

INDRA AND EDEMSA MAKE TRAFFIC SAFER AND MORE EFFICIENT IN THE TÚNEL DE ORIENTE, THE LONGEST IN LATIN AMERICA

- **The company has commissioned two control centers, together with the Colombian company Eléctricas de Medellín Ingeniería y Servicios (Edemsa): a main center and a backup center, from where the nine kilometers of the tunnel will be supervised**
- **The corridor also includes modern electronic toll collection systems, which will help reduce travel time from Medellín to José María Córdoba airport from 45 to just 18 minutes**
- **With its offering of solutions for Transportation, Mova Solutions, Indra meets all the technological needs for the operation and management of this concession contract, guaranteeing the highest standards of quality and safety**
- **Indra reinforces its position as a technological partner of the most modern Colombian highways and as one of the world's leading technology companies in large transport infrastructures, with projects in more than 50 countries**

Madrid, August 26, 2019.- Indra, one of the leading global technology and consulting companies, has been responsible for implementing all the technology for the Túnel de Oriente, the longest in the country and the region. This is regarded as one of the most important infrastructure projects in Colombia, due to the length of its tunnel, which is about 9 kilometers long. This road transport link is also strategically located between Medellín and the José María Córdoba airport, in Rionegro.

The company has just commissioned two control centers, together with Eléctricas de Medellín Ingeniería y Servicios SAS (Edemsa): a main center and a backup center, from which all intelligent transport systems, safety systems and revenue collection systems will be monitored in an integrated manner.

The project is also equipped with Indra Mova Solutions technology, the innovative proposal to lead the future of mobility and transport and, specifically, with the solutions Mova Traffic, Mova Collect, Mova Protect and Mova Comms. Indra thus meets all the technological needs for the efficient operation and economic management of this road corridor, known as Concesión Túnel Aburrá Oriente, which comprises a total of 24 kilometers made up of tunnels, roads, interchanges and bridges.

The Horus integrated traffic and tunnel management platform, of the line of Mova Traffic solutions, provides operators with real-time information and a single vision of everything occurring on the highway, thus optimizing operations and decision-making. There are also variable signage systems for increased safety, as these provide drivers with information in real time on road conditions, the safe distance between vehicles, speed limits and any incidents.

The company's offering has an Automatic Incident Detection system (AID), which integrates information from cameras and sensors, and sends alerts automatically to the control center in the event of an incident or emergency, thereby reducing its time to resolution and increasing user safety.

Advanced smart transport systems

The project also includes the implementation of the necessary communication systems, safety systems, and intelligent traffic systems (ITS): closed circuit television systems (CCTV), traffic counters, road signage, SOS posts, incident detection, lighting control, a loudspeaker system and ventilation control., with anemometers,

luminance meters and opacimeters. With this equipment, it is one of the most advanced and modern tunnels in the country in terms of intelligent transport systems.

In addition, air quality measurement systems and CO sensors are installed, which are able to detect high levels of toxic gases in real time and activate the fans automatically to expel these pollutants. An innovative radio system enables georeferencing of the exact location of ambulances, firefighters, police and operation and maintenance vehicles in the event of an incident.

The tunnel now has visibility sensors and an emergency and evacuation artificial lighting system, as well as power generators and backup power plants to guarantee the power supply of all safety systems.

Swift and secure collection management

Indra also provided the highway with its toll solution, Mova Collect. It includes manual payment systems and electronic toll systems, which allow the classification and passage of vehicles without stopping, at speeds of up to 60 kilometers per hour, which will help cut travel times between the Río Negro airport and Medellín from 45 to 18 minutes.

In addition, the back-office system provides quick and secure management of collections and income tracking.

Partner for more advanced transport projects

The implementation of the company's traffic management solutions in the Túnel Aburrá Oriente public authority concession contract reinforces Indra's position as a technological partner of the most advanced Colombian highways. In Colombia, Indra has already deployed its solution for integrated and centralized traffic and tunnel management in the two-lane Bogotá-Villavicencio highway and the Parques del Río tunnel in Medellín, as part of the city's most important sustainable urban development project. Indra has also developed the integrated mobility solution of Medellín and has implemented its toll systems in Colombia, specifically on the Los Llanos, Café and Devisab highways, among others.

Recently, the company has been awarded a contract with the Concesionaria Ruta del Cacao, to supply all traffic management technology, intelligent transport systems (ITS), communications and toll systems for the Bucaramanga-Barrancabermeja-Yondó highway.

These projects also consolidate Indra as one of the leading companies in the world in cutting-edge transport technology, with projects successfully completed in over 50 countries and the capacity to undertake ever more ambitious and complex projects.

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 world-wide. It is a world-leader in providing proprietary solutions in specific segments in Transport and Defense markets, and a leading firm in Digital Transformation Consultancy and Information Technologies in Spain and Latin America through its affiliate Minsait. Its business model is based on a comprehensive range of proprietary products, with an end-to-end, high-value focus and with a high innovation component. In the 2018 financial year, Indra achieved revenue of €3.104 billion, with 43,000 employees, a local presence in 46 countries and business operations in over 140 countries.