



Press Release

INDRA WILL IMPLEMENT A HIGH-SPEED TRAFFIC MANAGEMENT SYSTEM AND RAIL NETWORK PLANNING SYSTEM IN TURKEY FOR €43 M

- **Indra is to set up a cutting-edge control center in Ankara, where operational planning will take place for the country's 12,000 km railroad network, managed by the DaVinci high-speed train traffic system**
- **The Project for Turkish Rail covers the two high-speed rail lines currently in operation, and will include all lines under construction and scheduled to come into service prior to 2016**
- **This contract consolidates Indra's position as leader in high-speed traffic management systems, as well as reinforcing its status in the railroad industry, with operations in countries such as Saudi Arabia, Morocco, Colombia, Lithuania and Malaysia**

State Turkish Rail (TCDD) has handed Indra a contract to implement a planning system for its entire rail network, as well as a high-speed train management system, for €43 M. The consultancy and technology multinational signed the contract after beating major industry competitors in the international tender.

Indra will set up a new control center in Ankara, equipped with cutting-edge technology, from which operational planning will take place for the country's 12,000 km railroad network, both conventional lines and high-speed tracks. Furthermore, the DaVinci system, which has established itself as the world's most advanced rail traffic management platform, will support comprehensive high-speed rail traffic management in Turkey, where the Ankara-Estambul and Ankara-Konya high-speed lines are currently operational.

The project includes traffic planning and management for all high-speed lines now under construction, which are scheduled to become operational before 2016, bringing the total amount of Turkish high-speed track overseen by Indra technology to 2,000. The DaVinci system has consolidated its position as the country's most prominent management platform, and is well-positioned to be adopted in future contracts to manage the entire conventional network and future high-speed network extensions. The Turkish Transport Ministry intends to build a 10,000 km network of high-speed railroad by 2023.

The DaVinci system, which was developed by Indra and is the intellectual property of Adif, will allow Turkish Rail to automate and integrate all procedures to ensure the correct functioning of its high-speed lines. These currently operate using disaggregated systems, meaning numerous manual and repetitive tasks are required. The platform will incorporate, among others,



regulation systems, automatic routers, communications, control panels, remote monitoring and a system to manage charging for use of the infrastructure.

Optimizing the conventional network

The planning system deployed by Indra will lay the foundations on which the current rail network can be modernized and optimized, as well as a basis for planning technological requirements, in terms of control systems, signaling, etc., for new infrastructure. With this system, Turkish Rail will be able to design and size all elements required to build new lines and redesign existing tracks, showing for example the exact design of interconnections or elements required by ATP systems (Automatic Train Protection) that may be installed (Asfa, ERTMS, etc.).

The planning system supports traffic planning for the entire network, improving operating plans and optimizing train circulation, allowing greater control over the position of physical vehicles. Among other benefits, the system automatically ensures that trains planned for each day will be available.

Indra's technology will thus provide Turkish Rail with optimal, simpler, more sustainable and efficient operations management, ranging from planning right through to execution in real time. The solution is also ready to integrate the planned network expansions.

TCDD started building high-speed lines in 2003, with the Ankara-Eskisehir stretch of the Ankara-Istanbul line. The Turkish Transport Department next plans to build the remaining stretch to Istanbul, as well as the Ankara-Sivas and Istanbul-Esmirna lines.

Cutting-edge technology for the industry

This new project will reinforce Indra's position in the railroad market, where it has operations in countries such as Saudi Arabia, Morocco, Malaysia, Lithuania, Colombia and elsewhere. It also sees the DaVinci platform grow in its global leadership of high-speed rail traffic management. The system now controls close to 3,000 km of high-speed rail in Spain, while the 500 km Mecca-Medina high-speed link will also be under its control, as well as the near 2,000 km of rail that the Turkish high-speed network will reach in forthcoming years.

Indra's innovation and engagement with the rail industry has seen the company develop proprietary cutting-edge technology with strong export potential. Evidence of this is Indra's involvement in the Mecca-Medina high-speed railroad, the largest international project ever won by Spain, to build what will be Saudi Arabia's largest rail line.

Furthermore, Indra continues to invest in innovation to develop latest generation rail technologies, as part of the ERTMS Level 2 and ASFA Digital systems, among others.

Indra, chaired by Javier Monzón, is one of the world's largest consultancy and technology multinationals, a leader in Europe and Latin America and is expanding in other emerging economies. Innovation is the cornerstone of its business, which is highly focussed on the customer and on sustainability. The multinational is one of the leaders in its sector in Europe in terms of investment in R&D and innovation, having invested more than €570M in the last three



years. With sales approaching €3,000 million, it employs 42,000 professional and has customers in 138 countries.