



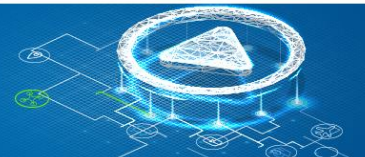
SESAR Digital Academy Webinar: Virtualisation - Virtual Center

Moderated by Ruben Flohr, ATM expert, SESAR JU

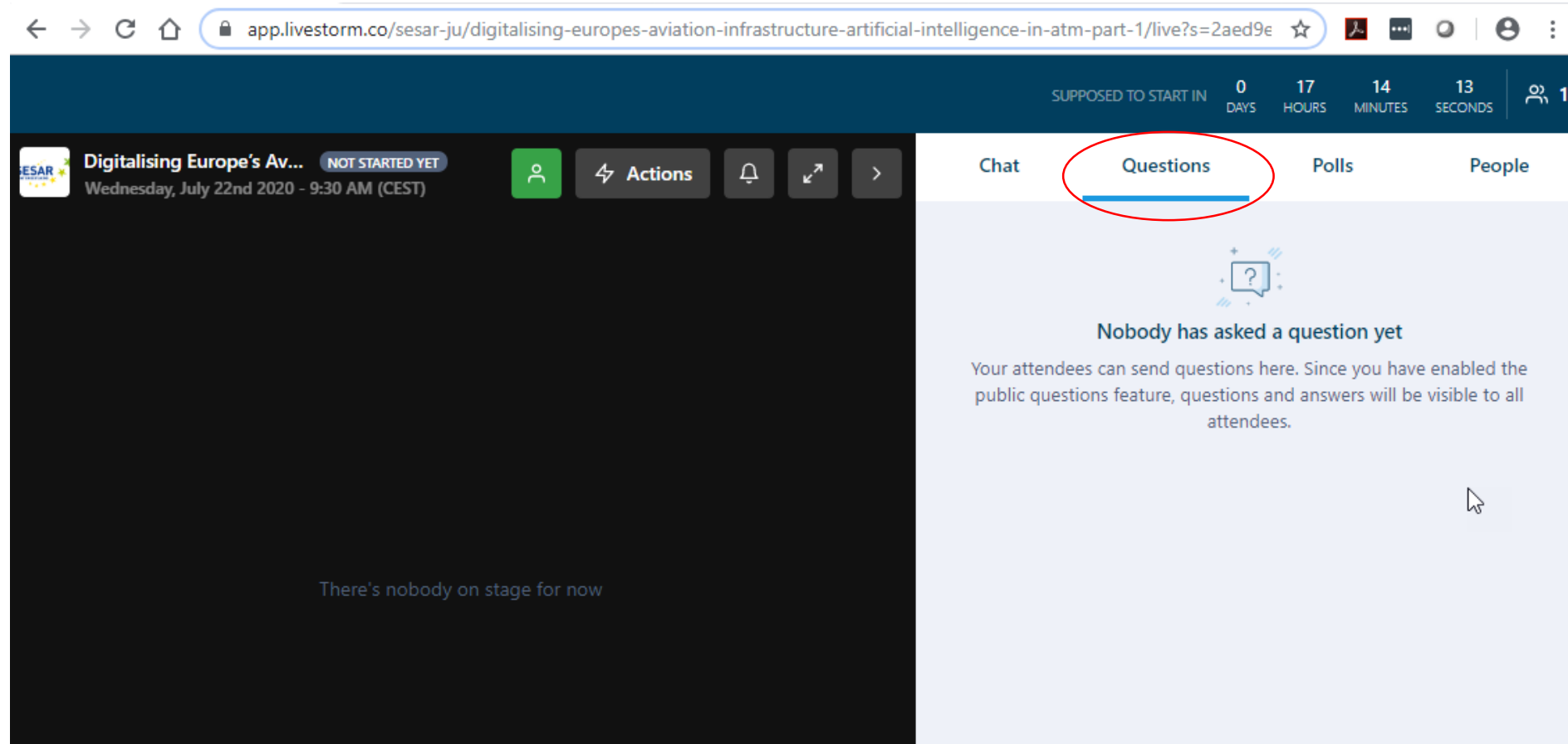


Digital academy webinars

- The European ATM masterplan (in a nutshell) – 30 June
- Towards higher levels of automation, part 1 – 22 July
- Towards higher levels of automation, part 2 – 24 July
- Virtualisation: Remote tower – 15 September
- **Virtualisation: Virtual Centre – 29 September**
- A holistic approach towards CNS – 6th October
- Exploring the future vision and technological innovations in CNS – 22 October
- U space consolidation
- Trajectory Based Operations
- SESAR and the environment



