As more retailers and their suppliers turn to radio frequency identification (RFID) to help improve supply chain efficiency, an opportunity has arisen for third-party logistics providers to assist these companies with their RFID deployments. Megatrux, Inc., a California-based Top 100 3PL provider of Freight Management services for air, land, and sea shipments, is using RFID to provide real-time tracking for its customers and to improve its own internal import, warehousing, and distribution service offerings.

At Megatrux’s new company-owned facility in Rancho Cucamonga, California, the company has initiated RFID tagging, tracking and quality control services for two customers who are shipping goods to Wal-Mart.

"RFID is definitely cutting edge," says K.C. Pelle, executive vice president at Megatrux. "We want to save money for our customers by having consistent, stabilized inventories, and by taking human error out of the receiving, cycle counting, order assembly and shipping processes."

The company has a long history of adopting leading technologies—everything from Enterprise Resource Planning (ERP), Operation Management System (OMS), Transportation Management System (TMS), Warehouse Management System (WMS) to fully integrated dispatch dashboard monitor technology, exception notification software, LTL/Cube fulfillment, Route & Fuel optimization, Global Positioning System (GPS) satellite truck and trailer tracking, GPS 2-way in-cab communication devices, automatic tire inflation systems in it trailers and much more. According to Pelle, RFID is a logical next step. "RFID is big in the supply chain, and Megatrux is big on technology," he says. "It’s a given that we want to excel in the RFID arena."

**Real-time Inventory**

As a major logistics provider for retail and consumer goods companies, Megatrux is uniquely positioned to assist its customers with RFID compliance issues. Before the RFID solution was implemented, the company already provided real-time tracking information to its customers using a combination of RF, bar code and GPS technologies.

Pelle and his team have reduced devanning and put-a-way costs, retail charge-backs due to human error, internal cycle counting and overtime. "The more confidence we can have in our active readers and zoned inventories without sending out teams of people to do manual counts, the more efficient we are. That has an immediate return on investment that we can see out of the gate," says Pelle.

Megatrux turned to Montreal-based Ship2Save for its RFID solution, based on a previous relationship with the company. Ship2Save deployed its OMS at the 200,000-square foot Megatrux warehouse in conjunction with fixed and
mobile RFID readers from Motorola and RFID label printer/encoder labels from SATO America. The RFID system is fully integrated with enterprise-level, multi-modal ERP and TMS from TMW Systems.

The two customers involved in the current project are not covered under current Wal-Mart RFID compliance mandates, but are tracking and tagging their shipments voluntarily.

As shipments arrive from the two participating suppliers, the Ship2Save software generates Electronic Product Code (EPC) Generation 2-compliant labels using a SATO CL408e RFID printer. These labels are applied to both cases and pallets of product before merchandise is moved to storage locations within the warehouse. Employees use a hand-held Motorola MC990G RFID reader to scan the pallet tag and a bar-coded location label. This data is then transferred wirelessly to the WMS so that the pallets can be quickly located for outbound shipping.

The RFID tags not only include EPC identification numbers, but also tracking information relevant to the shipping history of the merchandise, such as production facility/lot number, item number, OBL manifest information, warehouse entry/exit gate, warehouse bin location, shipping purchase order, and more.

"Basically whatever a customer wants or views as relevant reportable supply chain data, Megatrux can add or re-code on the chip for storage, reporting and tracking functions," Pelle says.

When orders are shipped to retail customers, each carton is tagged again with a UCC-128/RFID plate that is then scanned on to master outbound pallet labels.

Megatrux has equipped five of its dock doors with Motorola DC600 RFID readers, which scan the pallet tags as shipments are loaded onto the trucks. Large LCD display screens mounted nearby provide a confirmation message as each pallet moves through the portal, as well as alerts if a pallet is loaded onto the wrong truck. Scanning the outbound RFID tags prompts the system to close the order, adjust inventory, send Electronic Data Interchange (EDI) and Advance Shipping Notices (ASN), and issue customer invoices automatically.

By automating the shipping and receiving process, Megatrux has been able to improve order accuracy and operational efficiency, and provide a real-time audit trail to reduce shipment disputes and chargebacks. The company estimates it will save between $50,000 and $100,000 per year at the Rancho Cucamonga facility (its busiest location, which ships more than 1 million cartons to Wal-Mart annually), and Pelle hopes to expand the RFID deployment to other Megatrux facilities for additional applications.

Megatrux customers also benefit from RFID through real-time tracking of their inventory and compliance with retailer mandates.

"Not only are they automating their shipping and receiving processes," says Sam Falsafi, director of business integration and RFID strategy at Ship2Save, "but they are providing a value-added service to their customers."

The implementation went smoothly, and so far Megatrux has not had any significant problems applying or reading the tags. According to Falsafi, Megatrux thoroughly tested the system to optimize RFID tag placement, and to make sure the closely positioned dock door readers did not read tags from pallets that were passing through nearby loading locations. Megatrux operations staff actively participated in the testing process, which Falsafi says greatly improved the system.

"But overall, this hasn’t been nearly as complicated as we anticipated," says Pelle. "We're still experimenting with different configurations."

The system went live in June and Megatrux expects to see a return on investment in just over a year.

The company plans to install the system across its warehouse facilities over the next two years and will feature RFID as part of a marketing and advertising campaign touting its new capabilities.

"We have the opportunity to be one of a limited few that are truly using RFID," says Pelle. "This is a huge advantage to us. Our capabilities with this technology are endless because people keep coming up with new ways to use it."

"We have the larger supply chain in mind for this technology," Pelle continues. "We're not just interested in inventory and distribution. We envision point of manufacturing to store shelf."

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