

Discover how SESAR is helping to make way for the Single European Sky

ABOUT SESAR JU

As the technological pillar of the Single European Sky initiative, SESAR aims to modernise and harmonise air traffic management in Europe. The SESAR Joint Undertaking (SESAR JU) was established in 2007 as a public-private partnership to support this endeavour. It does so by pooling the knowledge and resources of the entire ATM community in order to define, research, develop and validate innovative technological and operational solutions. The SESAR JU is also responsible for the execution of the European ATM Master Plan which defines the EU priorities for R&D and implementation. Founded by the European Union and Eurocontrol, the SESAR JU has 19 members, who together with their partners and affiliate associations represent over 100 companies working in Europe and beyond. The SESAR JU also works closely with staff associations, regulators, airport operators and the scientific community.

LEARN MORE ABOUT SESAR
www.sesar.eu
www.sesarju.eu
www.sesardeploymentmanager.eu
#SESAR



ABOUT SESAR DM

The SESAR Deployment Manager (SESAR DM) coordinates the upgrading of Europe's air traffic management infrastructure. The main task of the SESAR DM is to develop, propose and maintain the Deployment Programme of SESAR concepts and technologies and ensure efficient synchronisation and overall coordination of implementation projects and related investments. The tasks of the Deployment Manager are specified in Article 9 of European Commission Implementing Regulation (EU) No 409/2013. The SESAR Deployment Manager is a partnership of leading airlines, airports and air navigation service providers – the managers and users of Europe's airspace. They are committed to the principle of the Single European Sky and to deploying the technologies that will deliver it in order to create customer and environmental efficiencies.

Forewords

A sense of great achievement was felt by Joint Undertaking (SESAR JU) members and staff in 2016 as we saw the results of nearly a decade of work really take shape. We brought to a successful close some 350 projects – the culmination of thousands of hours of research, validations and demos. These results are encapsulated in a first-edition Catalogue of more than 60 solutions aimed at tackling pressing air traffic management (ATM) challenges. 2016 also saw the launch of SESAR 2020, another significant milestone. Two of the programme's three research strands – exploratory and industrial – were kicked off by the end of the year, while the publication of a call for very-large-scale demos set in motion this important innovation stream.

Remember, SESAR JU was created in 2007 to fast-track the delivery of a "family" of tangible ATM solutions, guided by the European ATM Master Plan. Last year's progress shows we are on track, and comes at a critical time for Europe as it reconciles growing air traffic with aviation safety, costs and the environment.

*Florian Guillermet,
Executive Director,
SESAR Joint
Undertaking*



The SESAR Deployment Manager (SESAR DM) plays a critical role coordinating, synchronizing and harmonizing diverse modernization actions in Europe's airspace. SDM translates the innovative technological and operational solutions into timely deployment by supporting the industry that makes them a daily reality. Today we have 28 finalized SESAR projects starting to provide benefits for air traffic management operations and EU passengers. More selected projects will start to deliver during the year. By playing its role, the SESAR Deployment Manager aims to maximize the benefits of real Single European Sky implementation. SESAR DM will keep on modernizing air traffic management in Europe, proven by managing the ongoing modernization through another 197 projects running in 29 Member States. I consider 2017 a point of no return for an improved network performance and the Single European Sky actual implementation. Therefore, it is crucial that the co-funding of air traffic management investments is continued.

*Massimo Garbini,
Managing Director,
SESAR Deployment
Manager*



SESAR
2016 HIGHLIGHTS
COMING UP IN 2017





JANUARY / FEBRUARY / MARCH

- > **VDL Mode 2 Capacity & Performance Study** published, identifying by when this Data Link technology would reach its operational limits in Europe
- > Implementation of Memoranda of Understanding with all the **Manufacturers** having expressed their interest to cooperate with SESAR DM
- > **SESAR 2020** renewed membership announced, bringing 19 entities together to work on air traffic management (ATM) research and innovation
- > **Release 3&4 Results** published, detailing the latest delivery of SESAR Solutions
- > First-ever flight trial carried out using enhanced satellite communications for air traffic Data Link Services
- > SESAR DM and **European Investment Bank** joined forces in support of the Single European Sky initiative



APRIL / MAY / JUNE

- > SESAR DM and **European Organisation for Civil Aviation Equipment** signed memorandum of cooperation.
- > SESAR DM: 2015 CEF Transport Calls, 3 SESAR Clusters **successfully submitted**
- > First SESAR 2020 **exploratory research** launched, 28 projects earmarked to receive EUR 20.4 million under EU's Horizon 2020 research and innovation (R&I) programme
- > **Global demonstration of SESAR's System-Wide Information Management (SWIM)** tool in Rome, showcasing seamless and connected inter-regional aviation information exchange.

