

## **INDRA AND GREENRAIL COOPERATE IN THE DEVELOPMENT OF SMART RAIL TIES THAT WILL IMPROVE SAFETY AND RAILWAY MAINTENANCE AT A LOWER COST**

- **The technology company and Italy's startup of the year signed today an agreement to exchange knowledge, jointly develop innovative solutions for the rail industry and carry out pilot projects**
- **The integration of Indra sensors and systems in Greenrail eco-sustainable ties will enable real-time data collection on the status of railways and trains, and will offer new predictive maintenance functionalities, which will save costs and increase security**

**Madrid, March 22, 2018.-** Indra, one of the world's leading technology and consulting companies, and Greenrail, an Italian startup specialized in the production of eco-sustainable ties, have signed a collaboration agreement today to jointly develop products and innovative technology systems for the rail transport sector.

In the coming months, Indra and Greenrail will study the technical and economic viability of the development of an innovative model of sustainable and smart ties, capable of collecting, processing and sending real-time data to the railway traffic control centers on the status of railways and trains. The integration in Greenrail's sustainable ties of Indra's state-of-the-art systems opens the doors to new predictive maintenance functionalities, resulting in cost savings for implementation and energy and improving security, among other advantages.

Furthermore, the objectives of the agreement also include the joint development of other solutions and products aimed at the rail industry, as well as pilot projects for customers and R&D centers. Both companies will assess the applicability of Greenrail technology as a complement to Indra's most advanced solutions for rail transport; exchange knowledge and disseminate the results and developments achieved through publications, conventions and other forums.

The collaboration agreement has been driven by Indraventures, Indra's corporate vehicle for strengthening its relationship with startups, spinoffs, universities and intrapreneurs. Managers from Indraventures and the Indra Transport market have especially valued the tremendous potential of Greenrail, which already has patents in 80 countries and has positioned itself as *first mover* in the market of new-generation ties.

"Innovation is an essential part of our strategy as leading technology company. We have created an open innovation model that allows us to collaborate with other companies that can provide differential elements to enrich our offer and consolidate our leadership. After analyzing over 500 startups in the last year, we can say that the model works and leads to specific results as positive as we expect this agreement with Greenrail to be", stressed Manuel Ausaverri, Director of Innovation and Strategy at Indra, during the event when the agreement was signed.

"The signing of this important agreement represents for Greenrail a crucial, strategic move forward toward the construction of an international partnership -with views to improving the features and development of innovative technologies- with Indra, among the global leaders in the development of technological solutions for the rail industry. Greenrail's Solar and LinkBox systems may become a part of Indra's solutions for greater energy efficiency and for improving security of railway infrastructures", Giovanni De Lisi, CEO and founder of Greenrail, stated when signing the agreement.

### **Greenrail, one of the startups with the greatest potential for the rail industry**

Greenrail was recently chosen as startup of the year in Italy during the StartupItalia! Open Summit for its innovative design of eco-sustainable ties, manufactured of recycled plastic and rubber. The product



significantly reduces environmental impact, while limiting production and maintenance costs of railways. The company has just launched an agreement to market its model of eco-sustainable ties in the United States.

### **Indra's commitment to innovation in Transport**

The agreement with Greenrail is framed within Indra's commitment to innovation. This commitment has positioned Indra's proprietary solutions at the global forefront of this sector, and has modernized rail infrastructures in Spain, Colombia, Argentina, Chile, China, USA, United Kingdom, Australia and Morocco, among other countries. This leadership has turned Indra into the benchmark technology provider within the Spanish consortium formed for the Saudi Arabia Mecca-Medina high-speed rail link project.

Indra's vanguard developments in traffic control and rail signaling, payment systems and new solutions for improving passenger service, as well as its commitment to innovation, have positioned the company as a driving member of Shift2Rail, the main European initiative for innovation in the railroad sector.

### **Indraventures, a vehicle for innovation and transformation**

Indra's open, agile and flexible innovation model is aligned with the company's transformation process by improving the portfolio and generating a new, more innovative culture throughout the organization. Indraventures is the vehicle for channeling and funding initiatives, and for contributing, in accordance with the needs, Indra technology, human capital and infrastructures, as well as access to markets or the capacity for internationalization.

Since its launch in 2017, Indra has reached, through Indraventures, agreements with AutoDrive Solutions (ADS), a technology startup focused on the transport sector, Zero 2 Infinity, a startup specialized in space transport, and with entities as Enisa or Socios Inversores, among others. The company has launched with the Regional Government of Gran Canaria a call to support innovative ideas related to its challenges as smart island; has discovered first-hand the work of research groups and spinoffs of many universities, and has encouraged and recognized the entrepreneurial spirit of its professionals through Innovators, its intrapreneurship initiative.

### **About Greenrail**

Greenrail is an international company characterized by its outstanding innovative drive, capable of catalyzing qualified interdisciplinary profiles and research centers that are interconnected and active in the design of technologically-advanced solutions. Greenrail manages the design, creation of prototypes, production and testing of products, with the aim of processing innovation, promoting the development of new, specific skills, thanks to its collaboration with universities, research centers and a network of alliances that offer an extraordinary opportunity for growth.

Greenrail technology enables the manufacture of railway ties fitted with an internal core of prestressed concrete that guarantees the weight and structural characteristics for any type of railway, including high-speed lines, and an external casing composed of a mixture of rubber obtained from out-of-use tires and plastic recovered from urban waste, contributing to the circular process of the green economy.

Thanks to its composition, Greenrail ties can provide high standards of safety and innovation. In fact, the company has developed "smart" projects. Greenrail Solar integrates a photovoltaic module that allows for transforming railroad lines into photovoltaic fields, with a high production of sustainable energy. Greenrail LinkBox is a type of Greenrail Solar tie that integrates several data transmission systems for control, safety and telecommunications purposes.

The company, founded as a startup in the "PoliHub", the District of innovation and Startup Accelerator of the Milan Polytechnic Foundation, has formalized important partnerships, including: The Milan Polytechnic, Ecopneus (the largest Italian consortium for the collection and removal of out-of-use tires), the Foundation for Sustainable Development and the National Research Council.



Speed in incorporating innovation and flexibility are key factors in the development and progress of Greenrail, which today is an international example of sustainable industrial development based on the principles of the circular economy, whose technology is protected in 80 patent offices worldwide.

**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.