



SESAR Digital Academy Webinar Virtual Center: Operational Uses Cases

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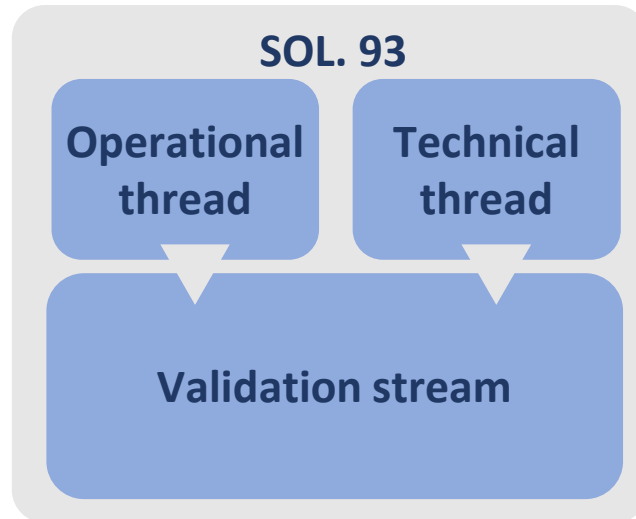


Content

- Operational Uses Cases in a Virtual Centre
 - **Delegation of Airspace among ATSU**s
 - **Delegation Procedures /Process / Phases**
 - **Partners Involved**

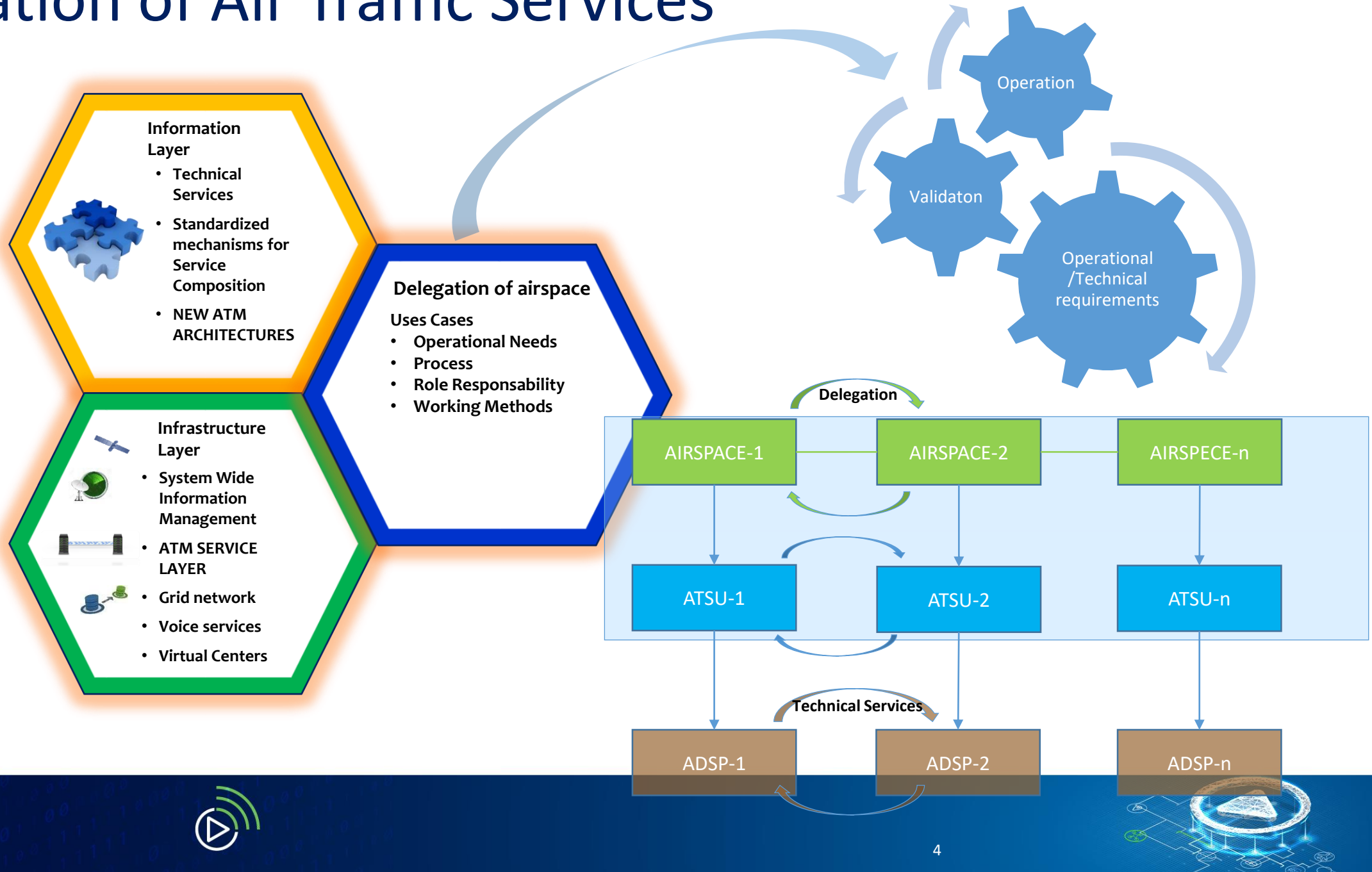
PJ.10-W2-93 Delegation of airspace amongst ATSU

