

Auto supplier eliminates paper, cuts labor in half, reduces training time by 90%, and boosts accuracy to 99.8% with Panasonic Logiscend's Pick and Replenishment modules.

Introduction

To thrive and grow as a Tier 1 global manufacturer of auto seating systems and components requires precision production...and very quick turnaround times.

Quickly and accurately picking, kitting, and delivering the right parts to the assembly line is critical to timely turnaround. Historically, this process had been managed with paper lists and pick tickets, which were inefficient and prone to manual error. This manufacturer chose Logiscend to automate the process with a visual RFID system.

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We often get an order in the morning and ship the finished product on the same day.

”

Production Manager

There were five primary goals for the project:

- 1 Standardize** the picking process globally across all locations
- 2 Increase system flexibility** to manage changes and deliver orders more quickly
- 3 Improve operational efficiency and accuracy**
- 4 Eliminate printing and cost** of paper pick tickets
- 5 Support** the corporate continuous improvement culture

To get started, the manufacturer's Center of Excellence team researched RFID applications for multiple development projects. The team came to Logiscend to automate the tracking of incoming materials and containers. They engaged us as both the consultant and systems integrator to help them increase efficiency in their picking (and later) replenishment processes.



Challenges

Logiscend helped the customer develop a truly flexible, hands-free, paperless system - without completely changing their material flow:

- **Timing.** Timely and accurate picking is key. The efficiency of an entire manufacturing operation depends on having the right materials to start. Wi-fi tablets used for the pick lists had to download immediately and accurately. VIEW Tags on each shelf needed to change quickly enough to reflect the picks.
- **Tablets.** The tablets trusted for pick lists were an upgrade chosen to ensure higher performance levels.
- **Control and Confirmation.** It was critical to be flexible enough to manage communications when a new list became available. Positive acknowledgment that the correct part was picked – or when the prior pick was completed – helped automate and accelerate the whole process.



Solution

To make this RFID implementation happen on an aggressive timeline, this Tier 1 Auto supplier established a cross-functional team, including:

- Advanced manufacturing engineers
- Continuous improvement engineers
- IT and Operations team members
- Project managers and systems engineers
- Plus, the Logiscend professional services team

The group met regularly, from initial conceptual design to physical site survey, and throughout project development and implementation - and, today, for ongoing support and maintenance.

Test and Refine

First, the system was thoroughly tested during the product development and QA cycles in the Logiscend labs. Next, the customer put it through their own User Acceptance Testing (UAT) . Then, the application was deployed in stages as a pilot in the manufacturing environment.

The customer has multiple facilities in the heart of the auto industry. Field trials included a small pick line in each facility where the paper "pick list" was replaced with a wifi-enabled tablet. Stocking locations were supported by the installation of VIEW Tags to visually indicate what to pick and where to pick the parts from – completely automating the process.

Learnings Along the Way

During this process, several important improvements were defined and incorporated in the final installation:

1. **Software/firmware customizations.** We made minor changes to the software and firmware to accommodate the customer's process and to integrate with their manufacturing execution systems.
2. **The tablet makes a difference.** We upgraded the ruggedized tablet to ensure fast connectivity and list downloading.
3. **Process flexibility.** We recognized that pick process workflows were different in each facility, so we adjusted the processes and software to accommodate the different workflows.

