

Supporting
European
Aviation



Evolving European Operations & Infrastructure

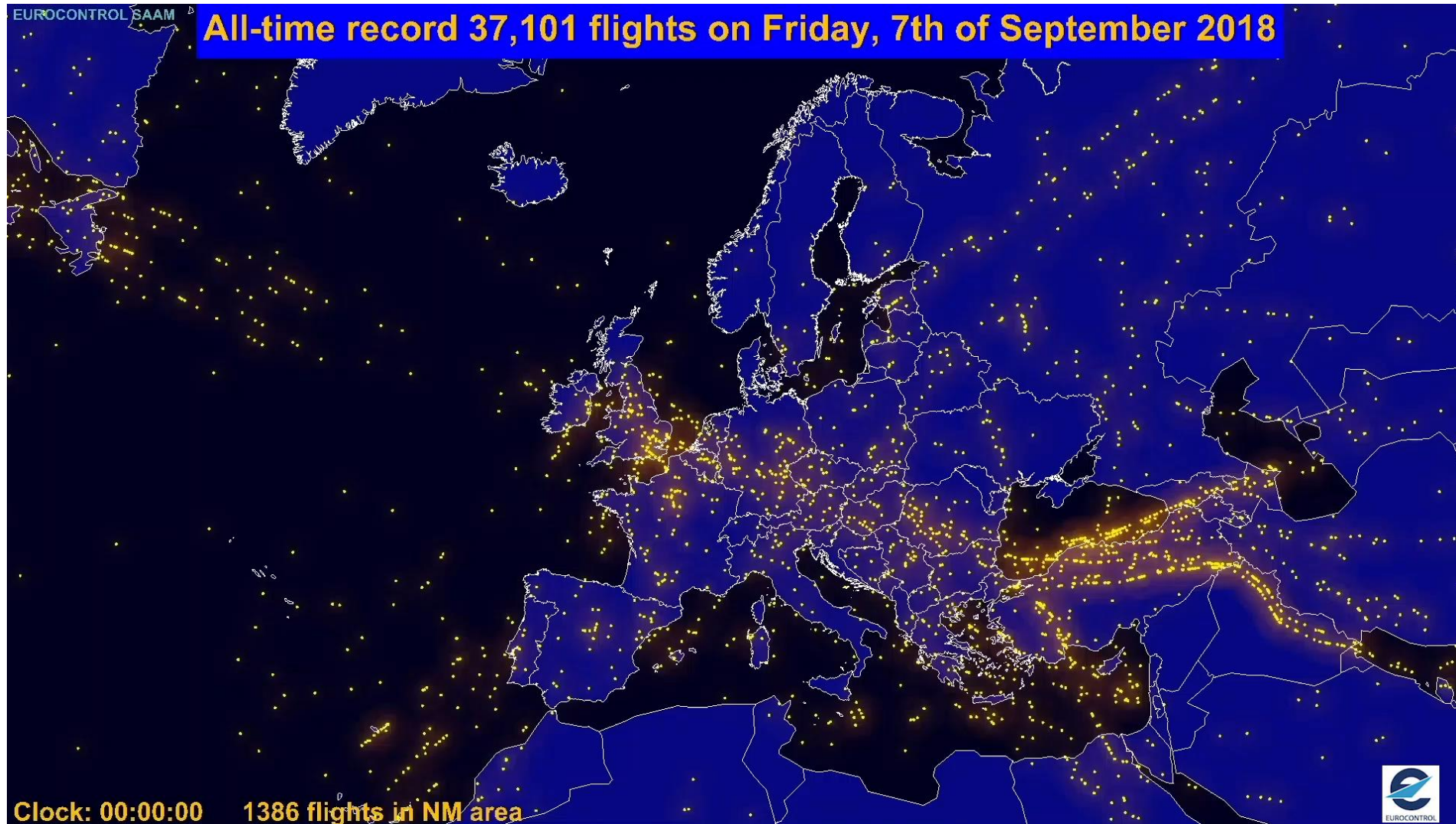
Joe Sultana
Director Network Management
EUROCONTROL



European Context

- European Union, National ANSPs from EU and non-EU States, liberalised airline market
- Single European Sky with a performance scheme, Network Manager - EUROCONTROL is designated as Network Manager since 2012, just re-designated for until 2029
- Collaborative approach with a sharing of responsibilities for ATM at local, regional and European level
- Areas of shared responsibilities - airspace design, Air Traffic Flow and Capacity Management, ATM Data sharing, CNS infrastructure monitoring
- European model relies on data sharing, interoperable infrastructure, same or compatible operational concepts