Grant Agreement Number: 874464



- The development of Use Cases for the Delegation of ATS Services and Contingency and to describe the operational procedures.
- To progress with Virtual Centre concept to support to the uses cases of static and dynamic contingency and delegation of provision airspace, based on En-Route, TMA and ATFCM domain. One ATSU may use data services from multiple ADSPs, just as an ADSP may serve multiple ATSUs
- to consider different architectures and implementation options involving multiple ADSPs , enabling Europe to move to an interoperable, cost-effective and flexible service provision infrastructure

Delegation of Air Traffic Services



Inventory of Uses Cases



**WS Analysis
Delegation and
Contingency**

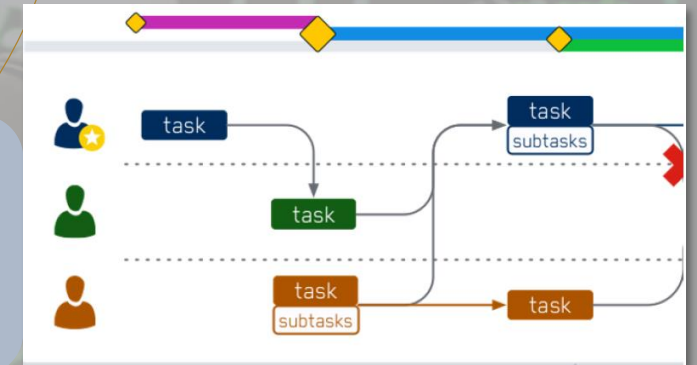


**Operational
Concept Study**

