Ready for Initial SESAR Deployment
Pilot Common Project ATM Functionalities
SESAR is at a turning point and deployment is imminent. European Air Navigation Service Providers are preparing to deploy mature SESAR technologies that will deliver significant performance improvements in terms of airspace and airport capacity, fuel consumption and emissions – and consequently, cost savings. Thales has played a key role in transforming SESAR concepts into mature technologies and will ensure the smooth deployment of the ATM Functionalities that form the Pilot Common Project.

**PILOT COMMON PROJECT DEPLOYMENT**

SESAR is a key programme for a safe evolution of ATM. Thales brings a third of the total manufacturing industry contribution, almost double that of the second manufacturing industry contributor.

**THALES IS DELIVERING THE SESAR TECHNOLOGIES ESSENTIAL FOR THE FUTURE EUROPEAN SKY:**

- **ATC Centres:** advanced controller tools, HMI and new generation FDP for 4D trajectory and TMA/queue management
- **Airports:** integrated airport solution, departure/arrival optimisation, D-Taxi, wake vortex
- **Airborne:** new generation FMS, Performance-Based Navigation
- **CNS:** multi-constellation GNSS, GBAS, enhanced ADS-B
- **SWIM:** security, interoperability, SWIM middleware
- **Navigation:** Airborne: new generation FMS, Performance-Based optimisation, D-Taxi, wake vortex
- **Airports:** integrated airport solution, departure/arrival management
- **Network Collaborative Management:** ATC-Network Manager interoperability based on SWIM technologies developed by Thales

**PCP OBJECTIVES:**

- Improve predictability
- Optimise arrival trajectories
- Improve fuel efficiency and emissions
- Enhance demand/capacity balancing
- Improve passenger experience

**THALES BRINGS A UNIQUE INTERNATIONAL DIMENSION THANKS TO ITS WORLDWIDE EXPERTISE IN GROUND, AIRBORNE AND SPACE DOMAINS**

Europe counts over 440 airports, which together handle close to 26,000 flights a day and more than 1.4 billion passengers a year. To address the inevitable congestion of our skies, outdated technologies and the future ATM challenges in Europe, SESAR is delivering technological solutions, functionalities and systems, and is preparing standards for deployment in Europe.

Thales strongly believes that SESAR is a key programme for a safe evolution of ATM. Thales brings a third of the total manufacturing industry contribution, almost double that of the second manufacturing industry contributor.

As the leading industry player in SESAR, a key technology partner for NextGen and ready for ICAO Aviation System Block Upgrades, Thales aims to ensure global harmonisation and interoperability.

"The Pilot Common Project is a major milestone for SESAR and towards the achievement of the Single European Sky. Most importantly it shows that we are able and willing to make the necessary changes."  
Siim Kallas, Vice-President of the European Commission in charge of Transport, 2014

**AF#1: Extended AMAN and PBN in high density TMA**

Thanks to Performance Based Navigation, aircraft will fly shorter, more direct and more environmentally friendly routes in the TMA. Master AMAN/SMAN, integrated with TopSky - ATM Solutions, will help ANSPs: improve the predictability of approach trajectories and will facilitate traffic sequencing at an earlier stage.

**AF#2: Airport Integration and Throughput Functionalities**

Airport Integration and Throughput Functionalities will improve runway safety and throughput, enhance taxi integration and safety, and reduce hazardous situations on the runway. TopSky – Tower is ready to be deployed with integrated departure and surface management, routing, D-Taxi, safety nets, weather integration and wake vortex, following operational validations at Paris Charles de Gaulle Airport.

**AF#3: Flexible Airspace Management and Free Route**

Free routing and flexible use of airspace together with associated controller tools will ensure a more efficient use of airspace. Thales is contributing to the validation of advanced free routing and proposes advanced Conflict Detection and Resolution tools, and HMI adaptations to support the deployment of this ATM functionality.

**AF#4: Network Collaborative Management**

Network Collaborative Management improves the European ATM network performance, notably capacity and flight efficiency through exchange, modification and management of trajectory information. Thales is contributing to the improved ATC-Network Manager interoperability based on SWIM technologies developed by Thales.

**AF#5: iSWIM**

European ATM System interoperability will become more flexible and agile with the introduction of iSWIM. Thales is leading iSWIM developments in SESAR, including iSWIM middleware, ATC evolution, flight object interoperability and integrated MET services portal. Thales is ready to help you integrate iSWIM into your ground systems.

**AF#6: Initial Trajectory Information Sharing**

ANSPs and Airspace Users alike will benefit from initial trajectory information sharing with fuel savings and reduced delays, and improved performance of controller tools. Thales has developed an advanced FMS, and datalink, FDP and HMI upgrades to support iSWIM validations, which are ready to be deployed on the ground and onboard.

The deployment of iSWIM and initial trajectory information sharing are the first technological foundations required to support new SESAR concepts and functions and will significantly improve the performance of European ATM.
THALES’S PRODUCT STRATEGY IS ALIGNED WITH SESAR

CUSTOMERS AROUND THE WORLD WILL BE ABLE TO BENEFIT FROM THE TECHNOLOGICAL BREAKTHROUGHS WE ARE MAKING IN THIS AMBITIOUS EUROPEAN ATM MODERNISATION PROGRAMME.

Come and try out SESAR technologies in an environment similar to your own at the SkyCentre, The Link Lab and CASIA in France and Australia!