Questions and answers



The screenshot shows a web browser window with the URL `app.livestorm.co/sesar-ju/digitalising-europes-aviation-infrastructure-artificial-intelligence-in-atm-part-1/live?s=2aed9e`. The interface is for a Livestorm event titled "Digitalising Europe's Av..." which is marked as "NOT STARTED YET" and scheduled for Wednesday, July 22nd 2020 - 9:30 AM (CEST). The top right corner displays a countdown timer: "SUPPOSED TO START IN 0 DAYS 17 HOURS 14 MINUTES 13 SECONDS" and a participant count of "1". The main navigation bar includes "Chat", "Questions" (highlighted with a red circle), "Polls", and "People". The "Questions" section shows a message: "Nobody has asked a question yet" with a question mark icon. Below this, it states: "Your attendees can send questions here. Since you have enabled the public questions feature, questions and answers will be visible to all attendees." The left sidebar shows a dark area with the text "There's nobody on stage for now".

Airspace Architecture Study Background



B04.04 Feasibility study on decoupling
WP08 & WP14 on SWIM



- PJ 15.09 - Business model, use cases and high level architecture
- PJ 19.03 - Architecture steering principles
- PJ 16.03 - Technical architecture and services interfaces
- PJ 10.06 - Remove qualification constraints allowing to operate in any airspace