**Operational
Reference
Model**

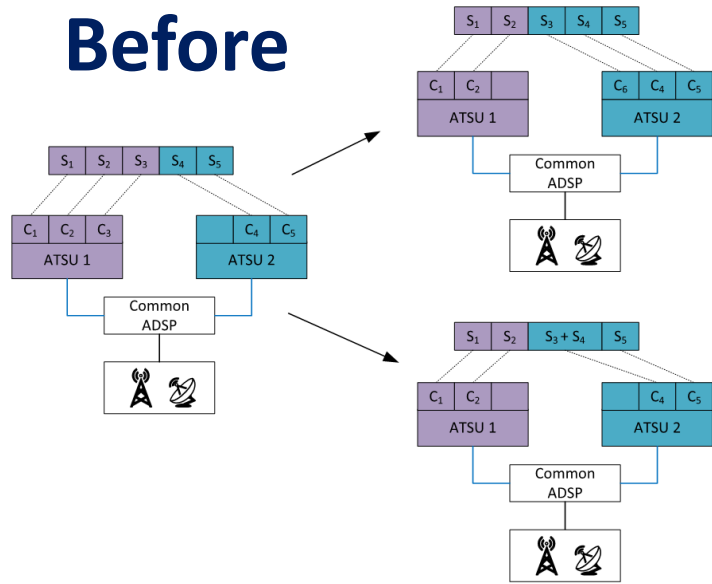
**Inventory
of Cases**

**Night
Uses
Case**

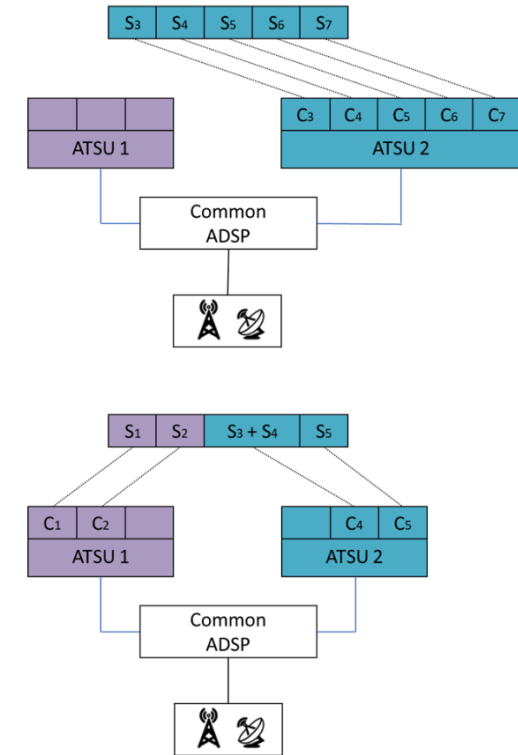
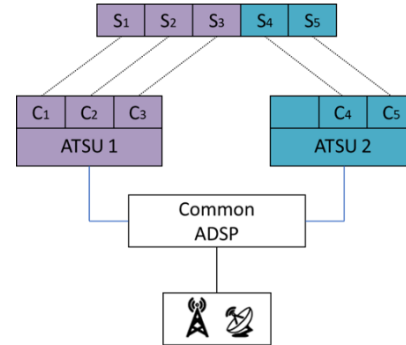


Delegation of Airspace Process

Before



After



Delegating Supervisor

Delegating ATCOs

Receiving Supervisor

Receiving ATCOs



Delegation of ATS Services

Night Operation 27 April 2017

Scenario
Identification

Operational
Phase

Actor and
Process

Services
Involved
(different
ADSP)

KPI Aspects
Identification

Timing

EUROCONTROL
ATSU

SEQUENTIS
ADSP

HUNGAROCONTROL
ADSP

ATSU 2

ATSU 1

☀ UC #1 Delegation of provision of ATS services at Night in a low traffic condition

☀ UC #2 Delegation of provision of ATS services at Fixed Time

✈ UC# 3 - Delegation of provision of ATS services with associated ATFCM provisions

