Case study

COPPERNIC
MOBILITY | CONNECTED DATA | ANALYTICS

PELLENC: TRACEABILITY SOLUTION FOR PRODUCTION CARTS

CONTEXT

In 2019, Coppernic, the specialist in customised RFID solutions, was contacted by the PELLENC Group, based in Pertuis, in the Vaucluse region of France. Since its creation in 1973, PELLENC has become in a world leader in the construction of machines, equipment and agricultural tools for professionals in natural and urban environments.

In order to improve its production process, PELLENC wanted to implement a traceability solution for the carts used to supply operators on the assembly lines.

This system needed to give PELLENC's logistics teams real-time visibility of the position of the various carts on the site, as well as to better satisfy the supply requests of the production teams. The data to be monitored included: the cart's reference, its location, its preparation status and its current status (empty, in preparation, in production).

SOLUTION

To provide an adapted solution, Coppernic implemented UHF RFID technology (RAIN RFID) that meets the PELLENC teams' need for traceability and robustness.

- Empty card with RFID tag -

The closed loop of the cart's operating cycle was divided into four stages:

1. Empty carts in the logistics area
2. Carts being prepared in the logistics area *(order picking)*
3. Carts that are ready and/or in use in the production area
4. Empty carts leaving the production area *(which return to step 1)*

These stages of the cart's operating cycle take place at 3 distinct locations on the PELLENC site. Three "smart" RFID systems were installed between each zone in order to monitor the movements of incoming and outgoing carts. The reader that was chosen was Impinj's xSpan RAIN RFID gateway, which detects the direction that cart tags move through the portal, easily and continuously, in a completely hands-free way.

The data are directly uploaded in real time to a server application using the ItemSense solution. This software tool can be used to remotely configure and monitor the xSpan RAIN RFID readers and convert the raw RFID data into information that can be used in production.

Furthermore, in the logistics area - *for carts that are waiting or being prepared* - a mobile PDA-based application was developed to allow teams to scan an empty cart and change its status to "to be prepared". This application also establishes the connection between the cart and its contents.

RESULTS

This system won the customer's approval. PELLENC equipped its main warehouse in Pertuis with this system and improved the process flow of its production line. This solution makes cart rotation smoother and more reliable and thus optimises order picking and handling operations in production.
This system is completely transparent for operators and improves the teams' productivity and efficiency while providing overall quality management of the entire production chain.

- Production area | logistics with xSpan RAIN RFID reader -