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PRESS RELEASE

Leonardo's air traffic control innovations are on show at the 2017 World Air Traffic Management (ATM) Congress in Madrid

- **Leonardo's LeadInSky ATM system now features Free Route which enables ANSPs to improve direct flight route planning, with cost savings and fuel reduction**
- **Next generation air traffic control communications solutions include the company's Data Link for data exchange**
- **At World ATM Congress Leonardo will showcase a new unmanned vehicles air traffic management platform via cloud services, and cyber security embedded in ATM solutions**

Madrid, 7th March 2017 – Leonardo is putting its innovative air traffic management solutions on show at World ATM Congress 2017 (Madrid, 7th - 9th March). Innovations comprise air traffic management (ATM) solutions for Air Navigation Service Providers (ANSPs) such as Free Route and two communications systems, which include the company's Data Link and an airport surface data-link infrastructure and network solution, three new pillars on which the Single European Sky project is being built. The first two solutions are already employed by ENAV, the Italian air navigation service provider, which launched its Free Route operations in Italy on December 2016. The Free Route solution is just part of Leonardo's LeadInSky, the company's latest-generation ATM system, compliant with SESAR and the ICAO Aviation Systems Block Upgrades (ASBU) roadmap.
Leonardo's Free Route allows ANSPs to provide airlines with the planning of direct flight routes through 'free route airspace', helping the aircraft plot more efficient courses compared to the traditional air traffic services (ATS) route. This can reduce fuel consumption via shorter flight paths, saving costs and being more environment friendly. At the same time, safety and security levels are kept high, in line with the philosophy of the SESAR programme. Thanks to Leonardo's solution, for every flight ENAV is able to offer above 11.000-metre free routes planning.

Leonardo's Data Link solution is a milestone in air traffic management; it allows users to move on from voice to digital text communication. This new system enhances security and efficiency by eliminating any possibility of misunderstanding between pilots and air traffic controllers. The Data Link system has been selected by ENAV, which has already implemented it at its Italy's Brindisi Area control Centre as well as at 19 data transmission stations in Italy.
Leonardo has also recently patented a further innovation, the 'double squitter', embedded in the Data Link. It allows for the integration and optimisation of the different telecommunications networks used by air navigation service providers and pilots and creates a single, integrated communication net. Leonardo's Data Link infrastructure is also ready to support and manage civil-military interoperation as foreseen in the European ATM Master Plan Roadmap.

Leonardo developed the airport surface data-link infrastructure and network solution that meets AeroMACS (Aeronautical Mobile Airport Communications System) standards, which is set to be an essential component of the implementation of data services. AeroMACS allows airport operators to rely on a secure communication network, which can support data exchange and ground operational needs. Leonardo's solution provides a secure wireless data network gathering data from fixed or mobile resources, flight service vehicles and weather stations via a shared infrastructure. At WAC2017 Leonardo participates in the WiMAX Forum, a cross-industry meeting to share opportunities, challenges and strategies for this advanced type of network.

Leonardo is also ready to deploy its automated system for unmanned aircraft air traffic management, on show at the stand. Using new technologies, the system is able to efficiently and safely manage unmanned civil airborne traffic in very low-level urban airspace, up to 150 metres above the ground. The company has also developed a simulation environment, which can integrate Remotely Piloted Aircraft System operations into Air Traffic Management (ATM) scenarios for testing their full integration in real environment.

At Leonardo's stand, the company's series 2100 Instrument Landing System (ILS), developed in cooperation with the Federal Aviation Administration, is on show alongside the firm's new ADS-B radio for Wide Area Multilateration and ADS-B networks. Leonardo is also displaying its 5th generation ATC communications equipment, the OTE ARES (Air-ground Radio Equipment) for the Single European Sky. The new family of radios for ground-to-air civil communications uses a software-defined radio architecture.

With leading experience in designing concepts for most complex and integrated systems of information and communication technology (ICT), Leonardo is delivering cyber protected products and solutions. ATM operators are facing challenges in protecting their increasingly interconnected networks from new and evolved threats. Current trends indicate higher complexity and targeting by threat actors. Leonardo offers embedded security solutions at delivery, together with a round-the clock support service via Security Operation Centre (SOC) at the customer's premises or through remote services that Leonardo can provide using its internal SOC. During the Show, with the role of project leader, the company is also presenting a speech on GAMMA, a project, which addresses new threats to air traffic management and aims to develop solutions to emerging vulnerabilities.

Leonardo has also been shortlisted for the Jane's ATC Awards 2017, taking place during the Show (7th March), in the "Technology Award - reflecting a significant contribution by equipment and systems suppliers" category, for its comprehensive modernisation of ATM systems under Turkey's SMART (Systematic Modernisation of ATM Resources in Turkey) project now underway, aiming to enhance the country's ATC infrastructure and services.