🤝 UC#4 Delegation of provision of ATS services – Civil-military operation

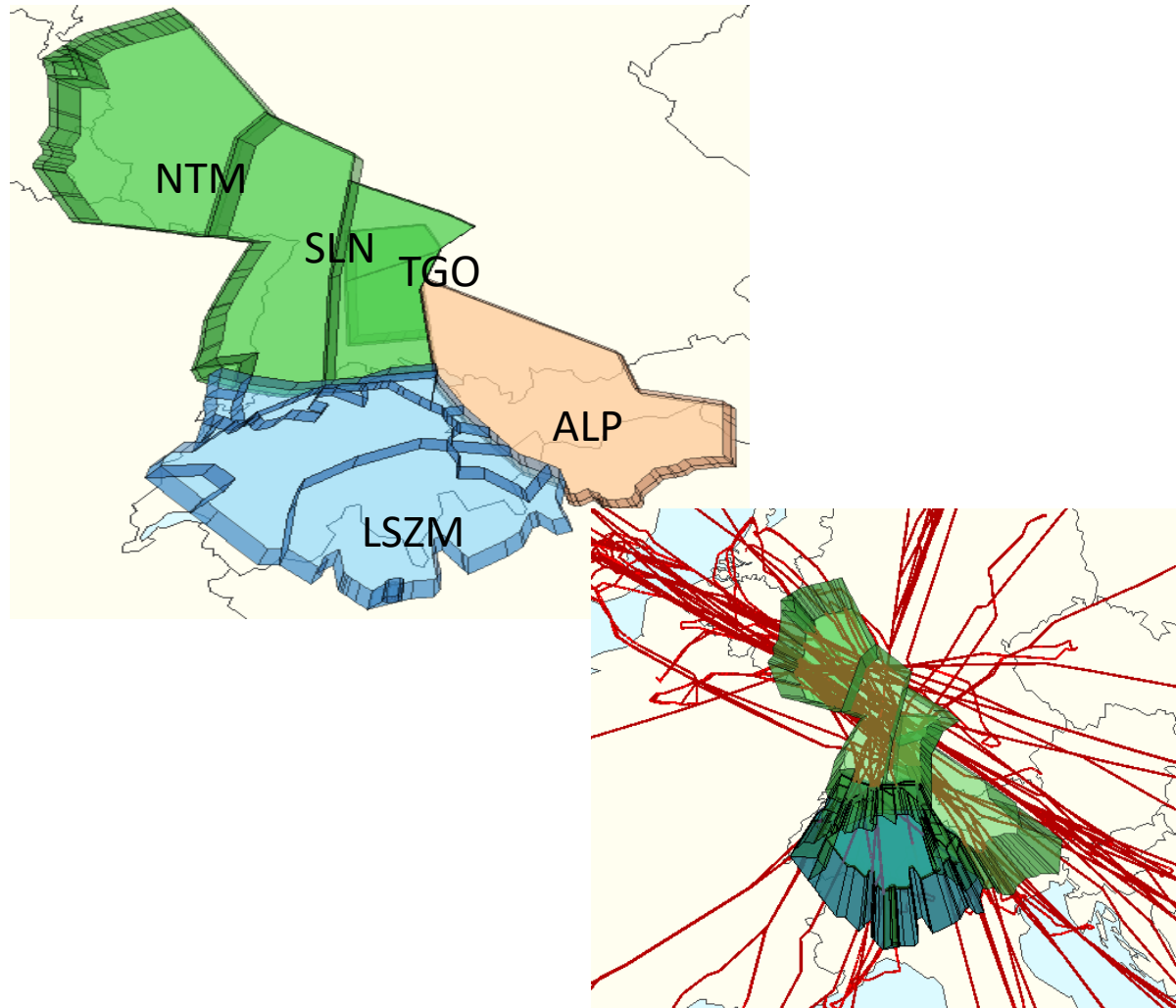
🚧 UC# 5- Delegation of provision of ATS services – Cross Border

