



Zebra Offers Top 10 Best Practices to Next Wave of RFID Mandated Wal-Mart Suppliers

- *Wal-Mart's "next 300" suppliers have until January 2007 to respond to the giant retailer's RFID compliance mandate.*
- *Zebra draws from experience of "first 300" Wal-Mart suppliers to offer Top 10 insights for a successful RFID compliance initiative.*

Zebra Technologies Corporation (Nasdaq: ZBRA), a leading manufacturer of bar code and RFID smart labeling solutions, worked with key partners and a large number of "first 300" suppliers to help them launch RFID technology in their operations. To help the "next 300" companies with 2007 compliance mandates, Zebra offers the following top 10 best practices from successful RFID implementations featuring Wal-Mart suppliers: Pacific Cycle, the largest bicycle supplier in North America; Victory Land Group, a large furniture importer; and Beaver Street Fisheries, a distributor of fish and seafood products.

Start early.

All three companies began their RFID programs early. In fact, both Victory Land and Beaver Street Fisheries had 2006 deadlines, but targeted 2005 instead. Pacific Cycle started their program early enough in 2004 to be three months ahead of the 2005 deadline. All three companies noted that the early start was necessary to research the technology, determine partners with whom to work, and assimilate the learnings in their organizations.

"The most important thing with RFID is to get involved," said Ed Matthews, director of information systems at Pacific Cycle. "You don't need to spend millions, but you need to start. There's a lot to learn."

Don't underestimate the need to get the supplies right.

When the first round of Wal-Mart suppliers were selecting tags, their choices were limited to only two vendors. Now, there are at least five major providers of tags or transponders—Avery Dennison, Alien, Symbol, Raflatec and Texas Instruments—all providing a variety of antenna/chip designs for end-users' consideration. The components of smart media—including tags, label material, backings, adhesives, etc.—need to come together precisely so that the finished product encodes properly, performs as needed on the products to which they are affixed, and provides the wear and tear required over its life cycle. Getting smart labels right could be the single-most important decision of your entire RFID implementation, because they carry electronic product code (EPC) data. If the smart labels do not work, all the rest of your RFID architecture will not make up for it.

Complete due diligence when researching RFID offerings.

RFID implementations can require a variety of readers and/or tags based on what types of items are being read (wood, paper, metal, liquid, etc.), how far the readers need to be from the tags, and the speed at which items are moving past the readers. For example, Beaver Street Fisheries faced a significant hurdle in finding the right tags for its fresh and frozen products. The density and moisture content of each package of frozen fish is not identical, which makes reading performance inconsistent and could result in unreadable cases. Therefore, the company's first step was to spend significant time finding the best types of tags for their products.

In addition, if your company plans to use its existing bar code label formats as the basis for compliance smart labels, their size and layout will set requirements for the size, thickness, and antenna design of the tag. Because of these interdependencies, all decisions on RFID components—readers, printer/encoders, supplies, etc. should be synergistic. A good place to start is to have a variety of tags tested on your products at an independent RFID lab. Once tags are selected, then choose hardware that has a solid track record in supporting those tag types.

(continued)

Get the right partners.

Finding the best fit of partners to work with depends on a number of considerations, including level of expertise, cost, availability of personnel, location and that ephemeral quality called “chemistry.” For Pacific Cycle, their decision to partner with Zebra, SAP and Peak Technologies was based on the fact that the company was running SAP. Zebra RFID printers/encoders are already integrated with SAP, and Peak is a strong partner of both SAP and Zebra. Both Beaver Street and Victory Land were very satisfied with their Zebra bar code products and requested their integrators, Danby Group and R4 Global Solutions respectively, to work with Zebra on RFID. The fact that Zebra already had solid relationships with both Danby and R4Global made for smoother interactions all around.

“We’ve used Zebra bar code printers for many years and they work great,” said Howard Stockdale, CIO of Beaver Street Fisheries. “There was no reason for us to look elsewhere.”

Start small and simple, and expand from there.

Beaver Street started its RFID pilot with only three products. Victory Land began by tagging only a single model of bar stool to minimize the impact on its warehouse operations. Pacific Cycle started with a basic slap-and-ship label application on only four products, whereas the project now encompasses more than 50 products. All three companies agreed that starting small made the project a lot less intimidating and reduced costs by saving on mistakes that could disrupt operations.

Victory Land’s Hudson Magloire went into the RFID project with some concerns. “You hear so much about the obstacles and difficulties in getting good read rates, having to make big changes to your business, and spending a lot to put in a system,” he said. “That perception changed the further we went along in our project. When you start doing it, it’s a lot easier than it seemed it would be.”

