



A look at GENCO's RFID solutions

RFID helps retailers improve processes and reduce claims

In today's marketplace, an effective and efficiently managed supply chain can be a competitive differentiator and enhance profitability.

Improved inventory management, visibility and analysis are three keys to better supply chain management. Without effective product tracking and monitoring capabilities to expedite the preparation, verification and accuracy of shipments, companies do not have full control of their supply chains.

Surprisingly, many have been slow to adopt technologies that can help, including Radio Frequency Identification (RFID). While a number of major retailers and manufacturers and the U.S. Department of Defense see the value of RFID, the reluctance of others to implement the technology may impact their ability to be competitive going forward.

Improved control

The potential of RFID is significant. RFID not only provides tracking throughout the supply chain, it also

enables the sharing of information with all partners along way.

GENCO has been working with major manufacturers and retailers for the last four years, using RFID systems specifically geared to enhance track and trace capabilities in warehouses.

Cary Cameron, GENCO's Vice President of Strategic Technologies and a Six Sigma Master Black Belt, points out that the advantage of RFID is in its ability to track the product down to the exact item using a unique serialized number. "When an RFID tag is placed on a case, there is more data available about that particular case," Cameron says. "Users know the date and time the case was processed and how many people handled it."

In the past, a company knew the number of cases of product it received and on which pallets they

were located. Now a company can identify exactly *which* cases they are, thanks to their unique serialized number, regardless of whether they are located on a manufacturer's floor, a store shelf or anywhere in between.

Thanks to RFID there is more data available than ever before. This new data provides better and faster visibility and accountability throughout the supply chain. Using serialized numbers, companies can now track exactly what product left their warehouses, ship dates, load times, who did the loading and the date and time product arrived at its destination.

The next goal is to place RFID tags on each product, not just the packaging. Then, if a product is returned to the store without its original packaging, manufacturers and retailers will know when it was purchased and when it was returned. This important data can then be used to track returns and recalls as well as new product launches or provide a snapshot of how products are selling.



The right frequency

GENCO believes the key to the current and future value proposition of RFID implementation is a matter of how the technology is applied. To comply with RFID mandates, many manufacturers are applying RFID pressure-sensitive tags to cartons and pallets just prior to shipping from their warehouses. According to Cameron, GENCO is taking a much different approach, by implementing RFID tags further up the supply chain. Instead of tagging product just prior to shipping, GENCO is evaluating how it can apply RFID tags the minute product is received, so tag data can

“The advantage that RFID brings to the supply chain is now you can track the product down to the exact item.”

Cary Cameron, GENCO's Vice President of Strategic Technologies

be used throughout the entire warehouse operation.

Unlike UPC bar codes, RFID allows data to be transmitted via an “aerial” microchip, through radio waves, without the need for a line of sight between the reader and the RFID tag. Product data is sent to a computer as it moves through key points in the operation. The data can be accessed any time through a secure Web-based portal to gain business intelligence, which contributes to improvements in the supply chain.

Case in point - the real benefits of RFID

A June 2006 study, “Assessing the Impact of RFID on Return Center Logistics,” was conducted with Sears Holdings Corporation (SHC) and GENCO through Carnegie Mellon University's Tepper School of Business. The following information is taken from the study.

In July 2004, GENCO conducted an RFID test program for product being sold to salvage dealers at the SHC

return center in McDonough, Georgia.

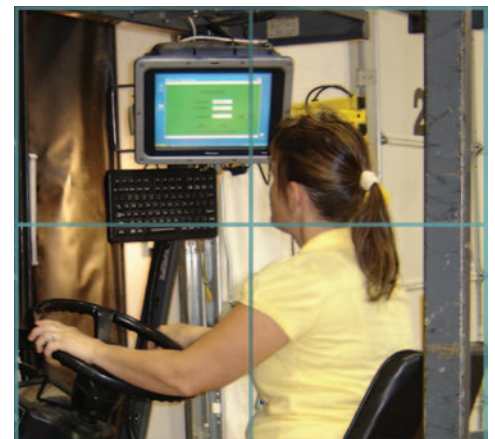
Salvage product is sold to salvage dealers based on product categories, such as electronics, soft goods and hardware. Because product values vary substantially, category identification helps salvage dealers gauge the value.

The return center processes more than 3,400 pallets and 800,000 items each month. While the salvage process already had a high accuracy rate that met salvage dealers' expectations, GENCO wanted even better accuracy

and a greater deterrent to fraudulent claims. Prior to RFID implementation, neither GENCO nor the return center had an effective way of verifying or disputing the accuracy of claims because there were seldom any reliable bar code records. Claims for high value items were of particular concern. SHC sponsored the program due to its potential cost savings impact from an expected increase in operational efficiency and a reduction in the number of filed claims.

One step further

One of the central issues driving the RFID implementation was the inadequacy of pallet bar code IDs for ensuring processing accuracy. Owing to problems in reading and the operational inefficiencies with finding and scanning bar codes, there was a lack of consistency in scanning the codes by return center personnel. As a result, most shipments were only visually checked using the Bill of Lading (BoL). The end result was an increase of inaccurate shipments and erroneous loading of trucks.



RFID technology was the silent supervisor, monitoring and recording the details of product movement, and alerting shipping personnel of errors. GENCO upgraded its software applications to take advantage of the data being generated by Gen2 RFID equipment, which promises better encryption, faster read and write times and transparent software compatibility.

Post RFID return center outbound material flow

RFID tags are now placed on pallets at the stretch wrap machine. They include information about the pallet, its contents, order details, BoL numbers, etc. In the outbound loading area, each forklift is equipped with an RFID reader and a screen, which signals the operator whether pallets for a particular order are included on the accompanying BoL. During loading, the operator is immediately alerted if any pallet is about to be placed on the wrong truck or if the number of pallets in the shipment is incorrect. Several warnings are given, including a flashing red screen and an audio alert warning.

Benefits of RFID implementation

The advantage of RFID compared with bar codes is that it provides automatic confirmation that each



Gen 2 RFID not only provides tracking information of products throughout the supply chain, it also enables the sharing of data with partners along the chain.

pallet has been loaded on the right truck and that the correct number of pallets has been shipped for each order. RFID significantly reduces the cost of handling claims by:

- Reducing errors at the loading dock
- Reducing time to research claims
- Providing a disincentive for filing fraudulent claims.

The number of claims during the 12 months post RFID implementation was far lower than the previous 12 months. Claims were reduced by 54.3 percent, and the dollar value of claims decreased by 29.7 percent. GENCO has now expanded RFID deployment to all its outbound operations at the return center.

These are only the *immediate* tangible benefits. Another potential benefit is operational efficiency and,

because of lower errors, increased customer satisfaction resulting from higher order accuracy. This study demonstrated that RFID technology was the key driver to improving the process and performance.

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