



PJ.17 SWIM Technical Infrastructure scope and roadmap

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Founding Members



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Agenda



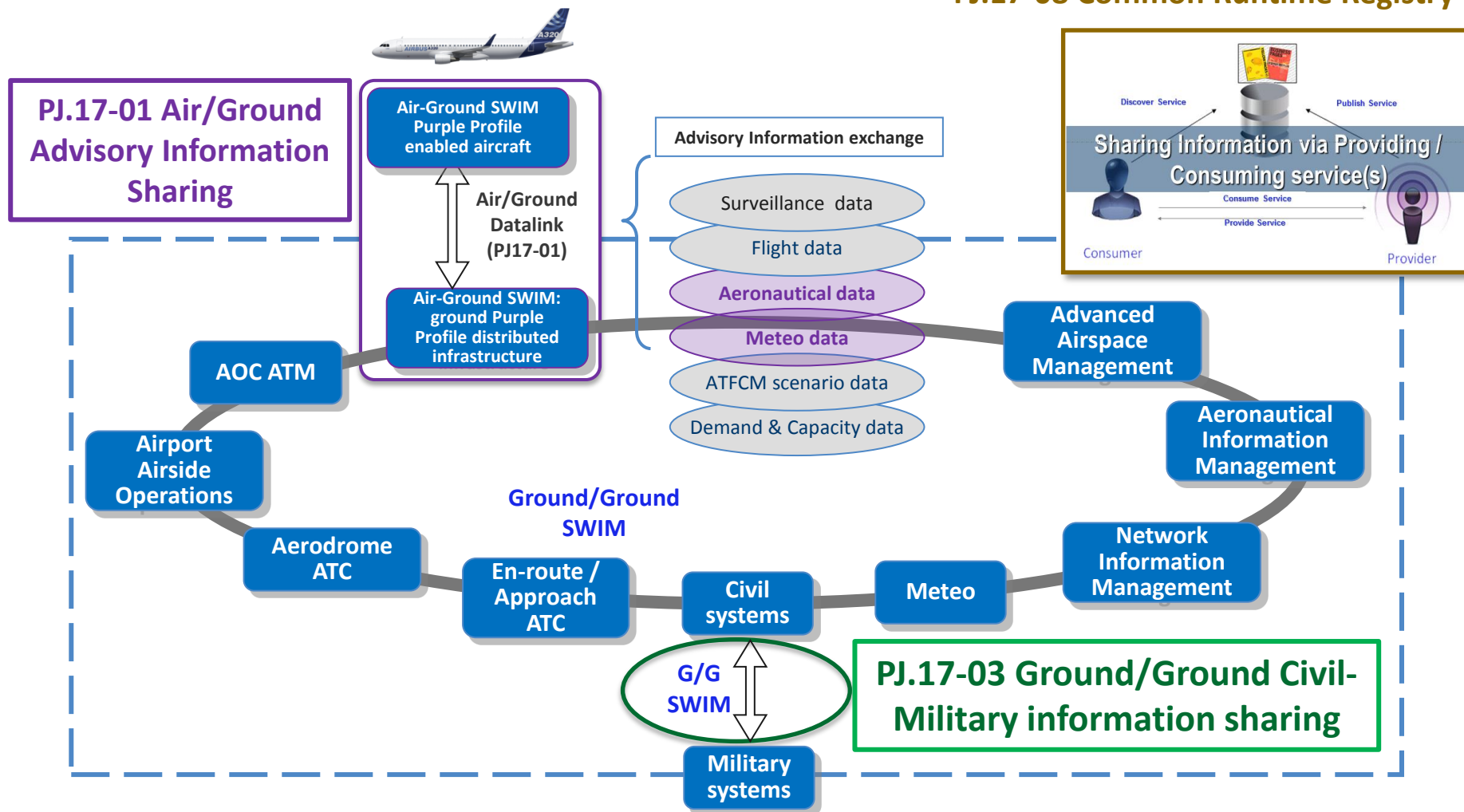
- PJ.17 SWIM-Technical Infrastructure Overview
- PJ.17-01 - SWIM-TI Purple Profile for A/G Advisory Info Sharing
- PJ.17-03 – SWIM-TI Green Profile for G/G Civil Military Information Sharing
- PJ.17-08 – SWIM-TI Common Runtime Registry
- SWIM-TI solutions in wave 2