🚨 UC #6 Contingency of Airspace – Loss of an ATSU

INDRA
ADSP



Delegation of ATS Services Night Time and at Fixed Time



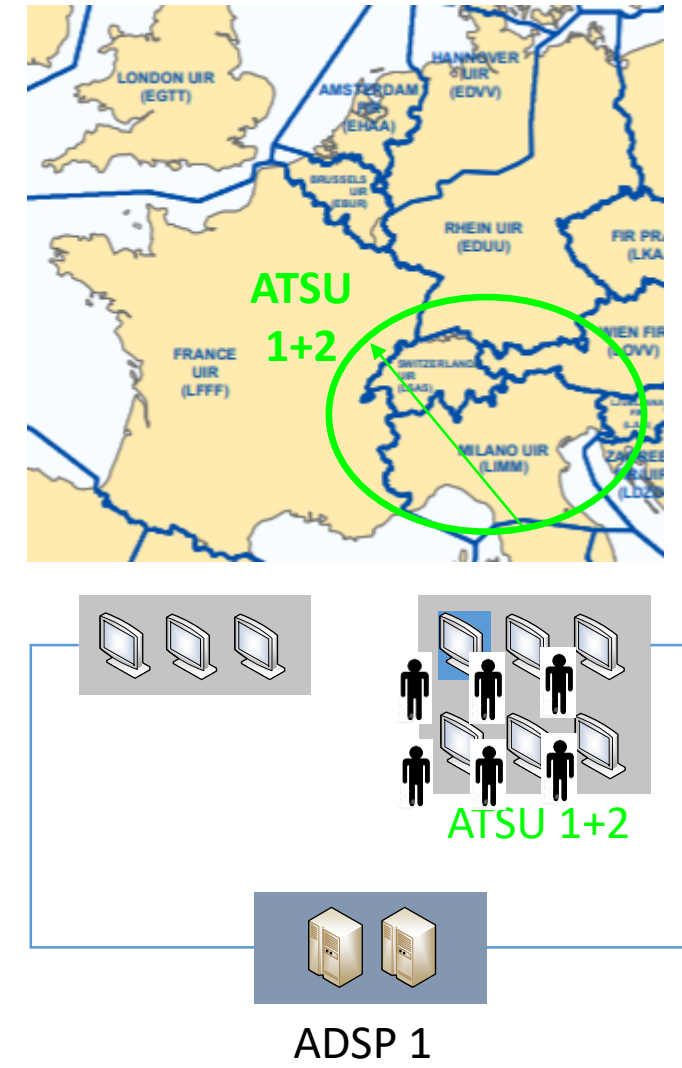
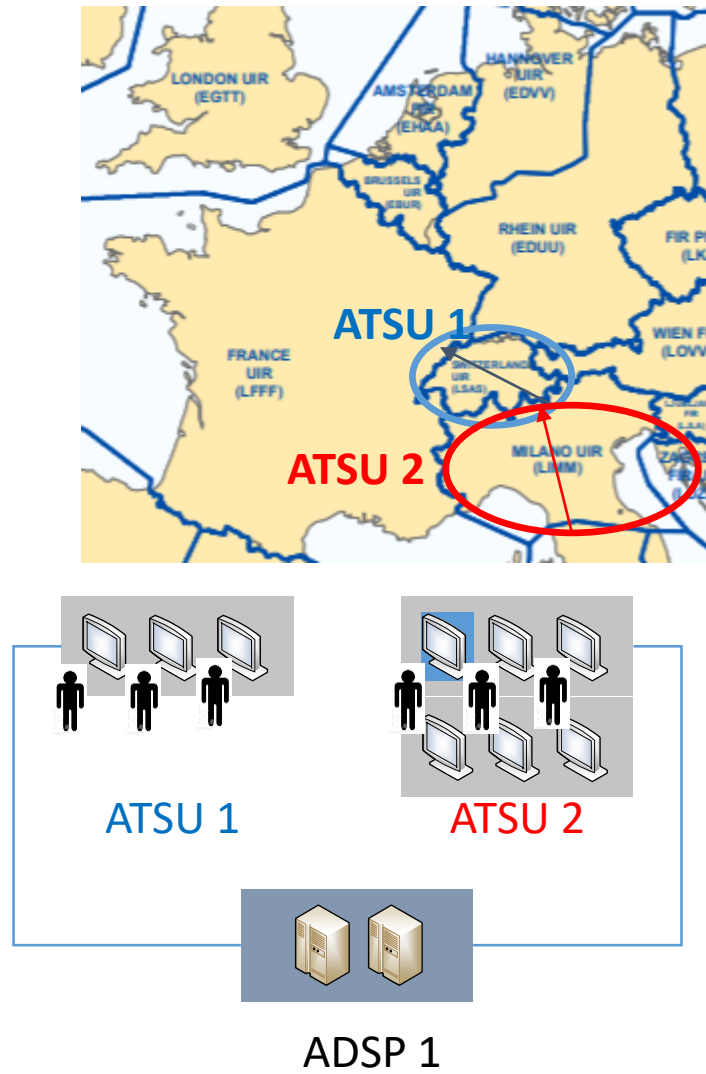
Description of Use case :

