INDRA LEADS THE PROJECT THAT WILL BRING NEW INTELLIGENT, AUTOMATED AND SUSTAINABLE MOBILITY TO SPANISH ROADS

- **Mobility 2030 will develop technologies to deploy the connected and autonomous vehicle safely and efficiently on a large scale, integrate it into future mobility as a service, and promote electric vehicle use by optimizing range, wireless charging and fleet efficiency**

- **The IoT, deep learning and big data will make it possible to detect anomalous driving in autonomous vehicles, predict traffic by including the connected car as a sensor, pay tolls per occupant when car-pooling or plan intelligent routes for electric vehicles**

- **In addition to coordinating the work of the seven companies in the consortium, and the 10 universities and research centers collaborating in the project, Indra will deploy its In-Mova Space platform for integration of all transportation data generated in the project**

Madrid, April 19, 2021 - Indra, one of the world's foremost technology and consulting companies, is leading the Spanish RDI Mobility 2030 project, which aims to make new smart, automated and sustainable mobility a reality by overcoming the current technological limitations for massive deployment of electric, connected and autonomous vehicles on the roads, and facilitating their integration into the new paradigm of mobility as a service.

The project will allow advancement in the design of a sustainable mobility for the future, which will be safer and more user and eco-friendly, through the development of new on-board vehicle systems, infrastructure technologies and traffic regulation, analysis, operation and control systems, with a comprehensive vision.

In this way, it will contribute to achieving the goals set out in sustainable mobility for 2030, both at the national and international level, such as those included in the UN Sustainable Development Goals. Indeed, among the quantitative indicators that will measure the project's success, we have set specific goals, such as reducing travel times by 15%, or improving vehicle efficiency by 8%, and the performance of six other mobility-related parameters thanks to the cutting-edge technology developed in each of the six validation and evaluation scenarios.

In addition, thanks to the use of advanced digital technologies, such as the IoT, Cooperative transport systems (C-ITS), Artificial Intelligence, deep learning and big data, innovative solutions can be developed to detect any anomalous behavior in an autonomous vehicle, facilitate autonomous parking, predict traffic conditions, enable new toll payment methods with smart technology and improve the autonomy management, inductive/wireless charging and intelligent planning of fleets and routes of electric vehicles, and more.

Strategic Project Aligned with UN SDGs

The project, with a budget of €9M and a duration of three years, is funded by the first call of the Center for the Development of Industrial Technology (CDTI) Science and Innovation Missions program, intended to support intensive Sector Strategic Initiatives for Business Innovation in RDI, with great relevance for Spain's future challenges, and in line with some UN Sustainable Development Goals, such as sustainable and smart mobility.

Indra will coordinate the work of the seven companies that make up the project consortium which, in addition to Indra itself, are: Sacyr, Iberdrola, Ficosa, Wall Box Chargers and Disid Corporation, all leaders in their respective sectors, as well as the ten participating research centers and universities from all over Spain.

Smart Mobility Leader Platform

Indra will also deploy its In-Mova Space platform for the integration and exploitation of all transportation data generated in the Mobility 2030 project. In-Mova Space promotes more sustainable and collaborative mobility, and facilitates the development of new business models in the field of smart mobility.

Among the lines of research in which Indra will participate are Intelligent Traffic Technology (ITS), which will enable the safe operation of connected vehicles alongside non-connected ones, as well as Cooperative intelligent transport systems (C-ITS), which facilitate communication with connected and autonomous vehicles. C-ITS systems will facilitate infrastructure management and vehicle deployment with an advanced level 4 of automation. Indra will also develop new traffic prediction systems, based on deep learning techniques, including the connected car itself as a source of additional information.

Additionally, the company will use Artificial Intelligence and advanced LIDAR systems for vehicle characterization in access control systems, to develop solutions to monitor driving of connected and autonomous vehicles, to detect and warn the vehicle network and the control center of any unusual or unexpected behavior resulting from hacks or malfunctions. In this way, the entire network's autonomous driving will be enriched, and it will be possible to prevent road safety risk scenarios from the control center.

Mobility as a Service and Smart Tolls for Reduction of CO2 Emissions

Technologies developed within the project will allow the development of advanced traffic characterization and tolling systems for connected and conventional vehicles, that will take into account different mobility characteristics and enable a pricing model to promote the use of less polluting vehicles.

Through the use of advanced technologies, such as 3D cameras, for accurate detection of vehicle geometry, vehicle connectivity with infrastructure, for capturing the number of passengers, emissions, travel distance, etc., the project will help move the implementation of a pricing model forward, not only oriented to the vehicle, but also to passengers themselves. The goal is to be able to integrate this cost into passenger mobility in the city, so that connected and autonomous vehicles can be considered as another element of the upcoming Mobility as a Service (MaaS) paradigm.

Indra performed the first autonomous driving tests on roads in Madrid, Lisbon and Paris as a part of the AUTOCITS project. Thanks to the experience and knowledge acquired, Indra has positioned itself at the forefront of the market for autonomous and/or connected vehicle services, continuing to work as a partner in the Spanish National Consortium of the C-ROADS project, led by the General Directorate of Traffic. In this project, Indra is developing and implementing control center solutions, roadside equipment and C-ITS services in pilot projects in Madrid and Cantabria. Indra is also working on increasing cybersecurity in autonomous and connected vehicles within the SECREDAS and SCOTT projects.

Indra has vast experience in Transportation, with more than 2,500 projects developed in more than 100 cities and more than 50 countries. Indra's renewed product range for Transports, Indra Mova Solutions, covers the entire life cycle of its clients' projects: from engineering and consulting to collection, operation and control, security and communications solutions, plus traveler experience or after-market services. It combines the new digital and integration capabilities, specialization and innovation demanded by the market with Indra's reliability, business know-how, transportation-specific technology, and the unique 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 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 a high-value focus and with a high innovation component. In the 2020 financial year, Indra achieved revenue of €3.043 billion, near 48,000 employees, a local presence in 46 countries and business operations in over 140 countries.