



**EUROPE** FOR **AVIATION**

# Virtual Centre

Madrid, 22 June 2022

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# Speakers

- Anna von Groote, Director General, EUROCAE
- Olivia Nunez, ATM Expert, SESAR 3 JU
- Nicolás Suárez Tetzlaff, ENAIRE, EUROCAE WG-122 Chairperson
- Ben Stanley, Egis Aviation, EUROCAE WG-122 Secretary

# Supporting Innovation through Standardisation

## R&D



## Standardisation & Regulation

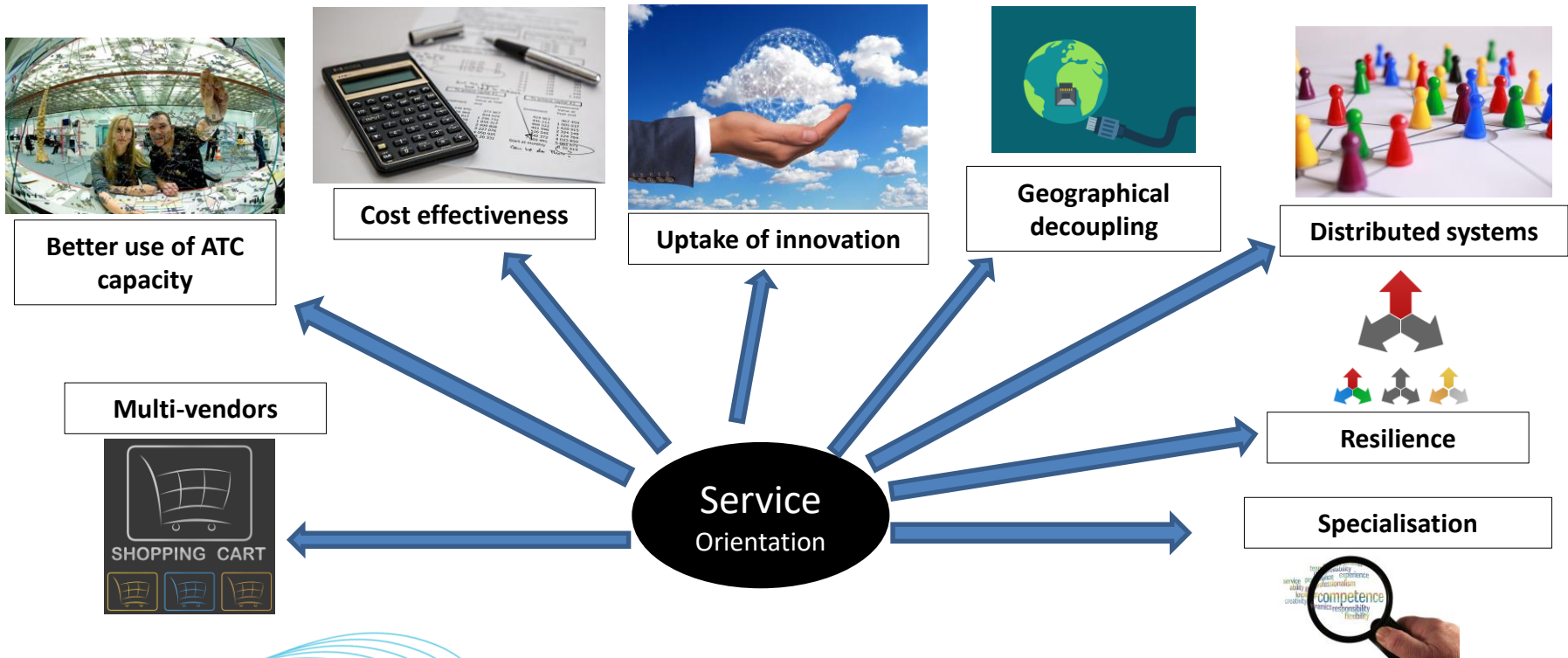


## Deployment

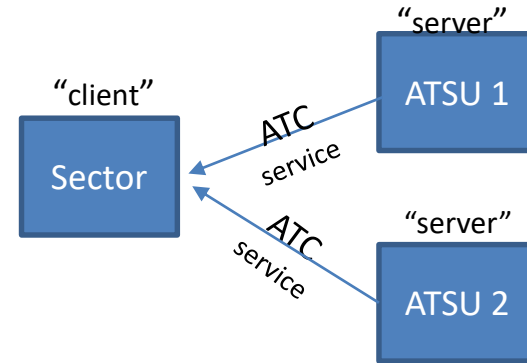
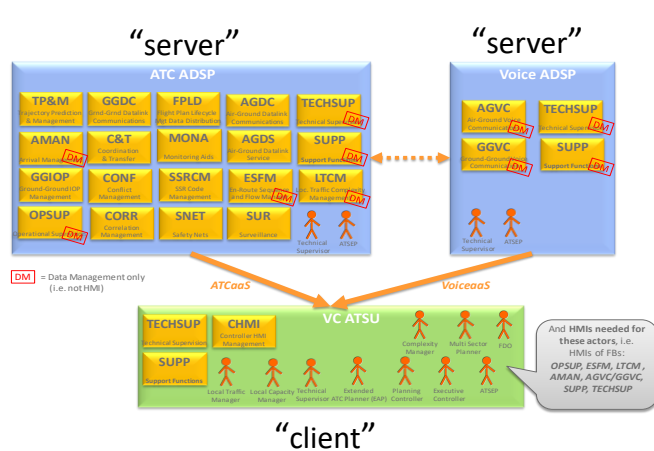


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# Why virtual centre?



# SESAR TECH & OPS Solutions



## Breakdown FDPS block and voice into logical elements

- Services can be located outside the ATSU
- Allows consolidation of services
- Makes it easier to add new innovative services

## Delegation of ATC service:

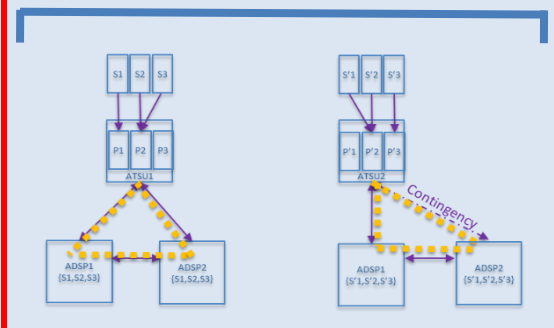
