ela
INNOVATION

Success story

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Automatic inventory
of tower cranes

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POTAIN
by Manitowoc

CHARLIE

POTAIN optimizes crane inventory
thanks to Charlie Solution IoT platform

For almost 100 years, Potain, part of the Manitowoc group, has been a leading manufacturer of tower cranes and automatic assembly crane. At the end of the 2000s, the company developed a used **crane rental and sales offer** to meet the demand of key accounts.

Until now, only the upper parts of the cranes were inventoried using RFID technology, but as this was cumbersome to install and maintain, Potain looked for an alternative solution to **identify and locate nearly 300 lower parts.**

In order to have a **real-time view of its 35,000m² warehoused fleet**, and thus ensure its ability to respond to invitations to tender, Potain has placed its trust in Charlie Solutions and ELA Innovation.

» The key players

IoT sensor manufacturer

IoT solution provider

End-user

> « We launched a full-scale test on our fleet of rental tower cranes, which included around fifteen units. This enabled us to assess the weather and UV resistance of the tags […] and the integration of the solution. »
>
> Xavier RABOURDIN, Second-hand Cranes and Rental Director, Potain

» The client needs

✓ Real-time inventory of nearly 300 rental crane components

✓ Facilitate management of the equipment maintenance process
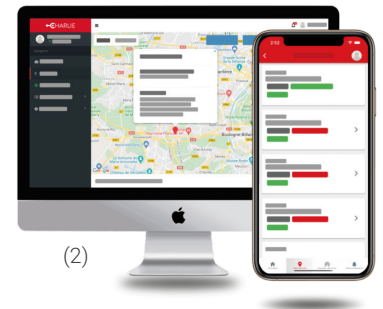
✓ Know the flow in and out of the stockyard

⟫ The equipment

- ✓ 300 Blue PUCK ID (1)
- ✓ 10 Bluetooth Gateways
- ✓ «Charlie Gestion» IoT platform (PC & Mobile) (2)

(1)

(2)

⟫ The operating mode

From a technical point of view, the automatic inventory IoT solution relies on a set of **Bluetooth beacons** attached to each of the 300 low crane equipment to be tracked. Each piece of equipment is then assigned a **unique identification number.** To track the equipment in the storage area, 10 gateways have been installed, and when the elements are deployed at customer sites, the operators' smartphones act as trackers, ensuring their location.

Equipment detection is automatic, thanks to the "Charlie Gestion" monitoring application, so no human action is required. The manager can **simply control his fleet via the IoT platform** (PC), creating dashboards and alerts when a device needs to be checked. In this way, he can find out **in real time** on which worksite a given piece of equipment is located, as well as its utilization rate and compliance. Eventually, Potain intends to **share this inventory data** with carriers, technicians and operators **to streamline logistics operations**.

⟫ The results

- ✓ Reduced response time when maintenance is required
- ✓ Increased machine reliability
- ✓ Global and detailed view of the position of rental equipment
- ✓ Saves time in the maintenance process
- ✓ Simplified inventory management

⟫ The advantages

- ✓ Easy to install. No wiring required.
- ✓ Low maintenance, with a battery life up to 15 years.
- ✓ Easy for teams to use.

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