



in use at Recticel Engineered Foams

Digital material flow control with E-Label and UWB: Automated production processes through modern technology

The combination of electronic tags and UWB tracking saves time and costs

Challenge

Recticel Engineered Foams Germany GmbH, is one of the leading companies in the field of manufacturing, development, and processing of foams. To successfully manage the production of the extensive portfolio of over 200 different foam types, a **Smart Factory** was to be established at the Duderstadt location in the Converting Center.

The goal was to ensure a **smooth material flow**, seamlessly linking warehouse management with production, reducing lead times, and optimizing production processes. Up to that point, these processes were very paper-intensive and required a lot manual work to record goods movements, which at the same time meant greater susceptibility to errors in the system. Moreover, transparency and seamless operations were compromised due to constant changes in media between IT systems such as **SAP S/4 HANA** or **Production Data Collection (PDC)**.

That is why Recticel Engineered Foams was looking for a **mobile production solution** to digitalize their processes.

Solution

In order to design efficient production processes in the smart factory, the company chose L-mobile. In addition to **electronic labels (E-Label)**, a modern **UWB (ultra-wideband) tracking technology** was to be utilized in production to facilitate digital material flow control and simple, **transparent order tracking**.

The **L-mobile Flow Processor** was developed to link these technologies. It serves as an interface between UWB, E-Label, production data collection software and SAP S/4 HANA and ensures **seamless information flow**. All goods movements can be automatically linked with the relevant information using the combination of UWB and E-Label. Using UWB tracking, you can check in real time during production whether the right material for the selected order is on the cart at the plant. If this is not the case, no postings can be made. Concurrently, the digital display of the E-Label on the cart provides **unique identification** of the assigned order at all times. In this way, the entire material and information flow of a production order can be processed at the same time and recorded in SAP S/4 HANA.

Conclusion

Embracing modern technologies towards a smart factory—the **digitalization of material flow control and manufacturing processes** has significantly **improved efficiency** in production management for Recticel Engineered Foams Germany GmbH. After the successful implementation of the L-mobile production solutions, employees can see at any time where an order is located, what order it is, and what its status is. Identification of the utilized transport carts can be transparently tracked in real time. All postings are validated by UWB technology, drastically reducing **incorrect postings**. Continuously updated data of a production order on the E-Label completes the new transparent production process.

With the use of electronic labels and precise UWB tracking, the company also benefits from **eliminating unnecessary search and handling times** in various processes, such as blocking orders or changing priorities—resulting in significant cost savings. Mr. Rueppel, Black Belt at Recticel Engineered Foams, praises the cooperation with L-mobile and is very satisfied with the implementation of the project. Mr. Rueppel was particularly impressed by the rapid project implementation, from planning to realization in just three months.

“Our goal was to launch a smart factory and to drive forward the digitalization and Industry 4.0 agenda. We looked around on the market and ultimately opted for the best provider—L-mobile. There was, however, not a lot of time between our request and the time the solution had to go live. So I must compliment L-mobile once again. Despite the extreme time pressure, everything worked out great and was tailored to our needs,” says Mr. Rueppel.

Highlights

- Efficient production control
- **Seamless linking** of SAP S/4 HANA, production data collection, E-Label management and UWB location system
- Reduction of **search and handling times**
- **Transparent live tracking** of production orders
- Automatic identification of orders and posting in SAP S/4 HANA



Recticel Engineered Foams Germany GmbH

Recticel Engineered Foams operates a network of 32 manufacturing facilities across Europe, the Americas, and Asia Pacific. With comprehensive and cutting-edge technologies for foam production and processing, these facilities provide extensive reach and consistent global supply.

Technical details

ERP: SAP S/4HANA

Technology: L-mobile E-Label, Kinexon UWB

Software: L-mobile production including Flow-Processor, SAP Connector, L-mobile Asset-Management, Kinexon RIoT-Core

Statement

“At the Converting Center, the solution allows us to achieve paperless manufacturing. Coupled with our automated guided vehicle (AGV) system, we move beyond just discussing Industry 4.0 to actually implementing it.” **Jonas Rueppel | Operations Manager, Recticel Engineered Foams Germany GmbH**

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