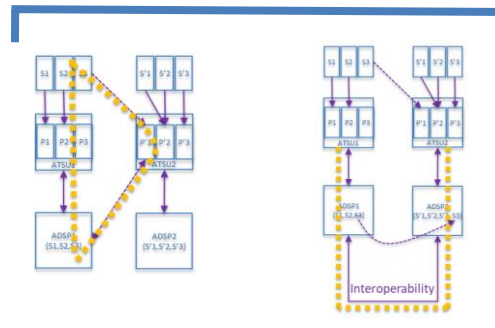
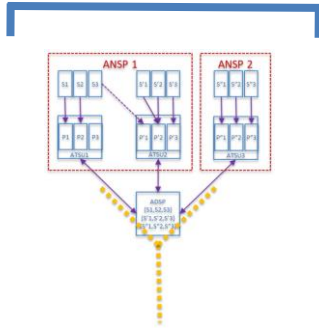
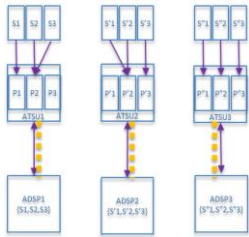
- ATC delegation is possible without the delegation of any FDPS or voice services
- High level operational requirements are actually quite simple:
  1. Be able to provide ATC service over the same area of airspace from two ATSUs
  2. Be able to switch quickly from one to the other seamlessly  
E.g. without clearing the skies, ideally with sector at top capacity

# VIRTUAL CENTRE ARCHITECTURE(S)

Cost-efficiency due to shared FDPS and supports well delegation of ATC services

Only objective is support of delegation of ATC service

Not necessarily linked to delegation of ATC service, but supports it well. objective is open market/competition for FDPS services



**"I" architecture**  
Just geographic decoupling of FDPS and CWP

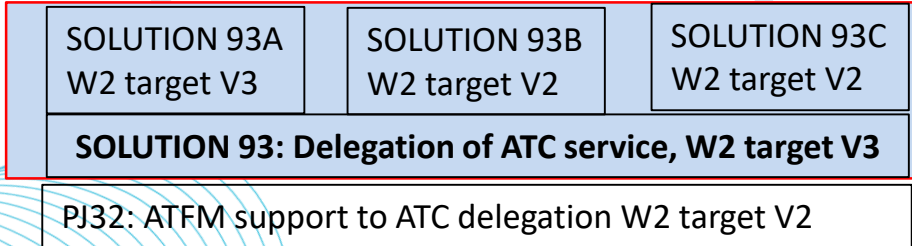
**"Y" architecture**  
Geographic decoupling + two ATSUs share FDPS services

