Scott Oehlberg, director of operations (left) and James Walker, director of management information systems

Up in the clouds

RJW Transport implemented an on-demand WMS to run its warehouse. The result: Revenue in warehousing operations has doubled.

By Bob Trebilcock, Executive Editor

On-demand, or cloud-based, computing, is one of the fastest-growing segments of the software industry. The on-demand approach has proven itself in applications like customer relationship management (CRM) and transportation management systems (TMS)—applications that may not require real-time responses. Still, operations managers want to know: Can an application in the cloud manage a distribution center, especially one with complex order fulfillment requirements?

The jury is still out when it comes to highly automated DCs, where millisecond response times are critical. However, in suburban Chicago, RJW Transport is successfully managing a multi-tenant warehouse with an on-demand warehouse management system (WMS; RedPrairie, www.redprairie.com) that includes requirements for lot tracking and traceability to meet food safety standards.

While RJW relies on conventional materials handling processes, such as floor and rack storage as well as lift trucks for transportation, the third-party logistics (3PL) provider is tracking 7,900 SKUs for 18 different owners. More importantly, the system successfully optimizes picking processes across products as varied as steel and metal coils, chemicals, raw materials for manufacturing operations and food grade products shipped to retailers.

The system has delivered a significant enhancement to RJW's real-time inventory accuracy. RJW can also extend visibility into inventory and orders to its customers.

The biggest change of all, however, is that the WMS has enabled RJW to participate in the Safe Quality Food (SQF) initiative and earn certification in the Global Food Safety Initiative, or GFSI. That, in turn, allowed RJW Transport to win new business distributing food grade products, including a 50% increase in order volume. "Revenue from our warehousing operation has roughly doubled since implementing our WMS," says James Walker, director of management information systems (MIS). "I can unequivocally state that it has been a strong factor in helping us land new business and manage it properly."

Adding complexity

RJW Transport was founded 30 years ago as a logistics and freight broker. Over the years, the company expanded into an asset-based 3PL, then added its own fleet of trucks and trailers, and then grew warehouse operations in Chicago.

Today, the company ships to all 48 continental states and manages a fleet of 400 trucks and trailers for a range of shipments, including small LTL, protect-from-freezing, intermodal, expedited freight and just-in-time support of manufacturing operations. "Our sweet spot is customer service," says Walker. "We like to say that we focus on meeting unreasonable customer demands

Jean-Marc Giboux/Getty Images

As a 3PL, RJW warehouses and distributes a variety of products (bottom right) from customers in several industries. The on-demand WMS manages operations from receiving dock to the shipping dock (top left).

says Walker. "They wanted to log onto a Web site and see the status of their inventory and orders. That started us on the path of adding a true WMS."

In the cloud

Walker began his research assuming he would implement a traditional WMS installed on the premises. "I didn't have any preconceived notions, but I tend to distrust any system that isn't under my

and making them reasonable."

The warehousing business grew out of that focus on customer service. Initially, the facility was set up for cross-docking. From there, RJW expanded into short-term storage and order fulfillment in response to customer demand. "We are primarily a pallet-in and pallet-out operation," says Scott Oehlberg, director of operations for RJW's private label division. "However, we are doing more and more consolidation of mixed SKUs from multiple vendors onto a single pallet for big box retailers and quick turnaround on high demand products." For one manufacturing customer, for example, RJW consolidates raw materials and parts from multiple vendors and delivers those on a just-in-time basis to plants in the U.S. and Mexico.

Prior to implementing a WMS, RJW managed its operations on Excel spreadsheets. The 3PL created a workbook for each warehouse customer and created a new tab each month for inbound and outbound deliveries and month-end inventories.

As the business grew, and as RJW took on more complex order fulfillment requirements, the spreadsheets became unwieldy and prone to error. "We added customers who wanted instant visibility,"

direct control," he says. "If anything, I had a bias against an on-demand solution."

Several factors changed his mind. One was the interface of the cloud-based WMS. "It was simple and elegant," Walker says. "When I got underneath the covers, it was very robust."

For example, the system was up to the task of managing a variety of customers from across a variety of industries, many of whom had unique inventory management and tracking requirements. "We have about 100 different characteristics we have to track as part of our item master list," Walker says. "We do not use all of them for every customer, but we use them all when you go across our customer list."

