

INDRA MODERNIZES THE AIR TRAFFIC MANAGEMENT SYSTEMS OF COSTA RICA AND REINFORCES THE SAFETY AND EFFICIENCY OF FLIGHTS THROUGHOUT THE COUNTRY

- **The company has addressed the modernization of the air traffic and surveillance systems by implementing state-of-the-art technology with features that exceed the most demanding requirements imposed by international aeronautical organizations**
- **COCESNA increases its flight management capacity in Costa Rica and reinforces safety, efficiency and punctuality while reducing the environmental impact**
- **Indra strengthens its relationship with COCESNA, the organization responsible for air traffic management in Central America**
- **The company is driving the modernization of air traffic management in Latin America: 70% of control centers operate with Indra systems and it has deployed approximately fifty radars**

Madrid, March 6, 2018. Indra, in partnership with the Central American Corporation of Air Navigation Services (COCESNA), has completed the modernization of the air traffic and surveillance system in Costa Rica.

Thanks to Indra technology, the country has increased its flight management capacity and reinforced flight safety and punctuality, as well as achieving more efficient and environmentally-friendly routes. This modernization of the country's air transport infrastructure will also enable Costa Rica to absorb more flights and receive more visitors, which in turn will consolidate its tourism industry.

The project consisted in renewing and implementing systems to facilitate the automation of flight management at the country's main control center, located in Alajuela, which controls approaches to the country's main airport, Juan Santamaría International Airport. The second approach control center, located in the city of Liberia, has also been modernized and the Flight Information Center and the Air Flow Control Center (which regulates traffic in high-transit situations) have been expanded.

The control towers at the Juan Santamaría, Tobías Bolaños Palma and Daniel Oduber Quirós international airports have also been upgraded with latest-generation systems that are both more secure and more efficient.

All of these automated air traffic management systems developed by Indra incorporate the most advanced technology on the market, far exceeding the requirements demanded by the International Civil Aviation Organization (ICAO).

With regard to air surveillance, Indra has renewed the radar header also located at the Juan Santamaría International Airport in Alajuela and has also fitted a primary radar to expand its scope and a state-of-the-art mode S monopulse surveillance radar and digital receiver (IRS20MP/S) that covers 250 nautical miles. Both systems complement one another to improve the quality of data received by the controllers, service reliability and cost optimization. The system makes it possible to apply advanced processing techniques of the pulse emitted and received by radars, therefore eliminating noise and increasing the accuracy with which aircraft are detected. This means that air traffic controllers have a better "picture" of what is happening in the airspace under their responsibility.

Leader in Latin America and worldwide

Indra has a consolidated relationship as COCESNA's technology provider. Currently, the entire upper airspace of Central America, managed by this body, is organized with Indra technology. COCESNA is also responsible for supplying the air traffic management systems for all the countries that belong to the corporation.

The company is driving the modernization of air traffic management in Latin America. Indra has been awarded the most important contracts of recent years in this region. Its systems are in operation in practically every Latin American country: it has modernized 70% of control centers in Latin America, 30 centers in total; it has installed its system in the majority of the control towers; and, it has deployed nearly fifty air traffic surveillance radars and a similar number of radio navigation systems. In total, five hundred air traffic management systems of all types with the Indra seal support air traffic management on this subcontinent.

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.