Busiest Day in Europe - 7 Sept 2018



Focus on ATM Performance

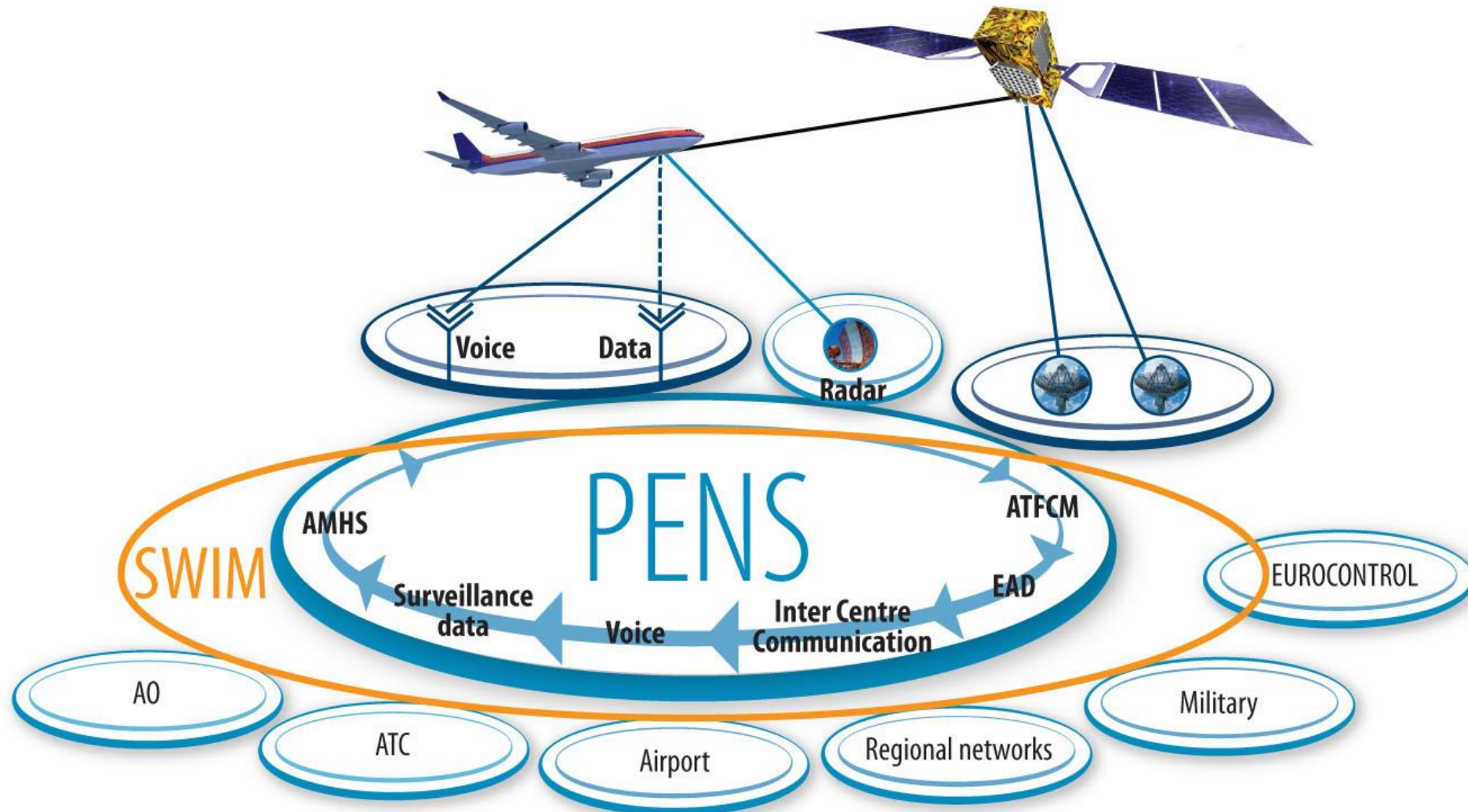
- 11m flights in 2018, 15M expected by 2035
- Air Traffic Management Delays well contained until 2017, capacity constraints in a few ANSP resulting significant increase in delays in 2018-2019 at European level
- Solutions/mitigation pursued at local and European network level
- Improved cross border airspace sector design, systematic harmonised operational improvements, more interoperable technology, ATC systems automation based on shared data is focus for way ahead
- Develop ATM data as a service through a service level architecture for CNS infrastructure – leading to a performance based approach to CNS

Examples of European-wide common systems

Need for common shared data and an efficient ATM CNS infrastructure – some examples