PJ.17 SWIM-TI overview



PJ.17-08 Common Runtime Registry





- Integrate the aircraft into the SWIM network,
➔ access to the air/ground existing or new services (e.g. in meteorological and aeronautical domains)
- Interoperable runtime infrastructure over which Purple Profile-enabled SWIM services are provided and consumed
- Advisory information
- Intended Benefits:
 - Supports improved situation awareness for better decision making, e.g. provision of accurate meteorological predictions to the A/C in adverse conditions
 - Expected positive impact on Cost Efficiency
- Refer to item#3 presentation for more details



SWIM-TI “Green Profile” (GP)

- G/G civil-military information exchanges for coordination/cooperation
- Increase (cyber) **security** and **resilience** when needed
- Anticipate support of new SWIM services (civil and/or **military** provided)

Bidirectional information exchanges

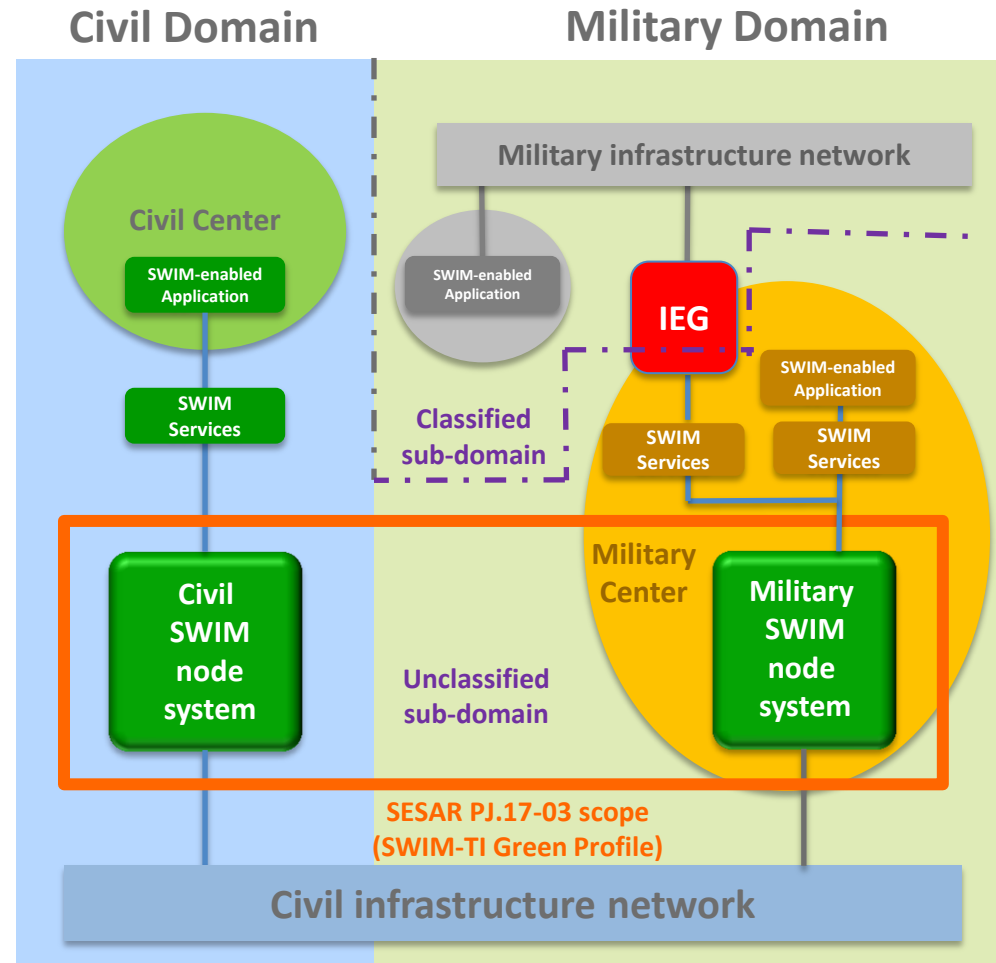
- Between civil ATM systems and military ATC/Air Defence systems
- **IEG** (Information Exchange Gateway) connecting military domains of different security levels