The WMS could also provide the Web interface to RJW's customers. What's more, Walker liked the idea that the software provider would provide the redundancy needed for reliable operations. "If we're down for 30 minutes, it's a problem for my people but it's manageable," says Walker. "If my customers can't log in for 30 minutes, that's a big problem for them. We believed the kind of redundancy we needed could best be provided by an on-demand solution."

Finally, the solution was affordable. "We were able to avoid the expense of building our own front end system as well as the cost of purchasing and bringing a couple of servers online," Walker says.

The implementation time was also rapid: According to Walker, the system was up and running within 45 days of signing the contract, including training time.

Getting certified

Since going live, RJW has begun the process of adding RF-based bar code scanning to the facility, a process that

Using the WMS, RJW is able to capture lot and serial numbers for complete tracking and tracing.

is not yet complete. "If I was doing this again, I would implement the system more slowly so that we could go live with scanning throughout the whole facility at the same time," Walker says. "It would have accelerated the process of getting scanning up and running."

Most customers, on the other hand, were quick to use the system to get visibility into their inventory and shipments. That capability is now an important component of RJW's sales pitch to customers and has been a factor in

landing new business.

The WMS also allowed RJW to enter a new line of business, earning the GFSI certification to ship food grade products to retailers. Businesses with GFSI certification are able to provide tracking and tracing of the products it handles and ships. As part of the certification, RJW demonstrated its ability to capture lot and serial numbers tied to the license plate bar code for each pallet.

"To earn GFSI certification, you have to manage inventory on a first-in/first-out basis, pick based on expiration dates that may be specific to a retailer and track and trace the products you're shipping," says Oehlberg. "Thanks to the WMS, we have shown that we can provide supply chain accountability all the way through and that we can handle all three aspects of the food supply chain, including raw materials, finished goods and packaging."

That certification has been a key factor in much of the new business RJW has won since implementing the WMS. "Without the WMS, we wouldn't be in that part of the business," he says. □

With a fleet of 400 trucks and trailers, RJW ships products to all 48 continental states.

Real-time track and trace for 3PL

RJW's cloud-based WMS provides real-time visibility into orders and inventory for the 3PL and its customers.

By Bob Trebilcock, Executive Editor

A warehouse management system (WMS) has brought a new level of discipline and control to warehouse processes at RJW Transport's multi-tenant distribution center.

Receiving: RJW's warehouse is divided into two areas: A general warehousing area **(1)** that is used for a variety of products and a food grade warehousing area **(2)** where food grade products are segregated for storage and order fulfillment. Receiving begins when a driver checks in with the warehouse office and is directed to a receiving/shipping dock **(3)** in the appropriate warehousing area for the product on that shipment. Once the trailer arrives at a dock door **(3)**, the contents are inspected and verified against the shipping documents and checked into the system. Inventory is then staged for putaway in a staging area **(4)**. Depending on customer requirements, information about the product is entered into the WMS, including lot numbers, serial numbers, expiration dates, weights or other attributes.

Putaway: Product is putaway in a storage area **(5)**. Because of the variety of inventory managed in the warehouse, some items will be stored in pallet racks while products with unusual sizes are stored on the floor. Putaway locations can be assigned by the WMS or chosen by a lift truck operator. To confirm putaway in a rack location, the lift truck operator scans the pallet rack location. Floor locations are manually entered into the system.

Picking: Orders are received in a variety of ways, depending on the customer, including e-mail, fax, telephone or electronically in the WMS. The WMS generates a pick list based on customer-specific criteria, which may include specific lot or serial numbers, first in/first out, first expired/first out or other criteria. The WMS has the capability to take those variables into consideration as it assigns tasks and tracks the execution of orders. Paper pick lists are distributed to associates who generally pick cartons to pallets in the storage area **(5)**.

Packing and shipping: Once a pallet is complete, it is delivered to the staging area **(4)** where it is stretch-wrapped, labeled for shipment and staged with other pallets for that order. Once the order is complete, a supervisor verifies the items and updates the WMS. Outbound drivers check in with the warehouse office and are directed to one of the two warehouses **(1 or 2)**, depending on the type of load they are picking up. Materials are loaded onto a trailer for shipment at the receiving/shipping docks **(3).** The WMS is updated with carrier details and the shipment is closed out, removing those items from inventory. RJW's transportation management system (TMS) manages the routing for each delivery. □