Press Release

AVIATION INDUSTRY DEMOSTRATE SESAR SOLUTION FOR SEAMLESS AIR TRAFFIC MANAGEMENT ACROSS EUROPE

- **It allows control centres across Europe to exchange up-to-date and consistent flight information, a cornerstone to the Single European Sky project and key to enhancing efficiency in air traffic management**

- **A demonstration which was conducted simultaneously in Germany, France and Italy, simulating the coordinated management of flights by different control centres**

- **Developed collaboratively by SESAR members, Indra, Leonardo and Thales, demonstrating strong commitment to system interoperability by European industry**

June 5, 2018.- 4DTM project SESAR members have conducted an initial demonstration of flight object interoperability (FO IOP), a solution which aims to enable control centres across Europe to share complete information about air operations in real time, significantly increasing the efficiency of the air traffic management system through the continent.

Europe has some of the busiest airspace in the world, managed by a network covering 11.5 million km^2 of airspace with 63 en route centres. Today, when an aircraft leaves one national airspace and enters another, the adjacent centres use an on-line data interchange mechanism (called OLDI), to share flight information. Centres further downstream, however, do not get access to this information straight away and must rely on the originally filed flight plan in order to organise their airspace.

Developed collaboratively by members of the SESAR Joint Undertaking, Indra, Leonardo and Thales, within the framework of the Four Dimensions Trajectory Management (4DTM), the solution plays a significant role in remedying the current situation whereby air traffic controllers transfer the data for the flights under their responsibility to the next control centre in a sequential manner. With the FO IOP solution, all the control centres involved in an operation will know simultaneously the complete flight trajectory, in particular when the aircraft receives permission for take-off, what altitude it is flying at and what route it is following.

Taking place on 26 April simultaneously in Toulouse, Langen and Rome, the demonstration involved French, German and Italian air navigation service providers (DSNA, DFS and ENAV, respectively) and tested a variety of simulated scenarios using real traffic data, covering different stages of the flight. The operations of several control centres were recreated to check that the solution, supported by System Wide Information Management (SWIM), enabled the centres to share and update information, and coordinate the transfer of several flights between centres. Initial results from the demonstration that was followed by SESAR JU and European Commission representatives show that the solution's validation is on track, with further tests planned in 2019 and 2020. The solution is expected to be deployed across Europe by 2025.

The solution is a cornerstone in the coordinated management of flights crossing different portions of European airspace. With flight plans agreed by all the actors involved, it will be possible to schedule and execute flights more accurately, reducing delays and leading to fuel savings. It will also be possible to keep all the control centres informed of any restrictions that may arise along the trajectory of a flight, therefore facilitating forward planning. This will have several benefits, such as enabling control centres to absorb more traffic, reducing delays at airports, and making significant cost savings for the whole economy.

The development of this solution follows on from the work conducted in the first phase of the SESAR programme, which ended in 2016, and it incorporates the specifications of the air navigation service providers in Germany (DFS), France (DSNA) and Italy (ENAV), EUROCONTROL in Maastricht (MUAC), the Spanish provider ENAIRE, UK (NATS), and the air navigation service providers partnership COOPANS. The European Network Manager also participated in the activity.

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4DTM, a single integrated view of the European sky

FO IOP is one of ten solutions currently being developed as part of the Four Dimensions Trajectory Management (4DTM) project, the overall aim of which is to enable air navigation service providers, airport operators, airlines and the entire aviation community to share a single, complete, harmonised and up-to-date view of civilian and military aircraft trajectories across the whole continent.

The 4DTM consortium, led by Indra, is made up of 28 air navigation service providers, technology firms and research bodies across the whole continent. Enabled by system-wide information management (SWIM), the solutions under development will make it possible to merge information handled by control centres in Europe and in a global context. It will also be possible to process the information handled by aircraft themselves and the flight operation centres, which plan flights for airlines. It will improve pilot controller communication through improved procedures relying upon the latest A/G Communication Standards. Information on military flights will be taken into account to assess its impact on civilian traffic, and tools will be developed to improve the availability of aeronautical and meteorological information, making it easier to plan operations and detect possible issues in advance.

About SESAR

The aim of SESAR, as the technological pillar of the Single European Sky initiative, is to modernise and harmonize air traffic management in Europe. SESAR Joint Undertaking (SESAR JU) was created in 2007 as a public-private partnership to support these efforts. To provide this support, the consortium uses the combined knowledge and resources of the entire ATM community to define, research, develop and validate innovative technology and operational solutions. SESAR JU is also responsible for executing the European ATM Master Plan, which defines the EU priorities in R&D and implementation. Founded by the European Union and Eurocontrol, SESAR JU comprises 19 members. Together with partners and affiliated associations, it represents more than 100 companies active both in Europe and further afield. SESAR JU also works closely with airspace users, airports, professional staff associations, regulators and operators as well as the scientific community.

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