

INDRA REVAMPS GERMANY'S ENTIRE AIR SURVEILLANCE NETWORK WITH NEW STATE-OF-THE-ART RADARS TO ENSURE SAFER, MORE DIGITAL, AND SUSTAINABLE AVIATION

- It will modernize the entire air surveillance radar network of DFS, the German air navigation service provider, with a minimum of 23 new sensors, and up to a total of 42 cutover activities on site
- The new systems, used for en-route air traffic surveillance and approaches to Germany's main airports, include the latest technological breakthroughs, thus enhancing the safety, capacity, efficiency and environmental friendliness of air traffic
- Indra will reinforce its position as the leading global company in the sector, developing the solutions set to transform air navigation in the coming years with its largest ATM surveillance contract in a key, advanced and large country such as Germany

Madrid, November 10, 2022.- Indra, a leading global technological engineering company for the aerospace, defence and mobility sectors, has signed a contract with DFS, Germany's air navigation service provider, to modernize the country's entire network of air surveillance radars with state-of-the-art technology. The project, with an execution period of 13 years, has an amount over 100 million euros, which would be extended depending on the release of the different options envisaged.

The company won out over the other top manufacturers in the market in an open competition, thanks to the best technically rated and most competitive proposal. It has thus won its largest air traffic management (ATM) contract to provide surveillance for a large and technologically advanced country: Germany, which operates many key routes in Europe.

The project will enhance the safety, capacity, efficiency and environmental friendliness of air traffic in the country and help reduce CO₂ emissions.

Indra's technology will replace the systems currently in operation, which are reaching the end of their useful life. More specifically, the company will deploy a minimum of 23 new sensors, 19 of them equipped with a primary PSR radar and a secondary mode S radar, and four stations with secondary mode S radars only. They will be used for en-route air traffic surveillance and approaches to Germany's main airports. Due to the efficient surveillance network structure the installation of interim sensors and their relocation to their final facilities will be necessary. Therefore, up to 42 installation, implementation, optimisation and cutover activities on site will be indispensable to be carried out.

"We're very proud that a demanding and top-tier customer such as DFS has once again placed its trust in Indra, in our technology and in the ability of our teams to undertake such an ambitious and complex renovation project, one we're sure will become a landmark in European and global terms. We have a proven track record of collaboration with DFS behind us in the iTEC partnership to make the Single European Sky a reality, and this new project will constitute a further step in moving forward together towards safer and more efficient air traffic with a smaller environmental footprint", declared Indra CEO Ignacio Mataix.

"We look forward to modernizing our critical infrastructure of surveillance radar technology, while reducing lifecycle costs and CO₂ emissions through reduced power consumption and modernizing building sites. Sustainability is key in every decision we take. With Indra's technological capabilities we will help to meet our requirements for the complex airspace over Germany in the heart of Europe," said CEO of DFS, Arndt Schoenemann.

A boost for digitalization

Indra's radars comply with the highest quality standards and incorporate the most advanced digital technologies, including GaN-based transmitters, fully digital signal processing and non-linear multi-sensor tracking algorithms. The RMMS radar control and monitoring system is implemented on a private cloud with big data features and predictive maintenance capabilities by means of machine learning mechanisms.

The radars can thus ensure an extremely accurate view of air movements and facilitate much more efficient and safer flight management, including in situations with clutter, interferences and anomalies caused by bad weather and steep terrain.

The information collected by the primary radars is, in turn, complemented by that received by Indra's MSSR secondary radars, the most advanced of their kind in the market, with the capacity to selectively interrogate and identify aircraft, which in turn cross-references information received from the integrated ADS-B systems, improving the radar's detection capability and reduces excessive re-interrogations. This mode S system is a solution with a high radar performance that provides great flexibility by adapting to the customer's needs.

The new radars also incorporate advanced techniques and algorithms developed in-house by Indra to mitigate the reflections and noise caused by wind turbines and solar panels that tend to affect the signal. This pioneering capacity overcomes a technical and operational challenge for airports and allows these kinds of installations to be located in the vicinity of radars, eliminating any obstacle to the production of renewable energies.

This unique project for DFS will reinforce Indra as the leading global company in the sector, which is developing the solutions set to transform air navigation in the coming years. The company has deployed more than 6,000 installations in 180 countries and its systems have supported the safety of more than 200 million landings at 1,400 airports.

About Indra

Indra (www.indracompany.com) is one of the leading global technology and consulting companies and the technological partner for core business operations of its customers worldwide. It is a world-leader in providing proprietary solutions in specific segments of the Transport and Defense markets, and a leader in Digital Transformation and Information Technologies in Spain and Latin America through its subsidiary Minsait. Its business model is based on a comprehensive range of proprietary products, with a high-value, end-to-end focus and with a high innovation component. In the 2021 financial year, Indra achieved revenue of €3.390 billion, near 52,000 employees, a local presence in 46 countries and business operations in over 140 countries.

About DFS

DFS Deutsche Flugsicherung GmbH, the German air navigation service provider, is a State-owned company under private law with 5,600 employees as at 30 June 2022. DFS ensures the safe and punctual flow of air traffic over Germany. Around 2,200 air traffic controllers guide more than three million flights through German airspace in peak years, up to 10,000 every day. The company operates control centres in Bremen, Karlsruhe, Langen and Munich, as well as control towers at the 15 designated international airports in Germany. The subsidiary DFS Aviation Services GmbH markets and sells products and services related to air navigation services, and provides air traffic control at nine regional airports in Germany and at London Gatwick Airport and Edinburgh Airport in the UK. DFS is working on the integration of drones into air traffic and has set up a joint venture, Droniq GmbH, with Deutsche Telekom. Other subsidiaries include R. Eisenschmidt GmbH, which markets publications and products for general aviation, and Kaufbeuren ATM Training GmbH (KAT), which provides training for military air traffic services personnel. The joint venture FCS Flight Calibration Services GmbH offers flight inspection services. www.dfs.de