



Press Release

INDRA'S TECHNOLOGY MANAGES THE MÁLAGA SUBWAY SYSTEM

- **Indra has created the control center for the integrated operation of the network and implemented a latest-generation data center, communication technology and the ticketing systems for all the stations**
- **The project reinforces Indra's position as leader in rail traffic management systems, building on earlier successes in the field through projects like the subway system for Medellín and the light rail network in Kuala Lumpur**

Metro de Málaga has made Indra its technology partner, commissioning the company to design and implement the control center that will manage the entire infrastructure, including both the rail traffic and the stations. The multinational has also implemented the ticketing and access control systems at all the stations on the two subway lines that currently service the city of Málaga.

The control center is equipped with Indra's advanced subway management solution which integrates all the necessary elements for operating and supervising the network, permitting the integrated management of both lines and maximum automation of the operation. Accordingly, the operators have access to real-time information for making decisions and resolving any incidents that arise.

The solution implemented in Málaga includes the integration of the operation planning and traffic regulation sub-systems, allows operators to monitor trains in real time, and offers a tool for supervising and controlling all the fixed installations (stairs, elevators, ventilation, low voltage, etc.), the video surveillance system, access control, and the intercom and PA systems. This means that operators have total control over all the subway systems from their workstation.

Advanced control center

The new control center comprises a room with four workstations, a room dedicated to maintenance, and a vast video wall showing the different lines. Since the solution is integrated through CCTV with the video surveillance and access control systems, operators can also monitor all the stations.

Indra has also implemented a latest-generation data center to support the activities of the control center and all the communications integrated in an IP platform, allowing users to communicate with every system from the same device. Moreover, among other systems the



control station incorporates a SCADA system to manage energy consumption and a SCADA control system for the fixed installations.

Latest ticketing technology

Indra has also implemented the Metro de Málaga ticketing and access control systems. This contactless technology validates tickets when they are held in front of a scanning device, thus speeding up the entry and exit of passengers.

All the stations have at least two turnstiles for people with reduced mobility (PMR), facilitating access for the disabled and passengers with buggies, suitcases or bicycles.

In addition to the passenger information systems and corporate management systems, etc., the control center implemented by Indra also incorporates the ticketing systems.

Technology at the service of public transportation

The use of state-of-the-art management technology provides Metro de Málaga with the capacity to access information in real time, thus facilitating the decision-making process and offering users a safer, more efficient and eco-friendly service. This added value is useful for promoting public transportation, a crucial aspect at a time when one of the main challenges facing cities is the need to guarantee more efficient, ecological and sustainable transportation and mobility.

Indra has already created an integrated control center for the light rail and monorail in Kuala Lumpur, Malaysia, and the subway system in Medellín, Colombia. These projects contemplate intermodal transportation models and the integrated management of different modes of transportation.

In the field of public transportation management, Indra's operation assistance solution (OAS) manages over 13,500 buses worldwide through projects in Brazil, Colombia, Mexico, Argentina, Poland, Morocco, Portugal and Spain.

Indra, chaired by Javier Monzón, is the leading consulting and technology multinational in Spain and one of the most prominent in Europe and Latin America. Innovation represents the cornerstone of its business and sustainability. In the last three years it has spent more than €570 million on R&D&i, making it one of the biggest European investors in the industry. With a revenue of approximately €3 billion, 61% of its income is generated by the international market. It employs more than 43,000 professionals and services clients in 138 countries.