Airspace Architecture Study

March 2019

AAS Transition Plan

September 2019

EC study on regulatory impact



Regulatory



Air navigation services



Airspace



Operations & technology



Infrastructure & data services



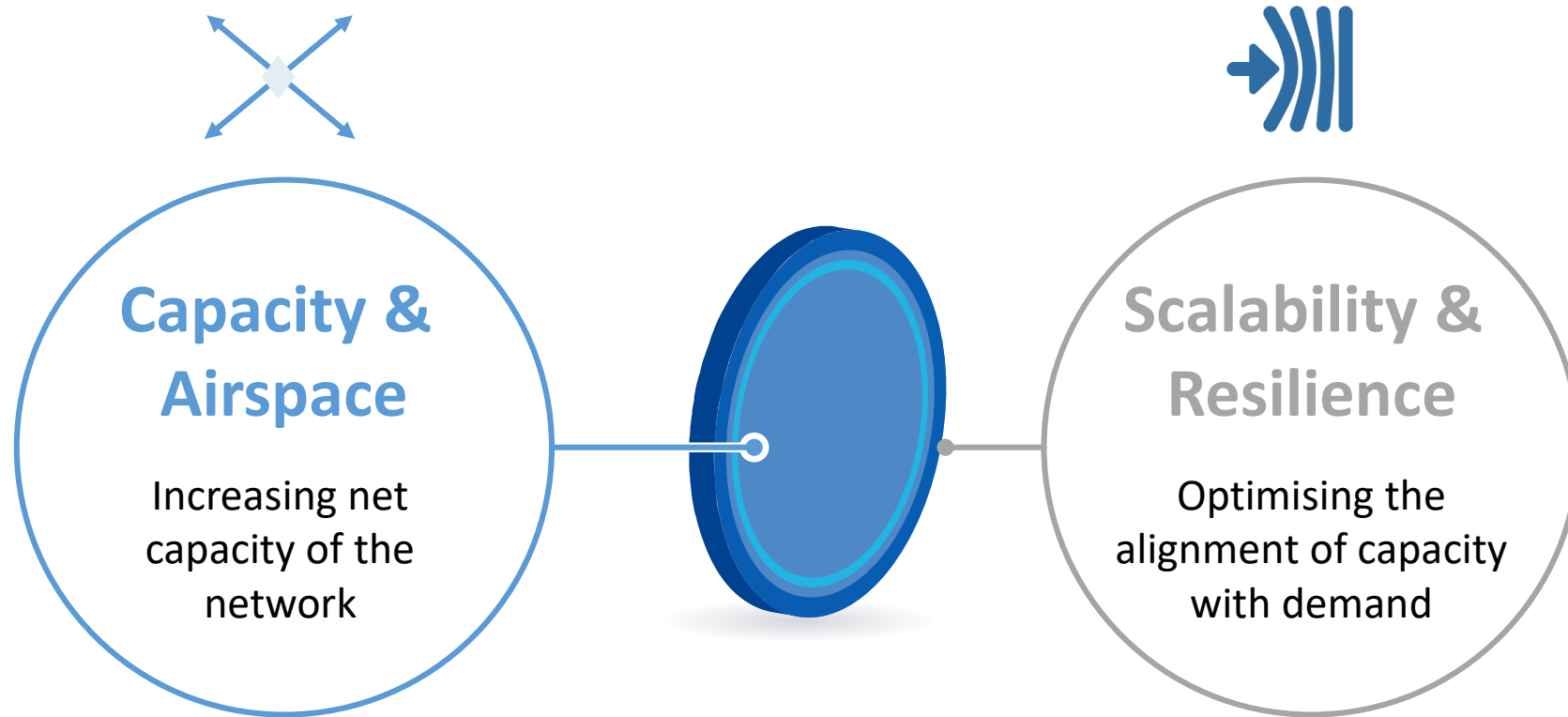
FRAMEWORK DIMENSIONS

*Services are **enabled by airspace and technology** and dependent on the **infrastructure & data services** within a **regulated environment***