**"D" architecture**  
FDPS reallocation From ATSU 1 to ATSU 2

**"U" architecture**  
Variable scope FDPS-block

**"Δ" architecture**  
Break down of FDPS block (FDPS is provided by two or more service providers)

**"Δ" architecture**  
Duplication of FDPS block for contingency



## TARGET ARCHITECTURE

### Target V1

(SESAR W2 FOCUS IS ATC DELEGATION)

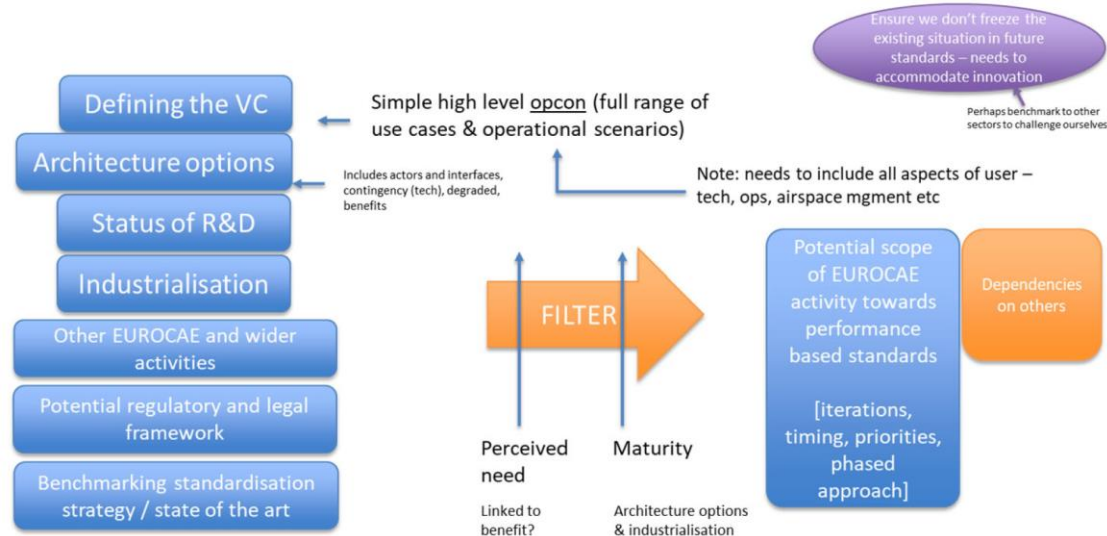
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# VC standardisation - first steps

- Stakeholder workshop August 2022
- WG-122 *Virtual Centre*
  - tasked to develop standards and related deliverables to support the implementation of the virtual centre concept
  - 46 organisations representing different stakeholders
- Our objectives
  - Increasing resilience and adaptability of European ATM Network (capacity and cost efficiency)
  - Implementing (successfully) virtual centres
- Initial WG meeting: November 2020 – high levels of participation across multiple task groups
- Initial deliverable late 2021: Report ‘Virtual Centre - Strategy for Standardisation - Phase 1

# VC standardisation – key questions addressed in Phase 1

- What's the scope and high level concept? → use cases
- What's happening / where are we?
- Process aims to unlock service-oriented procurement and implementation
  - Perceived need
  - Maturity





# Qs (slide will not be shown)

- To Ben: What approach did the group take since the beginning to ensure openness and inclusion of all views? Is the group composition representative? Is it EU only?
- What do you think is the benefit of the approach taken?

# ER-026 Virtual Centre Standardisation

- Definition of VC
- European context (the "why")
- Definition of virtual centre (the "what")
- Architectural options for VC (the "how")
- State of the art: R&D – industrialisation
- Regulatory and legal framework
- Performance-based standardisation
- Key questions
- Next steps to standardisation
- Ensuring compatibility and interoperability
- Service Oriented Architectures
- Open and inclusive
- Increase market penetration of R&D results
- Easy to configure components
- Promote reusability & reconfigurability

# What next?

- Taxonomy group
  - Taxonomy of services for Virtual Centres
    - Service identification
    - Interfaces between entities
  - EUROCAE report expected in early 2023

