INDRA PROVIDES VEHICLE OCCUPANCY DETECTION (VOD) TO A 50-MILE EXPRESS LANES NETWORK IN USA

- **Transurban chose Indra's technology to verify the correct use of the I-95, I-495, and I-395 Express Lanes and identify evaders, who will have to pay the toll if there are fewer than three occupants in the vehicle**

- **The final goal of the solution, based on deep learning, is to contribute to a safer, more efficient, sustainable and fair management of highways, since infractions drain resources and are detrimental to other drivers, increasing the toll price due to the traffic density**

- **Indra's system, which has already demonstrated the highest accuracy among three companies on the I-880 highway near San Francisco, contributes to a more sustainable mobility as it allows for more intelligent tolling**

Madrid, July 11, 2022.-Indra, a leading global technology engineering company for the aerospace, defense and mobility sectors, has been awarded a contract with Transurban in the United States to implement its pioneering solution for the automatic detection of high occupancy vehicles (HOV) in the I-95, I-495, and I-395 express lanes in northern Virginia.

Indra's technology, based on artificial vision and deep learning, makes it possible to automatically detect, in real-time, in a non-intrusive way and with high reliability, the number of occupants (front and rear) in a vehicle in the express lanes. In this way, Transurban can identify when the number of occupants in a vehicle is less than what the vehicle's transponder declares.

Transurban, one of the world's leading infrastructure companies, which develops and operates toll roads in Australia, the United States and Canada, chose Indra's technology after making a competitive contract between several companies that implemented their systems and evaluate the accuracy of automatic detection, image quality and other factors.

Indra's solution accuracy and image readability are an important part of Transurban's initiative to increase compliance of HOV and teach drivers how to properly use the transponder of its vehicles.

The final goal of the Indra's solution is to contribute to a more efficient, sustainable and fair management of highways since misuse of high occupancy three (HOV 3) declaration can reduce the operator's ability to control traffic density through dynamic pricing and harms the rest of drivers who declare occupancy correctly.

For HOV mode misuse, Indra's Vehicle Occupancy Detection (VOD) system decreases the number of transactions and images that operators must review.

Unique technology

As a result of R&D&I, the VOD system with artificial vision and deep learning is in Indra's Mova Protect line. VOD is a unique product making possible smart tolls, express lanes for high occupancy vehicles, new dynamic pricing models, and city access based on vehicle type and the number of occupants.

Indra's VOD system enables new advanced mobility models, which prioritize and promote public transport and high-occupancy vehicles, improving traffic speed, air quality and noise levels. Until now, the implementation of these measures entailed their compliance with infraction detection, surveillance, and traffic controls, which made their application complex, ineffective and unreliable.

In 2018, Indra's VOD system demonstrated the highest accuracy rate in the exact number of a vehicle's occupants in a pilot near San Francisco, competing with two other companies from around the world which complied with the minimum requirements for participating in the trial.

Innovation to lead _smart mobility_

This new project reinforces Indra's collaboration with Transurban, which in 2019 awarded Indra a contract to integrate Transurban's multiple Traffic Control centers in the Australian state of Queensland into a single control center, equipped with Indra's innovative Mova Traffic control technology.

This also constitutes a new innovative success story in the United States, where Indra continues to consolidate its position in the advanced model of dynamic tolls (Managed or Express Lanes), that makes it possible to develop new and more sustainable mobility policies, that are being more and more implemented in the United States and has great potential at the entrances to large European cities. Indra has been also a pioneer with multi-concession tolls in the country.

Indra's commitment to facilitate more sustainable and environmentally friendly, safer, more efficient and sustainable mobility, through innovation and the use of artificial intelligence, big data, the cloud and systems to integrate connected vehicles has allowed Indra to sign these and other contracts in recent years in countries such as USA, Australia, United Kingdom, Ireland and Israel, among many others. These projects confirm Indra as one of the world leaders in smart mobility.

Indra has a unique track record in the transport industry with over 2,500 projects developed in more than 50 countries. Indra Mova Solutions for transport cover the entire life-cycle of a project and combine the new digital, integration, specialization, and innovation capabilities that the market demands, providing reliability, business knowledge, and transport technology offered by Indra and the unique wealth of experience of its team of professionals.

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 worldwide. It is a world-leader in providing proprietary solutions in specific segments in Transport and Defence markets, and a leading firm in Digital Transformation 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 a high-value, end-to-end focus and with a high innovation component. In the 2021 financial year, Indra achieved revenue of €3.390 billion, with over 52,000 employees, a local presence in 46 countries and business operations in over 140 countries.