INDRA LEADS THE PROJECT THAT WILL MAKE IT POSSIBLE TO BOOK A TRIP ON DIFFERENT MODES OF TRANSPORT IN EUROPE WITH A SINGLE CLICK

- **The Connective project lays the foundations for a future European transport platform that will provide citizens with a single access point for buying a ticket to their destination, which may include private vehicle parking as well as journeys by train, plane, subway and/or bus**

- **A new interoperability framework will facilitate the integration of data from the different actors in the transport ecosystem in a simple, economic and transparent way for the user, while big data will generate valuable information for improving the operation and services offered**

- **Indra brings its experience and solutions for integrated mobility management, as well as the digital capabilities of Minsait IoT Sofia2, the Internet of Things platform developed by its digital transformation unit, which will be one of key technologies underpinning the project**

- **Part of Shift2Rail, the main European innovation initiative in the rail sector, this R&I project specifically aims to create the framework and tools for all the projects in the IP4 program "IT Solutions for Attactive Railway Solutions", to which it also belongs**

Madrid, March 20, 2018. Indra, one of the main global consulting and technology companies, has started working on the design and development of an interoperability framework that will lay the foundations for the future European transport platform that will allow citizens to plan a trip and book a ticket to their destination at a single click, including private vehicle parking as well as journeys by train, plane, subway and/or bus, and even car sharing.

The company is leading the Connective project (Connecting and Analyzing the Digital Transport Ecosystem) that will facilitate the digital transformation of the transport ecosystem by means of cloud-based interoperable platform on which transport networks, services and providers will share and consume information. Thanks to the use of semantic interpretation technology, service providers will be able to join the ecosystem with minimum effort and cost and make their data available to other services and users in a transparent manner.

The definition, development and implementation of this framework of reference, which not only comprises access to information without affecting existing systems but also tools and development environments, will provide citizens with a fully integrated and customized transport experience while making railway services more attractive. The goal is to facilitate multimodal travel combining different methods of public and private transportation, connecting the first and last mile in long-haul trips.

"The goal is to facilitate the passengers' use of trains, planes, buses, and subway in international routes without having to access four different reservation systems", explains Berta Barrero, Head of the Indra Transport market. Barrero also points out that "thanks to the integration of these travel services with the support of innovative digital technologies, the user can gain access through a single point that's transparent, simple and intuitive".

Fully integrated data obtained through the new framework and from users themselves will provide valuable information, while big data and business analytics technology will improve the operation of the networks and the user experience.

One of the key technologies underpinning the Connective project will be Minsait IoT Sofia2, the Internet of Things platform with big data and cloud capabilities developed by Indra's digital transformation unit, which is a technological benchmark for interoperability between networks and devices. In this case, it will be applied to transport, reinforcing Indra's experience and technology for integrated mobility management.

Key project in Shift2Rail

The Connective project, which is being developed by a consortium led by Indra and including the companies Thales, HaCon, Diginext, Network Rail and Ansaldo, plays a key role in Shift2Rail, the main European innovation initiative in the rail sector, since its goal is to create the framework and tools that will support all the developments that are being undertaken in the various projects of the IP4 program "IT Solutions for Attractive Railway Services", to which it also belongs. The project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No: 777522.

The IP4 program is concerned with the development of new ICT solutions and services to improve the passenger experience and make railway services more attractive by providing access to a complete range of multimodal trips in a transparent manner for the user. Its projects cover areas such as interoperability, ticketing, new payment methods and information systems. To achieve their objectives, these projects require an interoperability framework like the one that will be developed as part of Connective, enabling the integration of information from different sources and operators while limiting the impact on existing systems and favoring the incorporation of new ones.

In addition to leading the Connective project, within the IP4 program of Shift2Rail Indra is participating in the Attractive and Co-Active projects that will develop some of the services that will be offered in near real time through the framework, such as a route planner with prices and special offers, booking and buying tickets, including their validation with certain cellphone models, and the reception of notifications or alternative routes. The company is also involved in the Cohesive project, which coordinates and ensures that all the projects to develop these types of services fit smoothly together and may be integrated. In short, Indra will contribute its capabilities to boost the multimodal management of mobility and the development of these types of customized services that will improve the user experience during the trip and when purchasing and validating tickets.

Leader in transport technology

The key role that Indra will play in the Connective and other projects of the Shift2Rail IP4 program will help to position the company as one of the European market leaders in interoperability technologies applied to transport at the pan-European level.

Indra is a member of the main Shift2Rail governing body. It is also involved in the IP2 programs, focused on the development of advanced rail traffic control and management systems, and in the IP5 program, which aims to evolve toward more efficient, sustainable and competitive freight transport. In addition to its technological capabilities and experience in rail transport, Indra brings to Shift2Rail its wide-ranging expertise in a number of industry sectors, supporting synergy generation and the transfer of technology between different fields as well as driving more integrated and intermodal mobility management.

This key position in Shift2Rail reinforces Indra's position as one of the leading operators in the rail sector and recognizes its commitment to innovation in this field. The cutting-edge technological solutions developed by the company have placed it at the forefront of the global sector, having successfully deployed systems in different countries around the world, including in the USA, Australia, Mexico, Colombia, China, India and Malaysia.

Indra is one of the world leaders in the field of ticketing, where it has deployed proprietary solutions and executed projects for the subway networks of Madrid, Barcelona, Medellin, Santiago de Chile, Cairo, Calcutta and Mumbai, the light rail in St Louis, the railway in Buenos Aires and the suburban railway in Mexico City, among others. The company is currently working on the world's largest ticketing contract to date and is implementing all of the ticketing and access control systems for the new public transportation system currently being developed in Riyadh, Saudi Arabia. It will also implement its ticketing technology in the Mecca-Medina high-speed railway, as the benchmark technology provider in the Spanish consortium.

About Shift2Rail

Shift2Rail is the first European rail Public Private Partnership tasked with developing strategically focused research and innovation (R&I) and market-driven solutions, integrating these to create the railway system of the future. With a total value of €920 million for the period 2014-2020, Shift2Rail is promoting the competitiveness of the European rail industry and ensuring the attractiveness of rail as a safe and sustainable low carbon transport mode. This in order to meet the changing transport/mobility needs of EU citizens and the economy.

About Indra

Indra is one of the world's top technology and consulting and a technology partner for the key operations of its customers' businesses worldwide. It is a leading worldwide provider of proprietary solutions in niche areas in Transport and Defense Markets and the absolute leader in IT in Spain and Latin America. It offers a comprehensive range of proprietary solutions and cutting edge services with a high added value in technology based on a unique culture of reliability, flexibility and adaptability to the needs of its customers. Indra is a world leader in the development of end-to-end technology solutions in fields such as Defense and Security, Transport and Traffic, Energy and Industry, Telecommunications and Media, Financial Services, Electoral Processes, and Public Administrations and Healthcare. Minsait is Indra's digital transformation business unit. In 2017 Indra posted a revenue of €3,011m, employed 40,000 professionals, and had a local presence in 46 countries plus sales operations in more than 140 countries.