- Pan-European Ground Communications Network Service
- European AIS Database
- System Wide Information Management (SWIM) technology
- Surveillance Data Processing
- Initial flight plan processing, air traffic flow management network and systems
- A/C and ground infrastructure and avionics monitoring

IP-based European aeronautical ground communication infrastructure



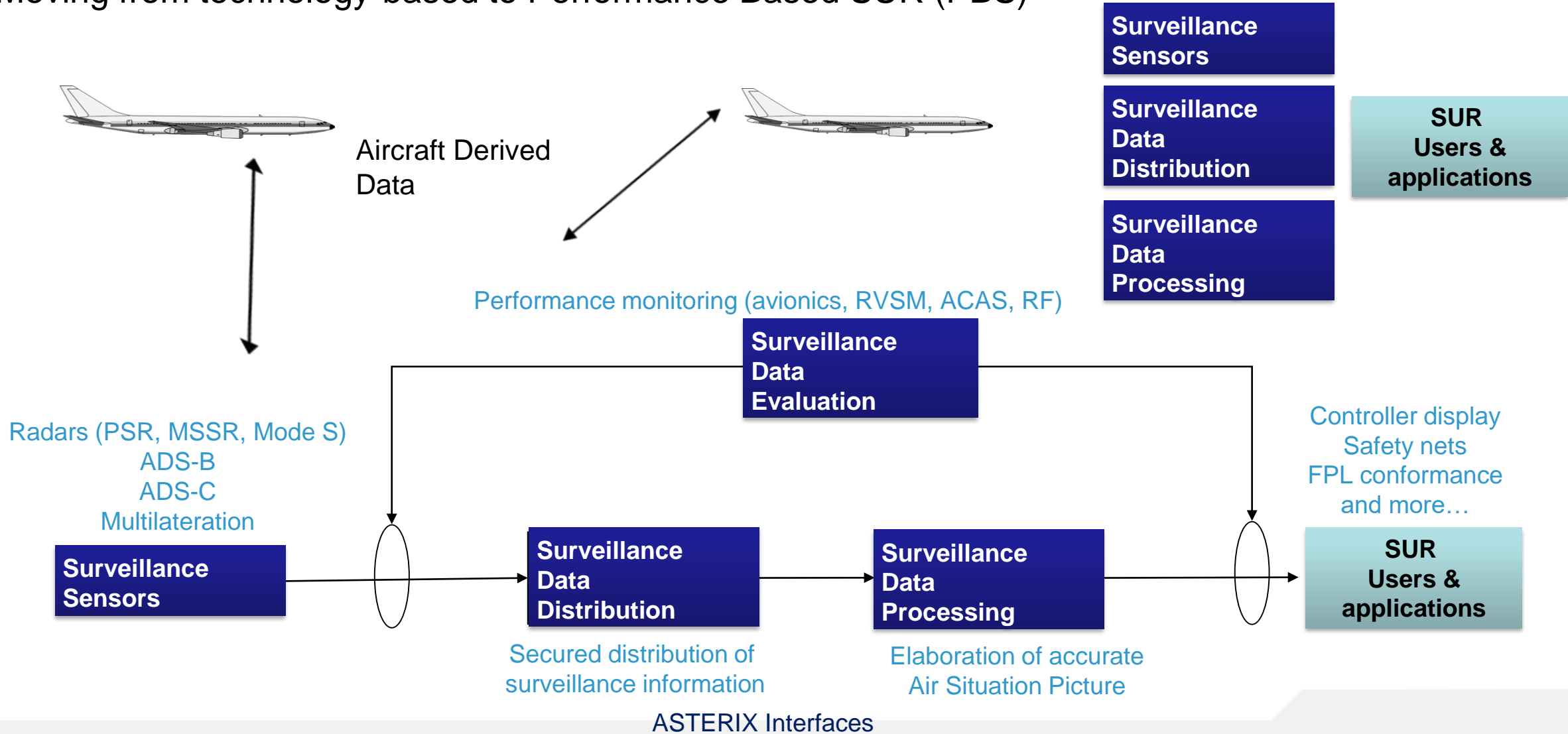
EAD – A cost effective pan-European certified AIM solution

1. A **secure One-Stop-Shop**, open **24 Hours** around the world, for the provision of **quality-assured aeronautical information** through a **fully certified** and **integrated state-of-the-art AIS solution**.
2. A **cost effective service** for both AIS Units and Airspace Users thanks to a **reduced workload** throughout the complete AIS process, the use of **shared resources & mutualized investment, development and maintenance costs**.
3. Application of **strict standards** imposed by ICAO, EASA & ISO which contribute to the **reduction in safety risks** resulting from the distribution and publication of aeronautical information.