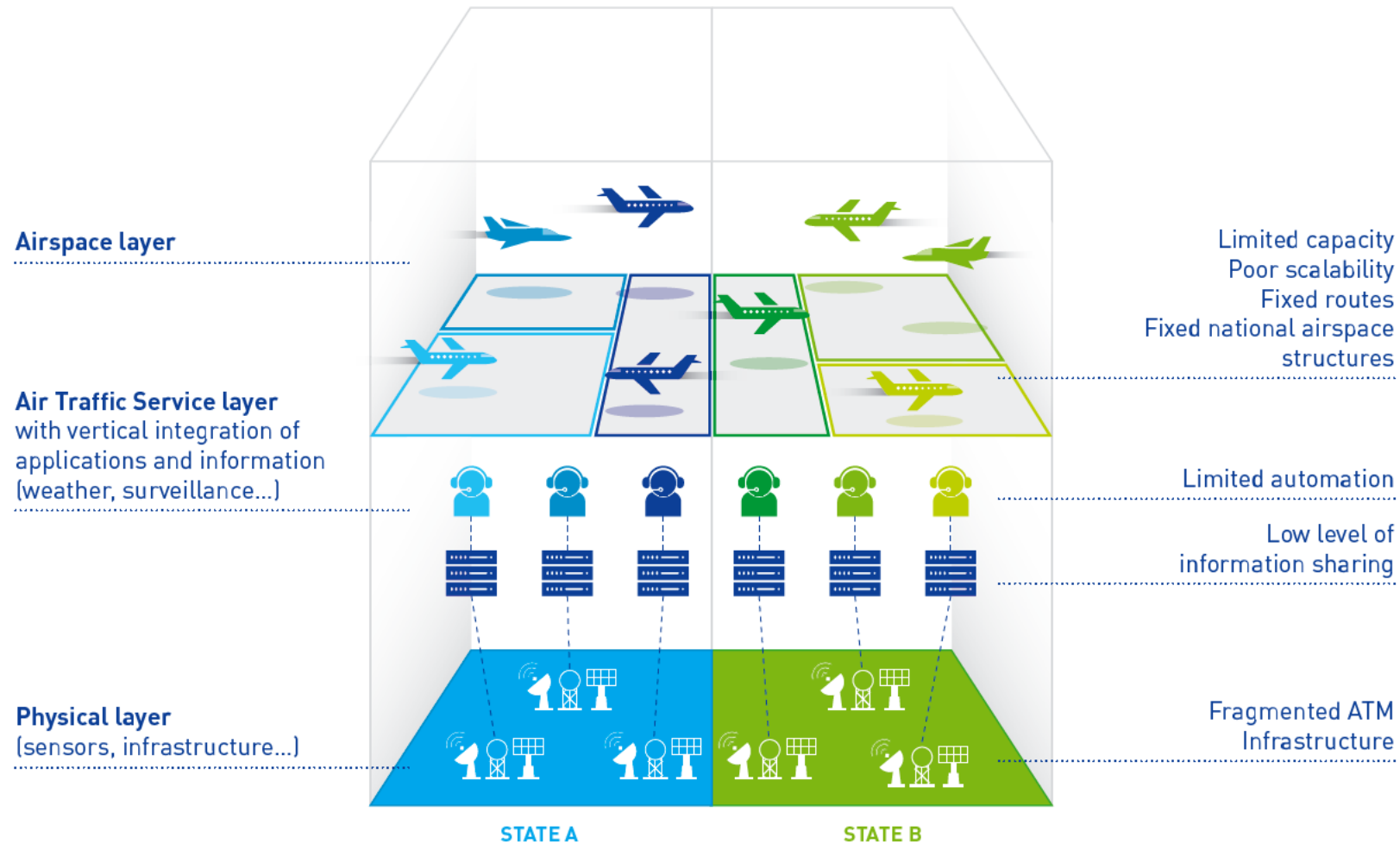
OPERATIONAL AND TECHNICAL DIMENSIONS

Stronger linking between
airspace, operations and
technical evolution
and **measurement of the impact**
through simulations factoring in
known deployments and
roadmaps from the European
ATM Master Plan

Two sides of the same capacity problem



The current airspace architecture is the result of national historical evolution and “vertical integration” of service provision



The new proposed architecture: a Single European Airspace System



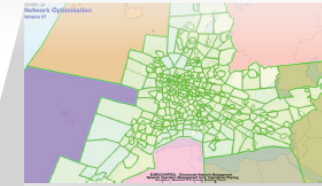
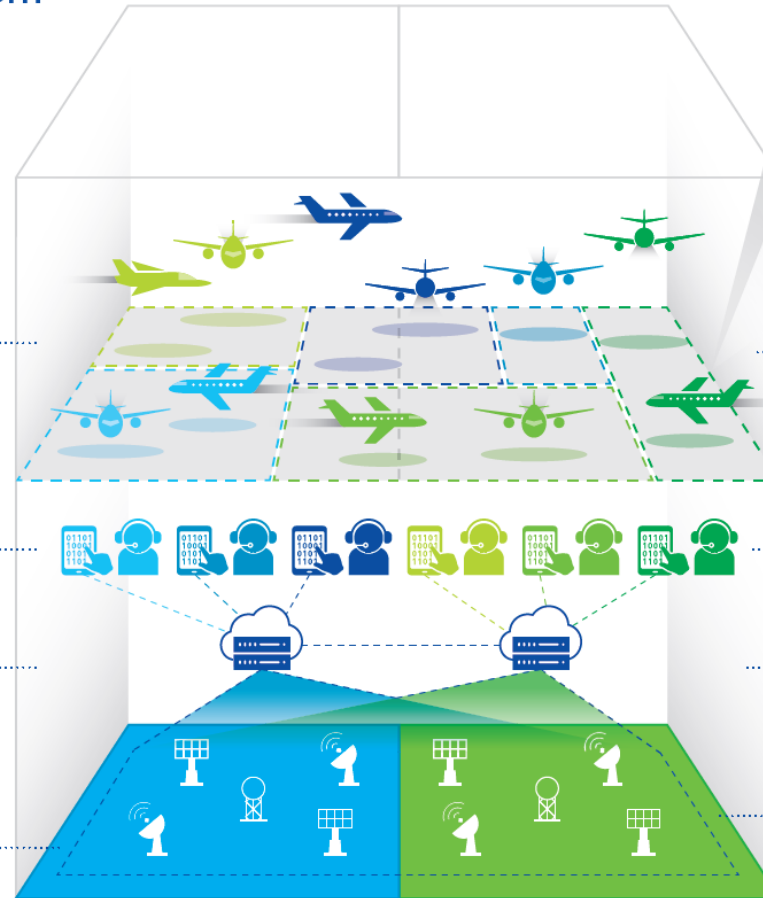
Single European
Airspace System

Network
airspace operations

Air traffic services

Data and application
services

Infrastructure



Seamless operations
Dynamic & cross FIR airspace
configuration & management
Free routes
High resilience

