

» Success story

Indoor location

of vehicles on the production line

» Indoor tracking

of vehicles in real-time thanks to IoT solution

The automotive production sector faces many challenges, such as stock management and spare parts supply. As production times have to be kept ever shorter, while guaranteeing the highest possible quality, the digitalization of companies in the automotive sector has become essential to meet market demand. It was against this backdrop that **BMW Group's Design department** have relied on **Intranav** and **ELA Innovation** to deploy an IoT **inventory management** solution. The challenge was considerable, as the solution had to enable intelligent inventory search and management, as well as automatically track the movement and location of each vehicle in real time.

To meet this challenge, an indoor geolocation solution based on **Wirepas Mesh technology** was deployed in the 18,000 m² warehouse, at a cost ten times lower than the internal estimate.

» The key players



Manufacturer
of IoT sensors



Integrator and solution
provider



Wirepas
Technology editor

«

ELA Innovation tags are easy to install and integrate. The compatibility of these tags with different systems and protocols has made the integration process smooth, saving us time and effort during the implementation phase. »

Ersan Gunes, Senior Vice President Product at Inpixon

» The client requirements

- ✓ To reduce the search time of their vehicles at all times and have a process in place to track their movement.
- ✓ To enable intelligent inventory search and management, filtering and documentation.
- ✓ To be able to automatically track the real-time movement and location of each model without having to scan during storage and pick-up.

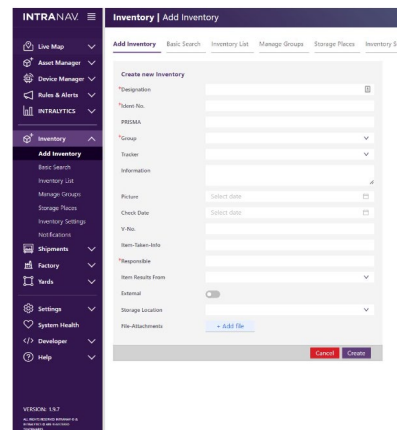
» The equipment

- ✓ 200 Blue Anchor (1)
- ✓ 1500 Blue PUCK ID+ MESH
- ✓ Gateway MESH / ethernet / MESH repeater - Solidrun
- ✓ IoT platform (management platform) - Intranav Inventory Manager



» Modus Operandi

From a technical point of view, inventory management and tracking software are combined with a state-of-the-art software solution, as well as **low-cost, battery-powered RTLS** hardware. The use of Wirepas technology has enabled a seamless approach to inventory tracking across multiple warehouses. Each stored prototype is equipped with a **Blue PUCK ID+ MESH(1) mobile beacon**, which connects autonomously to a gateway using fixed, battery-powered beacons **Blue Anchor(2)**. The anchors form an efficient, robust mesh network, with each anchor acting as a relay for the next. Data is transmitted from the beacons and gateways to the INTRANAV positioning engine, which calculates the position and interfaces, via the **INTRANAV platform**, with the automaker's secure cloud environment. By entering vehicle details (model name, responsible personnel, vehicle ID, etc.), the inventory manager makes the daily vehicle search process more efficient and saves time. Once the necessary information has been entered into the system, there's no need for manual searching or scanning. Thanks to a simple and advanced search form, the user can obtain a complete overview of the inventory stored and managed.



» The results

- ✓ **Increased efficiency** and **time savings** for employees using the system.
- ✓ **Simplified vehicle search.**
- ✓ **Improved supply and production** chain management.

» The advantages

- ✓ Real-time inventory management allows the system to improve visibility, efficiency, and productivity in the facility.
- ✓ Beacons compatible with the major IoT tracking platforms on the market.