Test, test, test.

Beaver Street set up an RFID lab in their warehouse to test tags and smart labels, determine how to orient them on cases and pallets for reliable read rates, how to set up readers so they wouldn’t interfere with each other, and more. Because tags perform differently with different materials, at different locations, and at different channels within the UHF spectrum, it is important to complete thorough testing early in the process to avoid creating more issues as implementations scale up in volume.

If you can, plan RFID from the ground up

Victory Land volunteered for early inclusion in Wal-Mart’s compliance mandate in part because it was breaking ground on a new distribution center. The company wanted their experience with RFID to inform the design and construction of their new facility. “We knew we wanted to take advantage of RFID technology internally,” said Magloire of Victory Land. “We would learn about RFID and gain experience while tagging for Wal-Mart, and this would help us in building a competitive edge over non-RFID suppliers.”

If your company will be involved in new construction or remodeling, implementing new applications, or upgrading IT infrastructure, gaining experience with RFID and factoring it into your plans is a very good idea.

Utilize the data.

Soon after Pacific Cycle completed its pilot, the staff realized that they had gained an understanding of RFID’s physical requirements, but no insights from the data.

“We weren’t doing anything with the data,” says Matthews. “The information went into a database and just sat there.”

A company initiative was launched to translate the RFID data flow to upstream business applications. This process grows more complex as volume and product lines increase, since the number of reader points and kinds of devices can escalate exponentially. However, Pacific Cycle saw this as the only route to true ROI for their RFID implementation.

Look beyond compliance for ROI.

To leverage their RFID implementation, Beaver Street Fisheries is planning to use shipment data collected via RFID to automatically create a bill of lading and advance ship notice for EDI transmission. Another goal is to push compliance labeling to worldwide suppliers to the seafood distributor. Similarly, Victory Land is planning to use RFID information for its own planning and suppliers. According to Ed Matthews at Pacific Cycle, "We wanted to tie all the RFID data back to mySAP to improve shipping and receiving." Doing so has allowed the company to automate its warehouse operations to gain real-time visibility into exception warnings, positive proof of deliveries, and serialization of products for returns or trade promotions.

All three companies agree that leveraging their compliance learnings is only the first step to RFID ROI, and extending the technology internally in an organization requires business-process and software re-engineering. But the payback is clear.

Recognize that RFID is still a moving target, and plan for change.

Today, increasing numbers of companies plan to use RFID technology for compliance initiatives and for closed-loop applications to improve internal business processes. Initiatives like RFID asset and inventory tracking, work in process control, access control, patient and patron monitoring are already underway at many companies.

Academic institutions across the country are setting up RFID labs and expanding research projects, and more vendors are entering the market, increasing the number and kinds of products and software available. Global standards are being settled. Certainly the RFID architecture put into place today will undergo changes over the next 18 months. But that's to be expected, as most businesses don't stand still. What's important is to realize that the vendor relationships you establish today will become more critical as your implementation matures. By choosing strong and knowledgeable partners today, companies can ensure they are prepared for the many developments in RFID tomorrow.

"We have a lot of ideas and vision about what we can do with the technology," said Stockdale of Beaver Street Fisheries. "We have looked at doing many different things with RFID, and I have a lot of confidence that Zebra will be able to support our continuing efforts."

Zebra Technologies has been researching and developing RFID products for nearly 10 years. Today, Zebra has the broadest printer/encoder product lines as well as the broadest smart media supplies portfolio. For more information on Zebra's RFID solutions, visit www.rfid.zebra.com or call +1 847 423 0422 (Select option 3).



HEADQUARTERS Zebra Technologies International, LLC **T:** +1 847 793 2600 or +1 800 423 0442 **F:** +1 847 913 8766
ADDRESS: 333 Corporate Woods Parkway, Vernon Hills, IL 60061-3109 U.S.A. **WEB:** www.zebra.com

OTHER LOCATIONS **USA:** California, Rhode Island, Wisconsin **EUROPE:** France, Germany, Italy, Netherlands, Poland, Spain, Sweden, United Kingdom **ASIA-PACIFIC:** Australia, China, Japan, Singapore, South Korea
LATIN AMERICA: Florida (USA), Mexico **AFRICA/MIDDLE EAST:** South Africa, United Arab Emirates



An ISO 9001 registered company
GSA#: GS-35F-0268N
©2006 ZIH Corp. Printed in U.S.A.
(4/06)