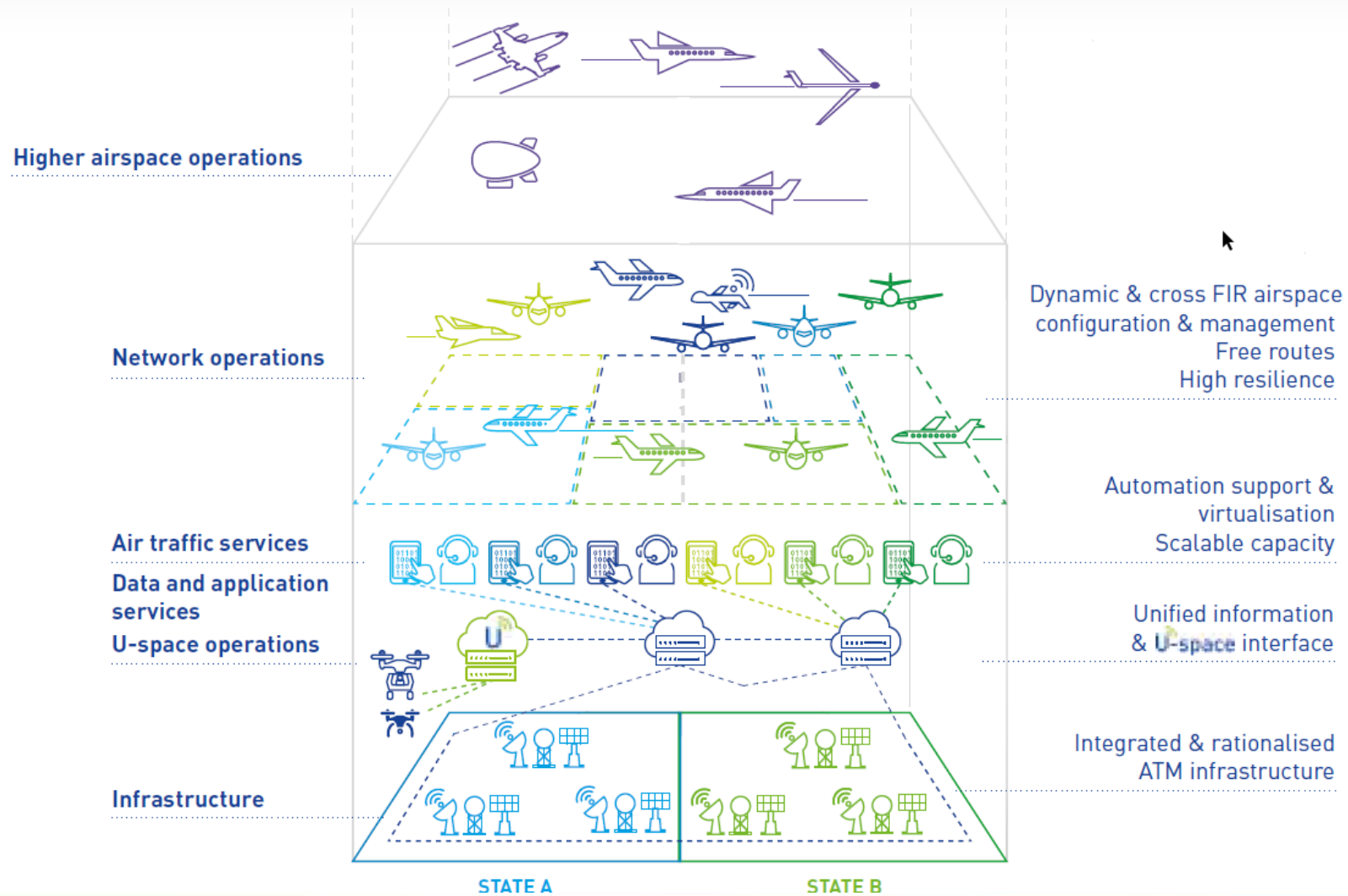
Automation support &
virtualisation
Scalable capacity

Common data models
Unified information

Integrated & rationalised
ATM infrastructure



Beyond the AAS architecture: European ATM Masterplan 2020



Key driver for a services approach is the *Separation of Concerns*

Scalability

Independently scale up capacity on each of the service layers (easier to adapt)

Resilience

More robust against disruptions in any of the layers

Flexibility

Allows for different business models; both competition and collaboration

Evolution

Separate service layers can evolve independently, accelerating innovation

Enabler

High reliability, low latency data-exchange networks allow for geographic decoupling

Today's speakers

Operational Use cases

- Maurizio Romano, Research Activities, Technosky/ENAV

Business perspective

- Thomas Buchanan, Sr. Advisor Intl & Public Affairs, SkyGuide

Virtual Centre technical state of the art

- Part I: Richard Beaulieu, ATM System Expert, Thales
- Part II: Maarten van der Lee , Product Manager ATC Voice, Frequentis