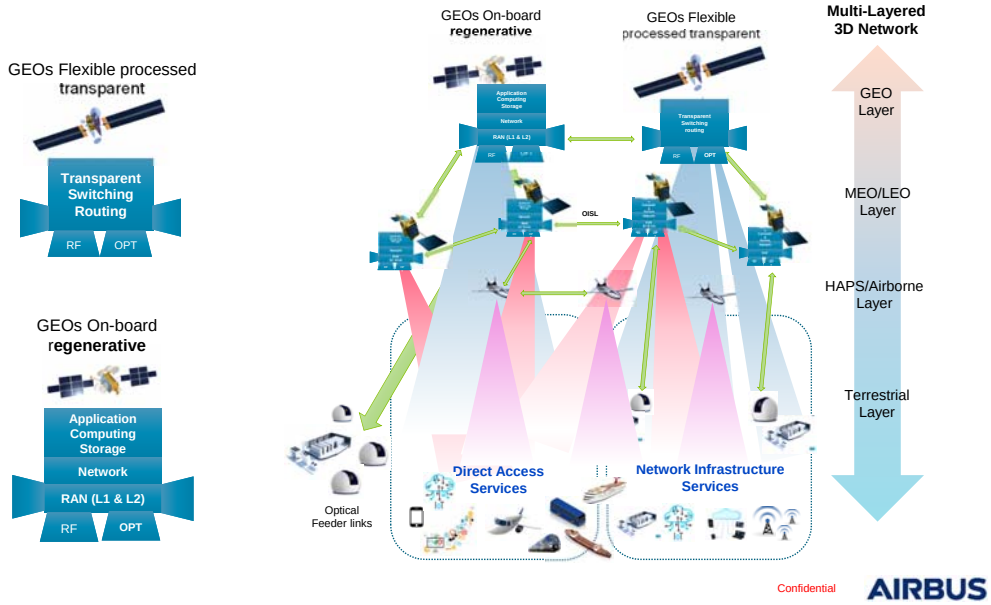


AIRBUS

Space Telecom integrated networks & E2E connectivity solutions
Overview of Integrated Network Architecture

Architecture Topology vision

- Multi-layer (Space + Airborne + Terrestrial) network
- "Network defined" space segment nodes
- Fully exploiting GSO and NGSO capabilities
- E2E Orchestration & Management
- Sat/Terr Unified communication protocols
- AI/ML-based automated and adaptive system



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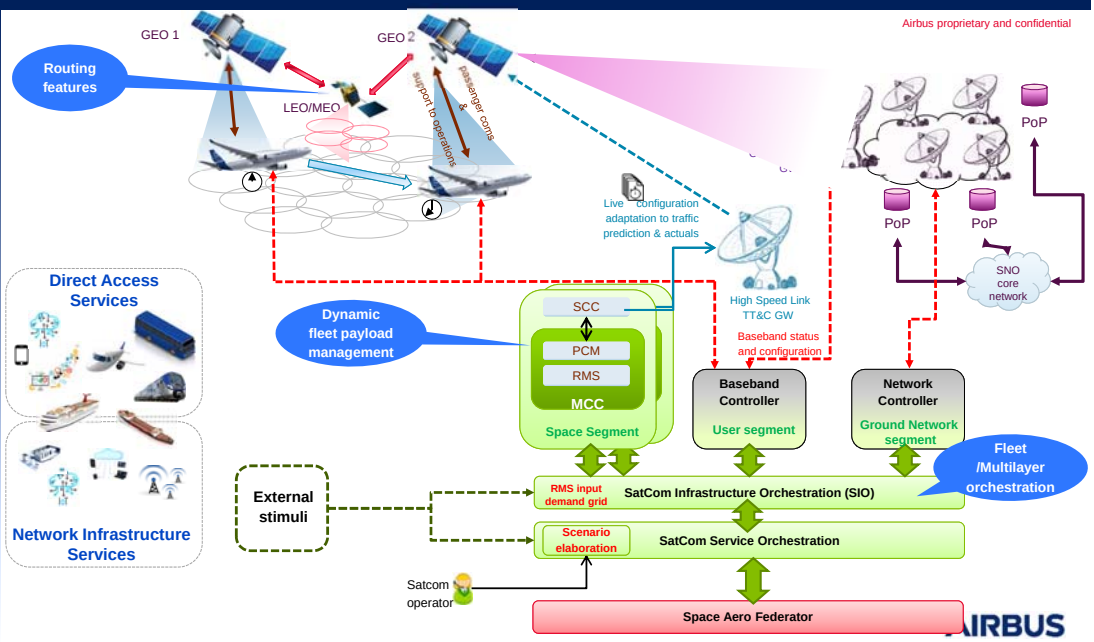
Space Telecom integrated networks & E2E connectivity solutions
Illustration: possible use cases & required features

