



2018
World ATM Congress



Beyond the Virtual Center concept, a Digital Transformation



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Virtual Center

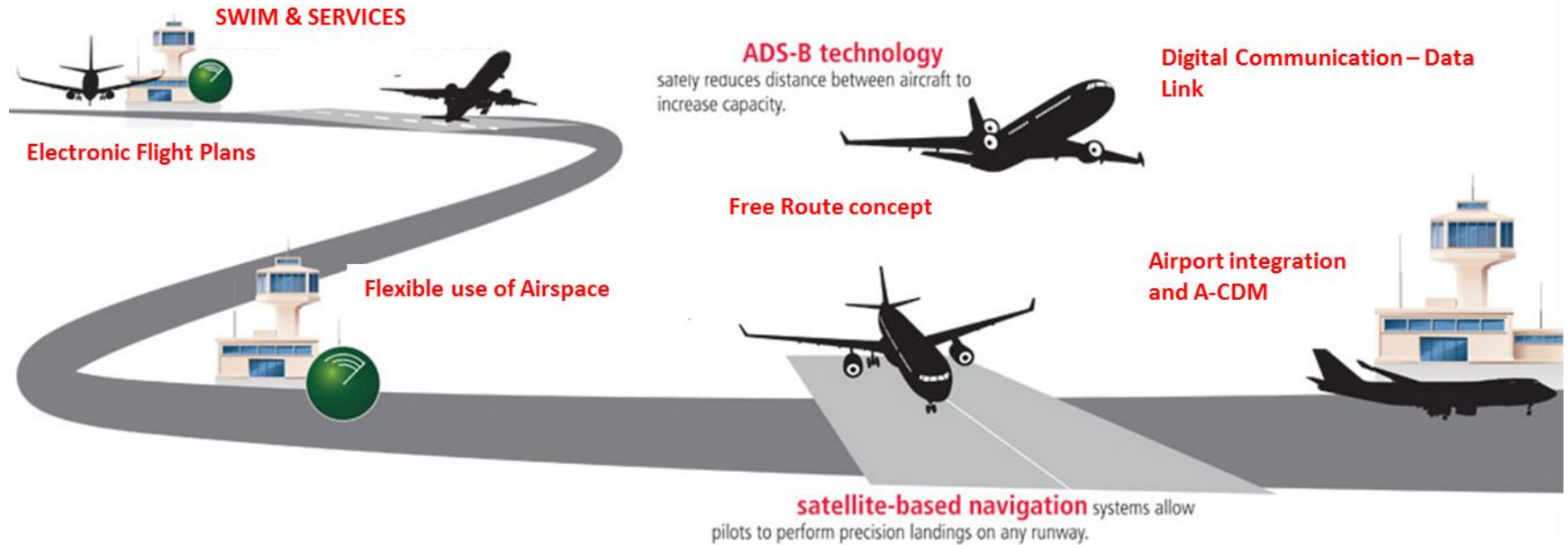
- In SESAR, a **Virtual Centre** “is a group of **air traffic services units** (under the responsibility of one or several service providers) operating from different locations.
- These **units** use **fully standardised methods of operation, information, procedures, technical means and equipment.**”



Beyond Virtual Center

The combining notions of “**Virtual Center**”, “**Common Services**” and **Digital Information** aims at the provision of common air navigation services on the basis of standardised **services** and **operational orchestration** – **business driven**.

Key Digital enablers



The Digital ATM

- **Ground Infrastructure**
 - 4D Trajectory
 - FDPs
- **Airborne Infrastructure**
 - 4D Trajectory
 - FMS
 - Digital links
- **Space Infrastructure**
 - GPS
 - ADS-B
 - (SAT)COM
- **Information infrastructure**
 - FO, RBT
 - Common Information Services
 - Digital Map
- **Technology infrastructure**
 - GRID Networks
 - Virtualization
 - Cloud



Common Services

- Common Services provides capabilities to consumers in a standardised approach
- A Service Oriented Architecture can be built around Information, Services and common Infrastructures (e.g. SWIM)

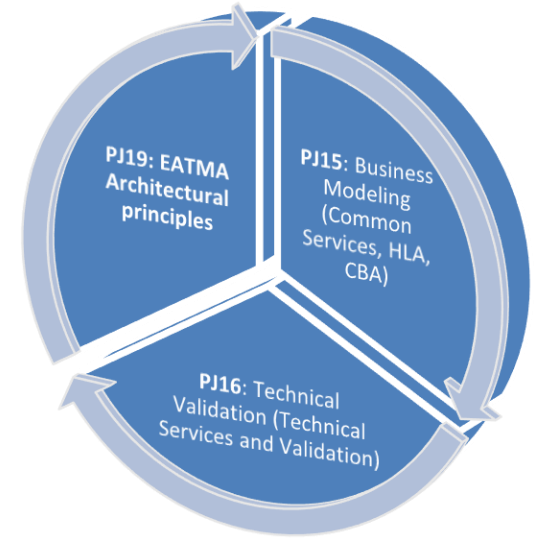


How it works

- **Information exchanges**, between all **Operational Nodes** are executed by agreed **Common Services** established from the same **Service Inventory**.
- The **shared Common Service architecture** can be largely **decoupled** from all different **local technical environments**.
- **Standard Service interfaces** are defined at a logical level (**HLA**)
- A **collaborative (business oriented)** approach with comprehensive cost-effectiveness and environmental impact and time aspects is then achieved.

SESAR 2020: the Solution 15.09

- Scope:
 - Collection and processing of **Surveillance**, **MET** and **Airborne** data
 - Provision of **Air Traffic Services** (En Route & APP)
 - **Workload balancing** and **Dynamic assignment** of airspace sectors
 - **Data** and (secure) **Information** related **services**
 - **Data communications infrastructure** and **Voice** communications infrastructure



Thank you!