First Services considered

- Mission Trajectories, Air policing

Deployment

- **PCP** → No GP: CIV-MIL coord. based on Yellow Profile, and Blue Profile (TBC)
- **Post PCP** → 1st level of GP (YP-MIL and BP-MIL extensions)



PJ.17-08 – SWIM-TI Common Runtime Registry

Main function

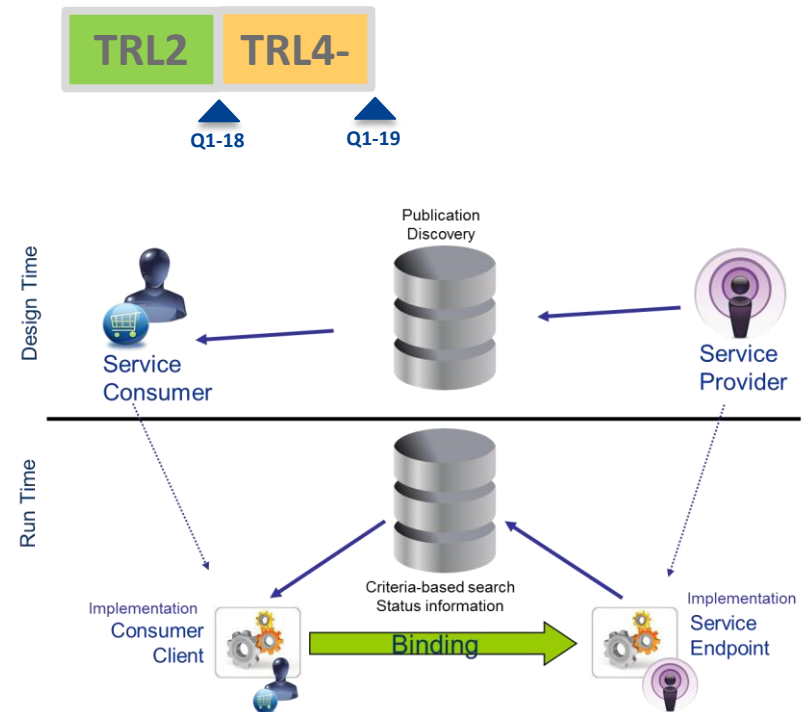
- Search for suitable services among the known providers, based on selection criteria
- Consolidated access to status of services and runtime information

How does it work?

