

HIGH-SPEED TRAIN LINE BETWEEN MECCA AND MEDINA

WE DESIGN, EQUIP AND IMPLEMENT
THE CONTROL CENTERS THAT WILL
MANAGE HIGH-SPEED RAIL TRAFFIC
TO MECCA



Context

The high-speed train for pilgrims

The Saudi government and SRO (Saudi Railways Organization) tendered the construction, operation and maintenance of a high-speed train between the two holy cities of Islam, joining the two cities with a 450 km line and three intermediate stations.

The second stage was awarded to the Spanish-Saudi consortium Al-Shoula for the construction of the superstructure (track, electrification, signaling, control and communications centers), the delivery of 35 high-speed trains, and the operation and maintenance of the infrastructure for 12 years.

Within this consortium, Indra is responsible for control centers (rail management and operation assistance systems and the consortium's management systems), communications (fixed and mobile), security (CCTV, access control and fire detection), traveler information systems, ticketing systems and reservations and sales.

State-of-the-art systems for real-time operation and management of railway infrastructures

- Indra will design, equip and implement the line's operation and control center, located in Jeddah, and the backup center.
- Both centers will be equipped with the Da Vinci system, developed by Indra and the intellectual property of Adif, which is considered the world's most advanced rail traffic management platform.
- Integration of all the remote control systems (interlocks, energy, ERTMS, detectors).
- Operation planning and real-time traffic monitoring system.
- Future traffic condition predictions and automatic routing of trains
- Geographical information system and generation of reports and scorecards.
- Integrated system for driving and traffic training.
- Implementation of surveillance and security systems for the installations, including closed-circuit television (CCTV) with digital IP technology.
- Comprehensive solution for fixed and mobile telecommunications that provides the infrastructure needed by all other systems (signaling, ticketing, passenger information, etc.).
- Latest-generation contactless technology for issuance and automatic and manual sale of tickets, incorporating electronic payment, and for the access control systems.

Benefits

Maximum security and control over railway traffic management

- The Mecca-Medina high-speed train strengthens Spain's position as a benchmark in high-speed thanks to Indra's solution.
- The Da Vinci system allows for the integration of railroad traffic management, since a single solution includes all the necessary systems for operating a railway line.
- The integrated system for driving and traffic training developed by Indra is based on an ideal simulation environment that allows new features to be tested under real-life conditions.

450 kilometers and an estimated volume of over 160,000 passengers daily

Indra in the sector

Real-time data for decision-making.

Indra is a leader in the use of new technology for creating smart infrastructures and making them more ecologically and financially efficient. Applied to transportation, these smart technologies provide real-time information for decision-making and offer added value to the citizen's service, increasing security levels, effectiveness and respect for the environment, giving infrastructures greater control and improving mobility.

Applying technology to public transportation management allows the service to be improved and optimized for use by the citizens, a key aspect at a time when one of the biggest challenges for the future, particularly in urban areas, is addressing the need for more efficient, ecological and sustainable transportation and mobility.

Indra has implemented an integrated control center for the light rail and monorail systems in Kuala Lumpur, Malaysia, as well as the management technology for the Medellin

Subway in Colombia. These projects are moving toward intermodal transportation models, which integrate management of different modes of transportation.

In public passenger transportation management, our operation assistance systems (OAS) manage over 13,500 buses worldwide, with references in Brazil, Colombia, Mexico, Argentina, Poland, Morocco, Portugal and Spain.