Integration of airborne and ground surveillance in Europe

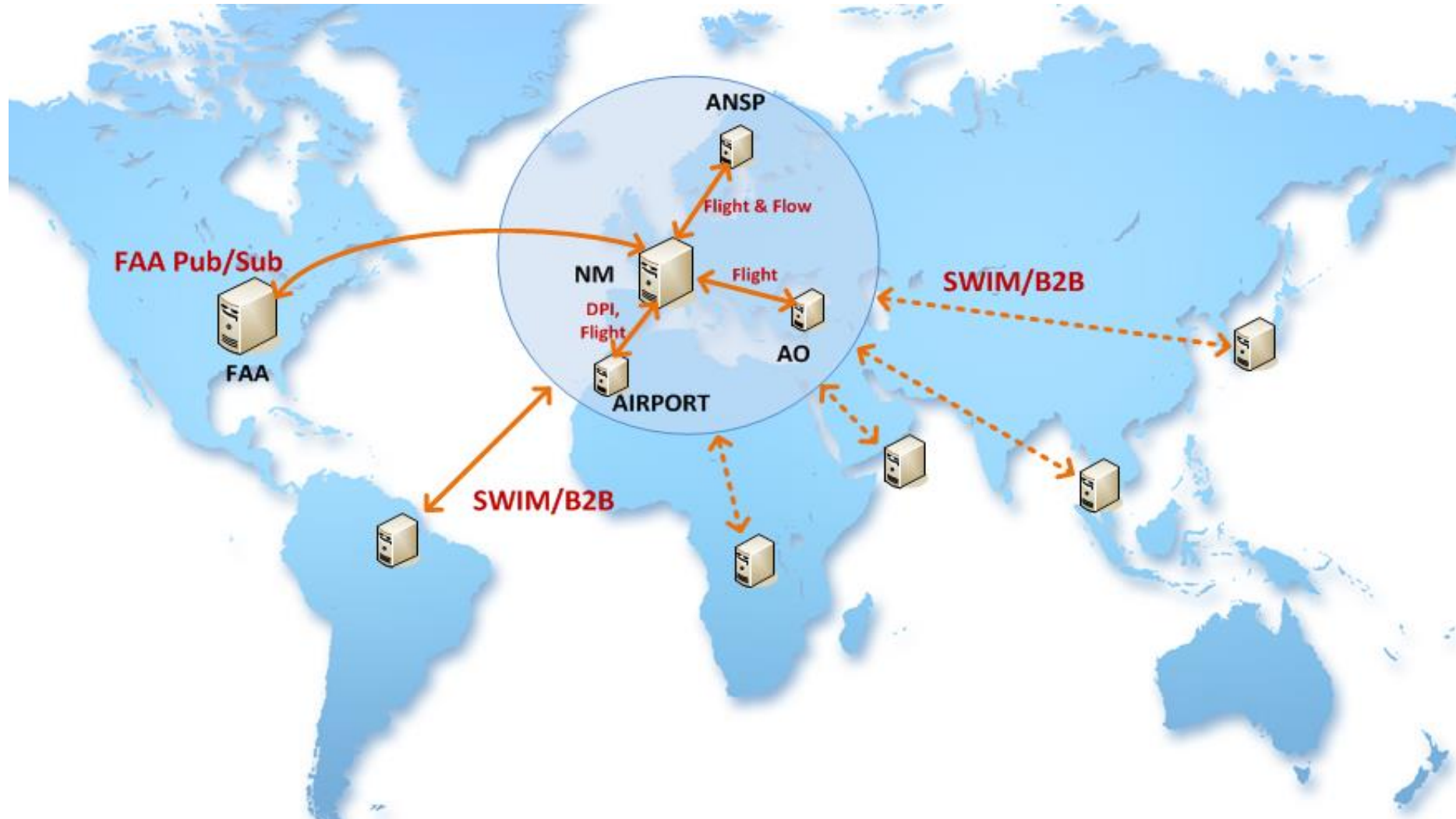


Moving from technology-based to Performance Based SUR (PBS)



Enabling the Digital Transformation of ATM

Global Interoperability, Global ATFM



European Digital Transformation



- 1st Digital transformation of NM and ANSP systems 2010+
- System-Wide Information Management (SWIM) based services Europe and beyond - protocols and models for data exchange since 2012,
- 2nd Phase of digital transformation needed for new data sources (satellite, data link, 4D trajectories 2020+)
- Big data, artificial intelligence for predictive analytics for easier and more effective collaborative decision making and improved European ATM Network performance