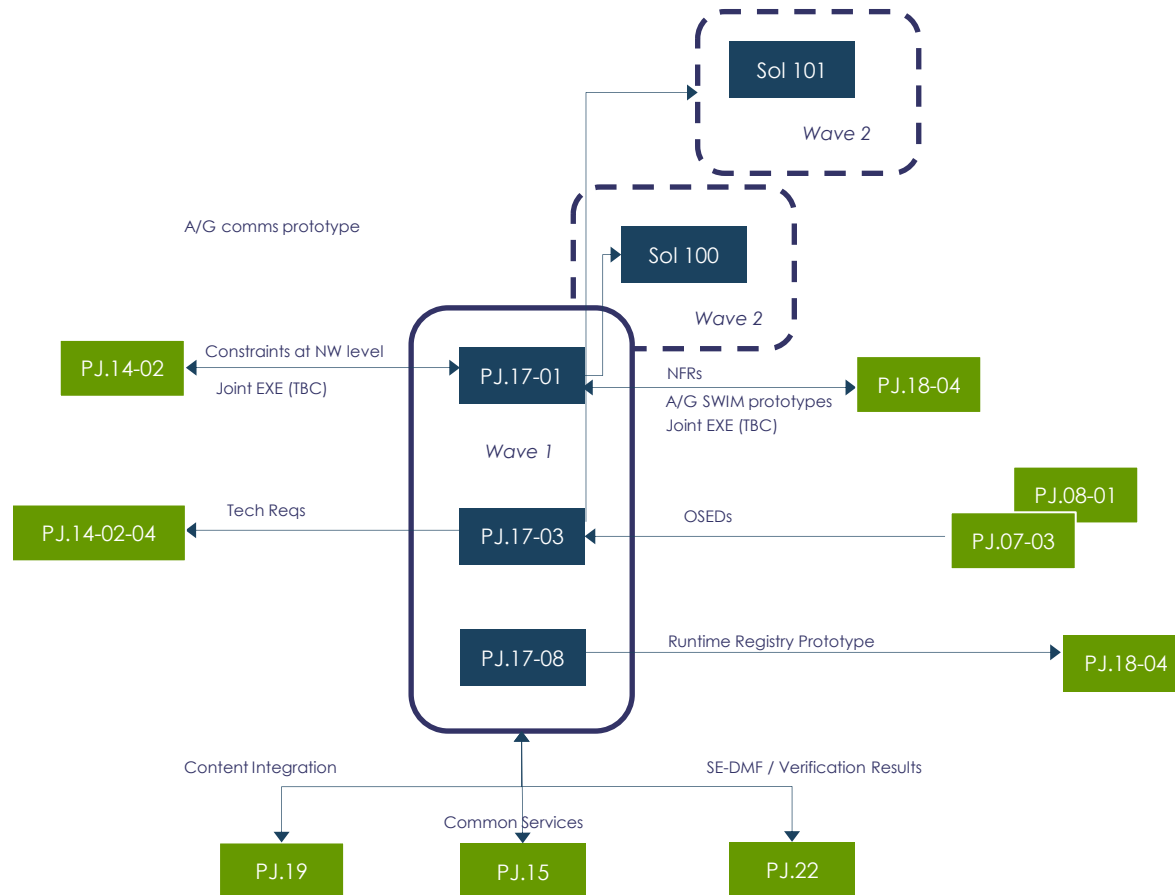
- While a *design-time registry* offers *static* content, similar to a directory listing all available hotels in a city, *runtime registry* adds the *real-time* aspect, similar to hotel booking websites showing also the *current* availabilities

Foreseen benefits

- Facilitate services offering on the market, thus lowering entry barriers for new service providers
- Allow to choose the cheapest service for a given QoS for every service call
- Increase resilience by allowing to dynamically switch to an alternative service in case of failure



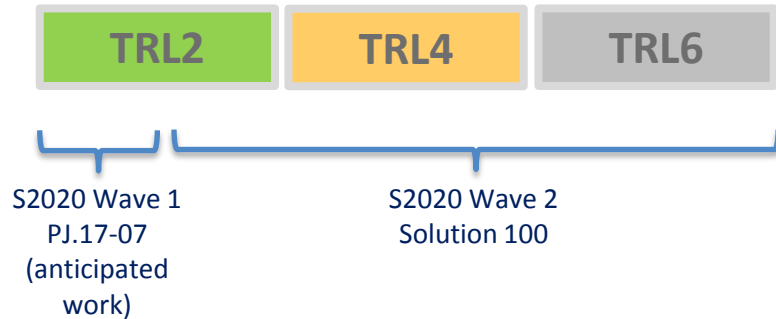
Inter-project Dependencies



PJ07 – Optimized airspace Management
 PJ08 – Advanced Airspace Management
 PJ14 – Essential and Efficient CNS
 PJ15– Common Services
 PJ18 – 4D Trajectory Magnt.
 PJ19 – Content Integration
 PJ22 - Validation and Demonstration Engineering

SWIM-TI in Wave 2 (current plans)

SWIM TI Purple Profile for Air/Ground *Safety-Critical* Information Sharing



SWIM TI Green Profile for G/G Civil Military Information Sharing





SESAR 2020 - PJ.17 scope and roadmap

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Thank you very much for your attention!



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