

CASE STUDY | E-KANBAN ENSURES RELIABLE REPLENISHMENT IN C-PARTS MANAGEMENT

Hydraulics manufacturer Fritz Stiefel offers its industrial customers fast, cost-effective and, above all, reliable replenishment of hydraulic components and C-parts with KanBan logistics. Things weren't always that straightforward. At least not until KATHREIN partner L-mobile developed a custom, digitized, RFID-based KanBan shelving system that was totally different.



E-KANBAN ENSURES RELIABLE REPLENISHMENT AND COMPLIANCE

> INDUSTRY Pneumatics, hydraulics and industrial logistics

About Fritz Stiefel GmbH

- Manufacturer of hydraulic systems
- 248 employees
- 53 million in sales (2019)

Key Benefits

- Automated replenishment of STIEFEL parts for STIEFEL customers
- A pre-configured plug & play solution available in various sizes
- Compliance with delivery deadlines
- Customer loyalty

> KATHREIN PRODUCTS

- RAIN RFID Reader RRU 4500
- RAIN RFID SmartShelf antennas, extremely slim, mounted without housing

> PARTNER BENEFITS

Custom e-KanBan module development based on standard KATHREIN products.

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The good partnership with KATHREIN was characterized by a pragmatic approach to problem solving and genuine teamwork. It took us just one day of very dynamic work to develop the best possible solution for STIEFEL.“

Daniel Diemer, Managing Director, L-mobile infrastructure GmbH & Co. KG

No production downtimes due to empty KLT containers

STIEFEL provides its customers with KanBan shelves with KLT containers for the manufacture of products from the pneumatics, hydraulics and industrial logistics sectors. A high system availability is crucial to ensure that STIEFEL customers have smooth production and assembly. If a KLT container is empty because the replenishment was not triggered in time in the ERP system, this leads to downtimes in the assembly process. This can not only get expensive, but also usually leads to non-compliance with delivery deadlines and the annoyance of end customers. Since STIEFEL's products have been synonymous with superior quality for over 60 years, the replenishment process had to be improved appropriately to meet the quality standards of the well-established manufacturer here as well. That's why STIEFEL asked L-mobile for advice. The beginning of a joint development process.

Objectives for a digitized e-KanBan replenishment concept

L-mobile understood STIEFEL'S quest to optimize the replenishment of supplies on its customers' production lines. The project objectives were formulated quickly: error-free and automated replenishment of KLT containers, avoidance of production downtimes and, above all, avoidance of unscheduled trips by the STIEFEL logistics team to make "emergency" deliveries. In addition, more transparency was required in the ERP system, i.e., the ordering of missing parts had to be triggered in real time and booked in the ERP system automatically. L-mobile approached KATHREIN Solutions for help with choosing the right RFID components and a customizable concept for STIEFEL customers.

Test center: The right hardware and a suitable concept were identified quickly

L-mobile's recommendation clearly pointed towards an RFID-based e-KanBan system. The goal was to create a 100% reliable RFID solution that also allowed selective reading. This would prevent situations where full and empty containers were incorrectly recorded together. When it came to choosing a hardware supplier, KATHREIN Solutions was the only logical choice for L-mobile. Because the RFID partner

not only outlined a practicable solution in theory, but also invited L-mobile to the company's in-house test center to conduct highly practical testing on a prototype for STIEFEL in a real-world environment. The first challenge was to search through the extensive hardware portfolio in order to find and combine exactly the RFID readers and antennas that would be most appropriate for the overall concept. With the KATHREIN Smart Shelf antenna from the RRU4500-RFID reader series, which can be flexibly connected or integrated via Ethernet, WIFI or 4G, the L-mobile/KATHREIN team found a reader that was capable of controlling 32 antennas simultaneously. An efficiency aspect that should represent a cost-effective solution for the customer STIEFEL during ongoing operations. Beyond that, L-mobile also wanted to make this solution modularly available to various STIEFEL customers, i.e., by adapting it to fit small, medium and large KTL shelving systems.

Thinking one step further: L-mobile develops plug&play shelf types

In order to equip STIEFEL customers with the new e-KanBan shelf without major effort, L-mobile developed a pre-configured e-KanBan RFID hardware system that could be sent directly to customers for self-assembly. L-mobile designed the system in such a way that the users could carry out both the mechanical installation and the IT connection on their own. This practical "plug&play" solution is available in a shelf version and a table version, in which all KTL containers placed on the system are fully recorded. Yet L-mobile went one step further and understood the needs of the various STIEFEL customers. It developed several intelligent modules in small, medium and large versions in order to be able to offer the most appropriate RFID e-KanBan module to each customer. Of course, scalability matters a lot.

Project success at a glance: The practical test

L-mobile fine-tuned the system directly on site or "at the shelf". When a worker removes a container from the shelf or puts it back on the shelf, the system must be able to read what happens right on time, not too early and not too late. L-mobile quickly implemented these functional adjustment requests as well as various design requests. STIEFEL customers were quick to appreciate the benefits of the new digitized replenishment process. Now everything just works.