- -Delegation of ATS service in an UNIDIRECTIONAL way:
- -At a pre-arranged and FIXED TIME WINDOW:
 - -22.00 UTC and 04.00 UTC during summer time
 - -23.00 UTC and 5.00 UTC during winter time

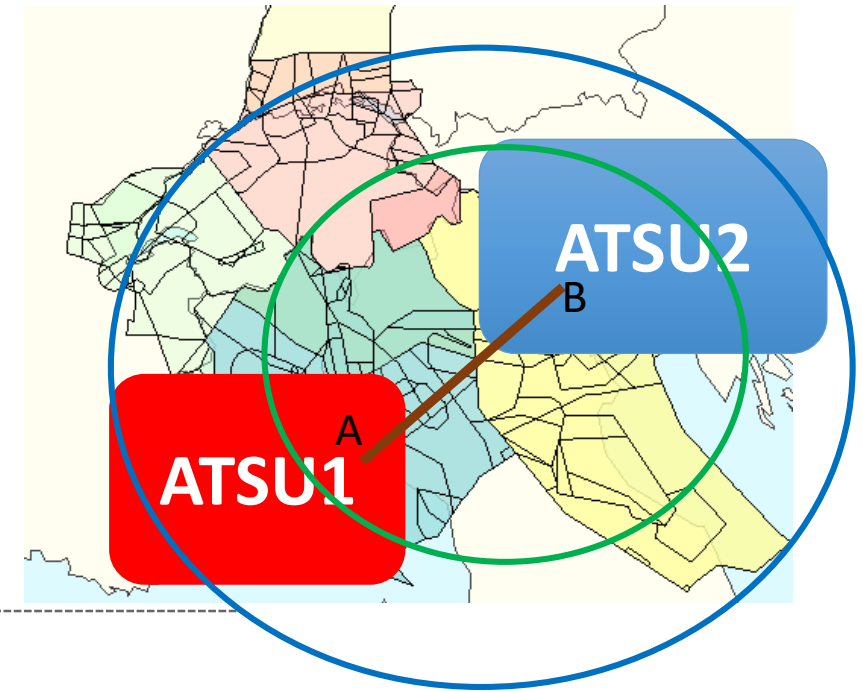
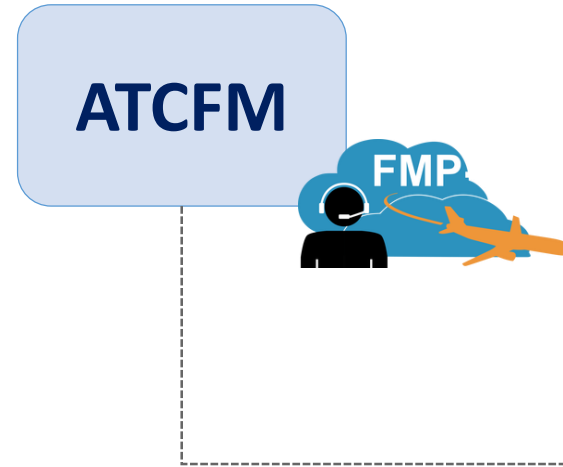
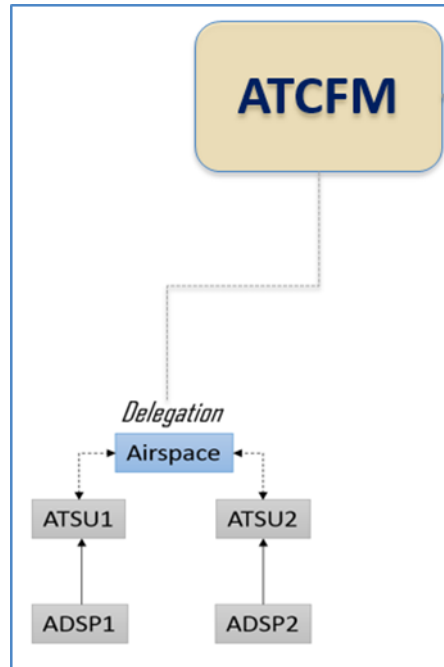
Pre-conditions :