USE CASE : MultiSat/multi-layer dynamic connectivity

- Multilayer software defined networks
- Fleet / multi-layer orchestration
- Management/Orchestration of regenerative space nodes (either GEO and/or LEO)



AIRBUS

Space Telecom integrated networks & E2E connectivity solutions
Illustration: possible use cases & required features

USE CASE : 6G integrated networks

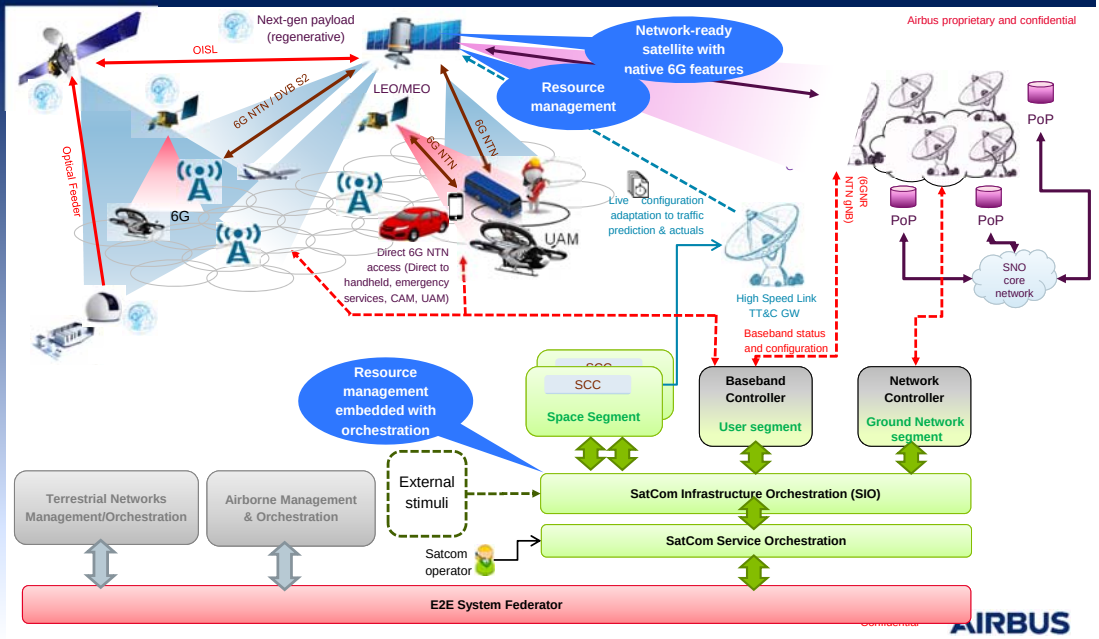
Smart network paradigm

Next gen satellite payload with native on-board resource management & network/6G features

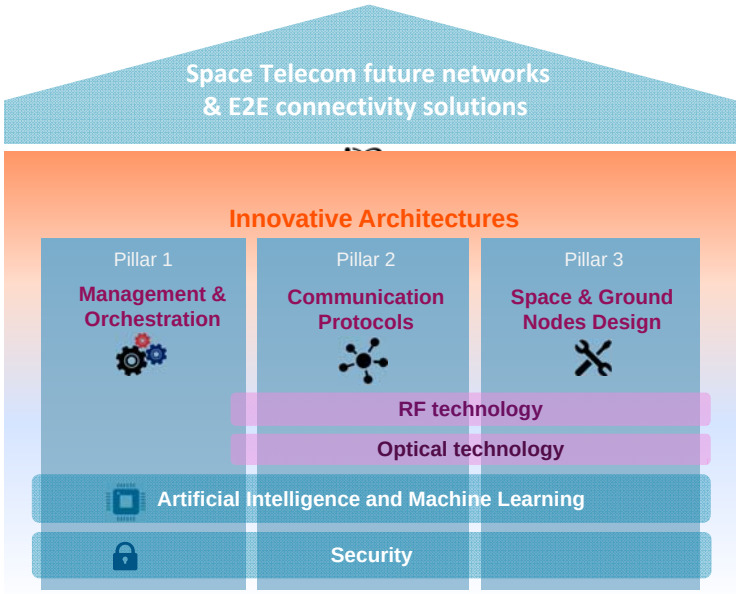
Multi-layer architecture with space, airborne and terrestrial components

Distributed AI/ML on all network nodes (space, airborne and ground)

Space function convergence exploiting EO, navigation and telecom for enhanced service provision



Space Telecom future networks & E2E connectivity solutions
Technology pillars



- Technologies for future space telecom systems under one roof
- Innovative multi-layer architectures to answer future E2E connectivity requirements
- Three structural pillars driving future systems design
- Transverse supporting technologies for cutting edge and robust solutions

Thank you --- Questions?

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