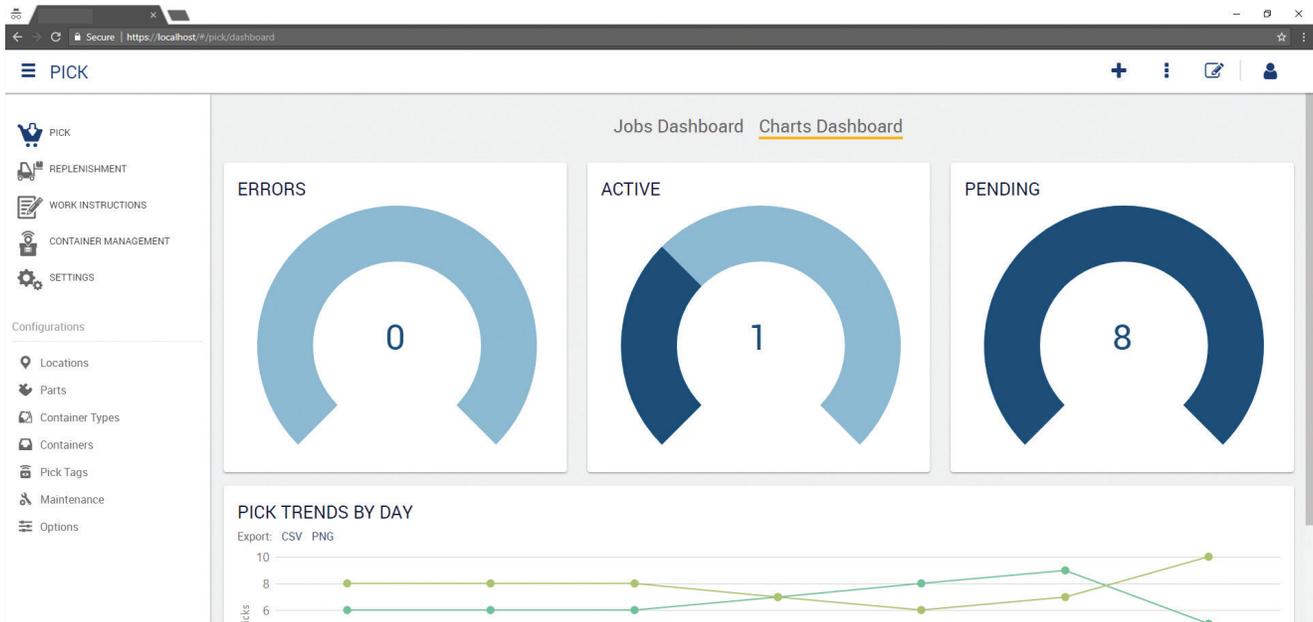
How It All Works

- **Readers.** Logiscend gateways are connected to the customer's network with static IP. Gateways communicate with the "pick here" VIEW Tags and customer systems.
- **VIEW Tags.** Active tags based on 433 MHz automatically and constantly communicate with readers. Optimized algorithms help balance the need for quick response while maximizing battery life.
- **Software.** Logiscend software resides on the customer's server. Their MES system sends Logiscend the pick list.
- **Orders.** Logiscend queues and sequentially forwards the orders to the correct pick zone.
- **Visual instruction.** Based on the sequence of pick requirements, Logiscend lights the tags, providing visual direction for operators.
- **Transparency.** Data on pick times helps the customer understand operator efficiency.

Products Included in Solution

The customer environment is a conditioned manufacturing/warehouse space with 24x5 operation and 99.9% uptime required. VIEW Tags were installed on the pick carts and the shelves to communicate with the gateway readers installed in the pick zones. Specific Logiscend products included:

- IIoT Gateway Readers
- VIEW 3 & 4 Tags
- Industrial Antenna
- Logiscend Software — Pick application module was in the original pilot, and the Logiscend Replenishment module has since been added to the installation.



Customization Creates Transformation

Several software customizations were necessary to interface with the customer's proprietary MES system. Like most manufacturers, this customer runs multiple workflows, so the Logiscend software was modified to accommodate each of these workflows now and in the future.

Some hardware/firmware revisions were also made to support the process modifications, optimizing communication. And, to ensure global standardization, adjustments were made to the solution for connectivity and data flow from their MES system in every environment.

Results



No more paper and printing.

Cost savings are being tracked and measured, but the impact of eliminating paper and printer supplies is ongoing.



50% labor reduction.

Pick efficiency improvements enable one operator to handle the work of two.



Improved pick accuracy.

Significantly fewer wrong picks, approaching 99.8% accuracy.



90% reduced training time. New operators can be trained and able to use the automated system in three hours vs. five or more days.



Kaizen support.

Data and efficiency of the new automated system can now drive quality improvement initiatives with no additional research or infrastructure modification costs.

Moving Forward in the Auto Industry



Based on the success of the pilot, we are currently implementing the Logiscend Pick system in more than 10 plants throughout the country. Based on this success, we've also added the Logiscend Replenishment application for automated bulk material replenishment.



Production Manager

About Logiscend

Logiscend is the premier smart material flow management solution for manufacturing. Based in Rochester, NY, the Industrial IoT Solutions Team of developers, solutions professionals, and support staff are located in the US, EU, and India to serve our global base of customers.

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