- Design of a delegation procedure for the handover
- LoAs adapted to include the possibility of delegation between involved ATSU's;
- Design of an Specific Detailed Operational Procedure
- Design of Contingency Plans of the concerned ATSU
- All the ATCO's in delegate airspace have received the proper training with simpler procedures

Delegation of provision of ATS services – Cross Border

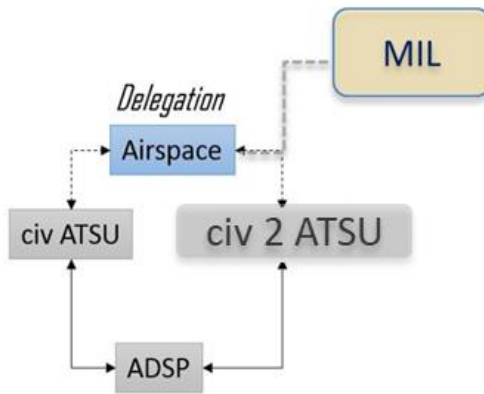


Delegation of Airspace among ATSU's *with associated ATFCM Service*



- Delegation of the entire ATSU's Airspace: all the ATFCM service connected will be provided by ATSU2 (Delegated);
- Delegation of the entire ATSU's Airspace to more than an ATSU: each of the Delegated ATSU will provide ATFCM Services into its own Delegated Airspace.

Delegation of Airspace among ATSUs Civil-military operation



Definition of the specific Sub-Uses Case

UC# 4 - Delegation of provision of ATS services – Civil-military operation

Uses Case #4 – Sub 1: Delegation of provision of ATS services –

Civil-military operation: ATSU1 National Military Activity handled by Military ATSU1 during the Delegation of provision of ATS services to ATSU2

Uses Case #4 – Sub 2: Delegation of provision of ATS services –

Civil-military operation: ATSU1 National Military Activity handled by Military ATSU2 during Delegation of provision of ATS services to ATSU2

Uses Case #4 – Sub 3: Delegation of provision of ATS services –

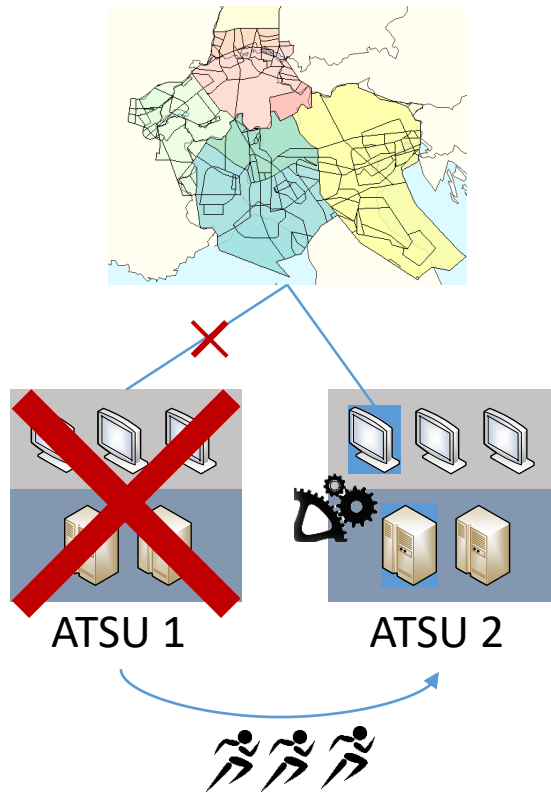
Civil-military operation: Multilateral Military Activity into ATSU1 Military Area handled by external Military ATSU during Delegation of provision of ATS services to ATSU2

Uses Case #4 – Sub 4: Delegation of provision of ATS services –

Civil-military operation: ATSU1 Real National Military Air Defence handled by Military ATSU during Delegation of provision of ATS services to ATSU2

