



PRESS RELEASE

InnovationLab and Trelleborg develop an innovative logistics system based on printed sensors

Accurate, low-cost sensor matrices for automated inventory tracking

Heidelberg, Germany – July 27, 2021 – [InnovationLab](#), the expert in printed electronics "from lab to fab", today announced that it has been working with [Trelleborg Sealing Solutions](#) to integrate its printed sensors into an innovative logistics application. Trelleborg's IntelliStok® inventory management system eliminates the need for the manual scanning of items, thereby saving time, increasing efficiency and reducing costs.

IntelliStok® works seamlessly with existing Kanban-based systems to provide real-time inventory tracking of the company's sealing products. The system uses printed pressure sensor matrices from InnovationLab, which are placed inside existing storage bins at a warehouse. These sensors weigh the products in each bin and wirelessly send this data to the cloud.

"This was a challenging application. As our seals can weigh less than 1g, we needed a sensitive, cost-effective system that could reliably provide accurate information," said Domenico Tucci, IoT Solution Architect at Trelleborg Sealing Solutions. "InnovationLab worked closely with us to develop a solution that exceeded our expectations and then manufactured the sensor matrices for us."

"We provide tailored solutions for our customers' challenges, from the initial concept to the industrial production of the final product," said Luat Nguyen, Managing Director at InnovationLab. "Our expertise is based on an in-depth understanding of materials, processes and printing technologies – for Trelleborg, we researched and analysed possible solutions, and then designed and manufactured the optimal sensor matrix that met their specific needs."

Trelleborg set multiple requirements for the sensor matrix material such as low cost and sufficient durability to prevent deformation or creasing during use. InnovationLab undertook detailed research and testing of various materials, until it found a material that perfectly met all the criteria.

Trelleborg offers IntelliStok® as a service to its customers – triggering orders automatically for the replenishment of stock, directly in Trelleborg's systems. The customer receives an email informing them of the order and the stock arrives shortly thereafter.

For Trelleborg's customers, there are five standard-size sensor units available, which fit most bin types. The sensor matrices are integrated into a module that incorporates a microcontroller (MCU), a Wi-Fi chip for wireless connectivity and a 3.6V lithium battery.

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About InnovationLab



Founded in 2008, InnovationLab GmbH is a one-stop shop for printed, organic electronics, with a focus on flexible pressure sensors, as well as temperature, moisture and gas sensors, and the capability to design and produce fully integrated hardware/software systems. The company offers highly customized solutions and supports high-volume production at two manufacturing sites in Germany, providing hands-on support to its customers throughout the entire product value chain, from concept to bulk production of printed functional products. InnovationLab provides state-of-the-art infrastructure along with comprehensive expertise in materials, processes and printing technologies to develop novel products. InnovationLab also supports numerous research and industrial partners at its lab and fabrication facility, an interdisciplinary environment featuring 6200 m² of usable space for production, development and offices, including 700 m² state-of-the-art cleanrooms. For more information, see <https://www.innovationlab.de>

About Trelleborg Sealing Solutions and Trelleborg Group

Trelleborg Sealing Solutions is one of the world's leading developers, manufacturers and suppliers of precision seals, bearings and custom-molded polymer components. It focuses on meeting the most demanding needs of aerospace, automotive and general industrial customers, including those from the pharmaceutical industry, with innovative solutions. Its network extends to over 25 production facilities and more than 50 marketing companies globally. The business area accelerates the progress of its customers through outstanding local support, an unrivalled product range including patented products and proprietary materials, a portfolio of established brands, unique process offerings, its ServicePLUS value chain solution and 'Ease of Doing Business' philosophy. www.trelleborg.com/seals

Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments. Its innovative solutions accelerate performance for customers in a sustainable way. The Trelleborg Group has annual sales of about SEK 33 billion (EUR 3.13 billion, USD 3.57 billion) in about 50 countries. The Group comprises three business areas: Trelleborg Industrial Solutions, Trelleborg Sealing Solutions and Trelleborg Wheel Systems. The Trelleborg share has been listed on the Stock Exchange since 1964 and is listed on Nasdaq Stockholm, Large Cap. www.trelleborg.com