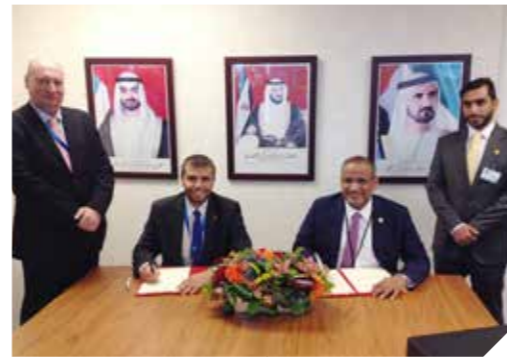
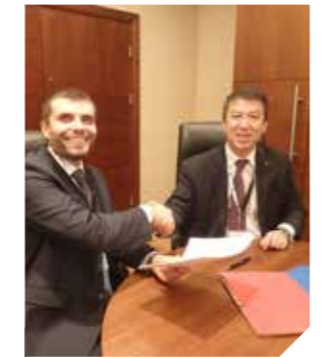


- > **SESAR Showcase** event gathered over 500 participants to mark closure of first-wave SESAR R&I activities
- > First edition of **SESAR Solutions Catalogue** published; an inventory of over 60 Solutions delivered to aviation community for implementation



JULY / AUGUST / SEPTEMBER

- > SESAR participated to the **TEN-T days** in Rotterdam to discuss the development of the Trans-European Transport Network
- > **Stakeholder Consultation** on Deployment Programme in full swing
- > Call launched for **exploratory research** projects to integrate drones into civil airspace; EUR 9 million earmarked under EU's Horizon 2020
- > Second **VDL Mode 2 Study (or ELSA)** published; recommendations on how to address performance issues related to Data Link and alternatives to the technology.



- > SESAR JU and **European Space Agency** signed MoC on satellite-based communications for Europe's air transport system
- > SESAR DM delivered the **"Data Link Services Implementation Strategy** towards Initial Trajectory Information Sharing"

- > SESAR DM: Several meetings were held with the **Communication Service Providers SITA and ARINC** to get their view on the DLS Implementation Strategy
- > SESAR DM delivered the **"Data Link Services Recovery Plan"**

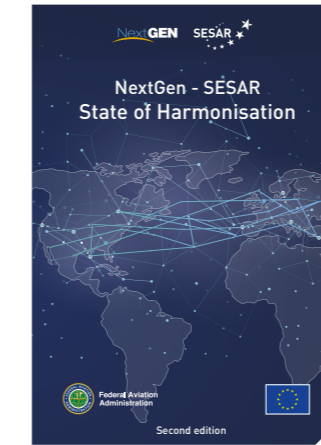
- > **United Arab Emirates' General Civil Aviation Authority** and SESAR JU signed MoC to improve overall ATM efficiency, optimising air traffic capacity and minimising delays
- > **Eurocontrol** renewed support for SESAR R&I activities within SESAR 2020 framework.
- > SESAR DM and FAA established an Action Plan **promoting global interoperability** with respect to deployment, followed by technical workshops on DataLink and SWIM implementation

- > **Deployment Programme 2016** delivered to the European Commission
- > SESAR DM: High Level **"SWIM Action Plan"** delivered
- > Memorandum of Understanding between the SESAR DM and **Boeing** was signed

OCTOBER / NOVEMBER / DECEMBER

- > **Drone demonstration projects** published; feasibility tests showing how these vehicles can be safely integrated into civil airspace
- > SESAR JU and **European Aviation Safety Agency** signed MoC for collaborating on SESAR 2020
- > 25 projects earmarked to receive around EUR 260 million by SESAR members and Horizon 2020 for **first-wave SESAR 2020 industrial research and large-scale validation tests/ actions**

- > SESAR DM: **Three grant agreements were signed** for a total of EURO 525 million projects to modernise the European airspace
- > SESAR **Drone Outlook Study** published, providing a snapshot of the drone landscape in 2050 and how new markets will unfold



- > **SESAR-NextGen State of Harmonisation Report** published, reflecting current and planned EU-US collaboration efforts to harmonise and modernise trans-Atlantic ATM, and support International Civil Aviation Organisation's Global Air Navigation Plan and Aviation System Block Upgrade programme
- > SESAR Phase 1 R&I activities formally closed; 350 projects, 20 000 hours of work, delivering over 60 SESAR Solutions

- > The **"Data Link Services Recovery Plan"** was referred to as a priority in the CEF Transport Call 2016
- > SESAR DM was appointed as **Data Link implementation project manager**
- > SESAR DM spoke at the 2nd EU Aeronautics Conference in the indispensable **dialogue between the European decision-makers and the high-level industrial stakeholders** in order to prepare the future of the European aeronautics industry
- > Open call for exploratory research and very-large scale demonstration projects launched with EUR 28 million budget
- > Signature Memorandum of Understanding between the SESAR DM and **Airbus SAS**

COMING UP IN 2017

- > Launch of next wave of **SESAR 2020 exploratory research and large-scale demonstration projects**
- > Launch of **European ATM Master Plan update** (end of 2017)
- > Update of **regulatory and standardisation roadmaps**
- > Elaboration of the **Data Link Services Programme**
- > **Pilot Common Project** review
- > The coordination of the application to the **future call 2017**



SESAR building blocks



- 2016**
 - > SESAR JU completes first R&I programme and delivers Solutions Catalogue
 - > SESAR DM: The "Data Link Services Recovery Plan" was referred to as a priority in the CEF Transport Call 2016
 - > Official launch of SESAR 2020 research activities
 - > SESAR DM: Three grant agreements were signed for a total of EURO 525 million projects to modernise the European airspace

- 2013**
 - Delivery of a first set of SESAR Solutions by SJU for deployment
- 2009**
 - Council resolution on the endorsement of the European ATM Master Plan

- 2007**
 - Establishment of the SESAR Joint Undertaking for coordinating and concentrating all relevant ATM research and development efforts in the EU. The SJU has a current mandate until 2024.

- 2014**
 - Establishment of the SESAR Deployment Manager to coordinate the synchronised deployment of SESAR

- 2004**
 - Establishment of SESAR as the technological pillar of the Single European Sky (SES)