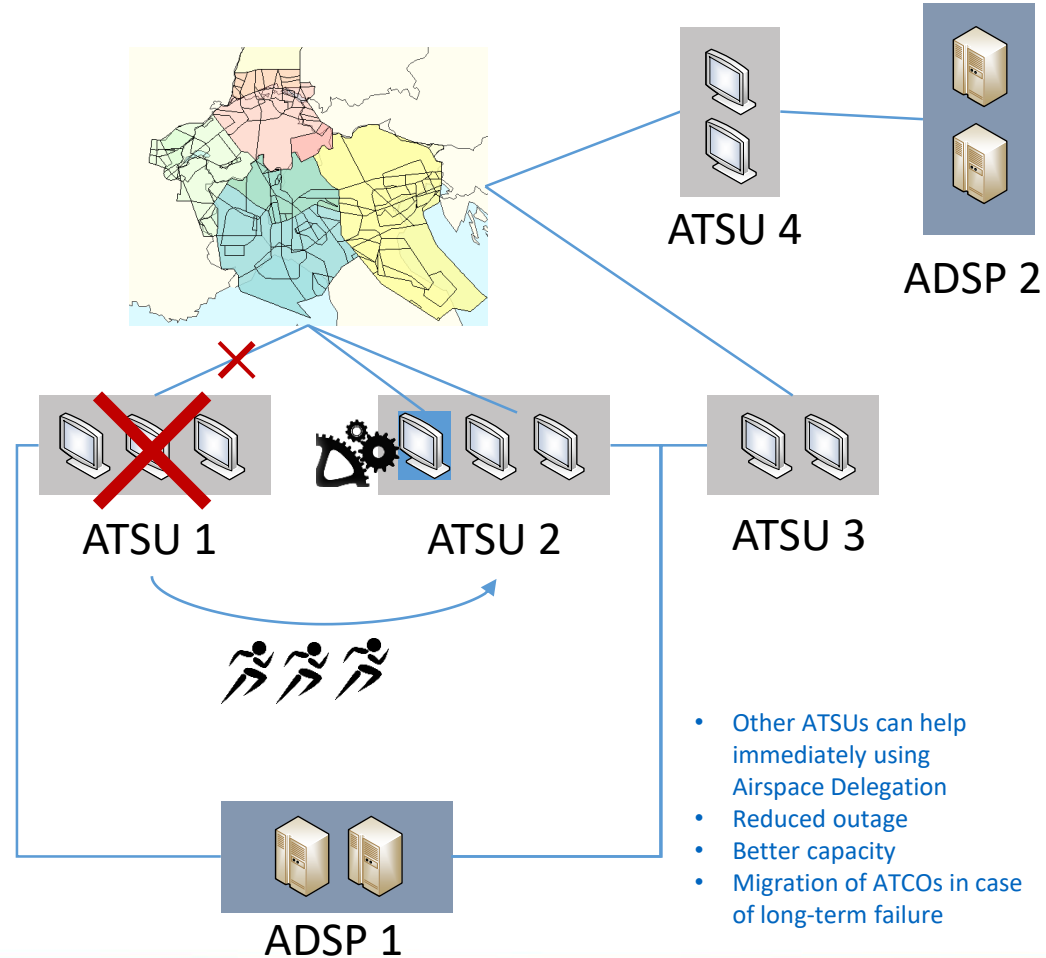
Contingency - Loss of an ATSU

Today's Contingency solutions



- Outage due to travelling of ATCOs and system setup at aiding unit
- Less capacity: less positions, maybe different system

Contingency in a Virtual Centre Environment

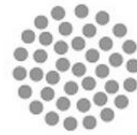


- Other ATSUs can help immediately using Airspace Delegation
- Reduced outage
- Better capacity
- Migration of ATCOs in case of long-term failure

List Of Partners



DFS Deutsche Flugsicherung



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NATS



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THALES

This presentation is part of a project that has received funding from the SESAR Joint Undertaking under grant agreement No. 874464 under European Union's Horizon 2020 research and innovation programme.