INDRA DIGITALIZES THE CONTROLLER-PILOT COMMUNICATIONS OF ENAIRE AND PANSA TO STRENGTH SECURITY AND EFICIENCY IN AIR TRAFFIC MANAGEMENT

- **Controller can send instructions to the pilot in more precise and clear way, avoiding possible misunderstandings produced in voice communications**

- **The system is in operation in Canary and Barcelona control centres and will be deployed in the Seville and Madrid centres in the short term**

- **PANSA completed the commissioning phase and is prepared to start providing datalink services to all flights in the en-route airspace**

- **Indra was the first company to launch a CPDLC controller-pilot data link in Europe for Eurocontrols Maastricht Upper Area Control Center (MUAC) in 2008.**

Madrid, March 13, 2018.- Indra has rolled out its controller-pilot data link communication systems (CPDLC) in ENAIRE's air traffic control centers in Barcelona and the Canary Islands and PANSA's air traffic control center in Warsaw to strength air traffic security and communications efficiency.

These systems allow the controller to send flight instructions, reducing the need to use voice radio communication systems. Therefore, the pilot receives data messages with clearances, including level change and the instructions to fly to a specific waypoint, directly on the onboard computer.

This technology prevents possible errors associated with voice communications, increasing the safety levels. Moreover, it facilitates the controller's work, who can send data to the pilot in a single click, reducing the number of communications that must be established and the time required to transmit them.

As a result, this reduces the work volume and increases the capacity to manage more flights. Likewise, the system reduces the occupation of the voice radio channels that are used as main communication link, increasing the flexibility of the control center.

The center in the Canary Islands has been ENAIRE's first center to use this system for oceanic flight management. It expanded its use to continental flights in January. The control center in Barcelona started to operate with this technology in February. It is expected to be commissioned in the centers in Madrid and Seville in the coming months, which will complete the system's rollout.

This modernization strengthens the capacity of ENAIRE's SACTA air traffic management system, as part of its Technological Modernization Plan, which is included in the company's Strategic Plan (2020 Flight Plan).

As regards PANSA, Indra has already rolled out its solution in Warsaw control center. Poland's air navigation service provider has already completed the commissioning phase and is prepared to start providing datalink services to all flights in the en-route airspace.

Indra was the first company to launch a CPDLC communication automation system in Europe, in particular, for Eurocontrol Maastricht (MUAC) in 2008. Its system meets EU's objectives and comply with the EU's regulations to modernize traffic manage and make progress in the construction of the Single European Sky. This technology will help air navigation service providers to keep pace with the constant annual increases in air traffic in the entire continent. With these tools, they will be capable of managing traffic more efficiently and safely.

About Indra

Indra is one of the world's top technology and consulting and a technology partner for the key operations of its customers' businesses worldwide. It is a leading worldwide provider of proprietary solutions in niche areas in Transport and Defense Markets and the absolute leader in IT in Spain and Latin America. It offers a comprehensive range of proprietary solutions and cutting edge services with a high added value in technology based on a unique culture of reliability, flexibility and adaptability to the needs of its customers. Indra is a world leader in the development of end-to-end technology solutions in fields such as Defense and Security, Transport and Traffic, Energy and Industry, Telecommunications and Media, Financial Services, Electoral Processes, and Public Administrations and Healthcare. Minsait is Indra's digital transformation business unit. In 2017 Indra posted a revenue of €3,011m, employed 40,000 professionals, and had a local presence in 46 countries plus sales operations in more than 140 countries.