Logistics

Three Years Of Retail RFID Pilots

Lora Cecere 05.02.07, 12:00 PM ET

AMR Research

For the original article, click here.

On April 30, 2004, the first cases of consumer goods products with radio frequency identification (RFID) tags shipped to **Wal-Mart Stores**. This was followed shortly by mandates by the Department of Defense, **Target**, and Albertsons.

From 2004 through 2006, the average consumer products company budgeted and spent $800,000 on RFID pilots. In those early days, there was lots of excitement and promise of what RFID could do. Now, at the end of three years, RFID retail tests have slowed and are still only pilots, and companies are still searching for return on investment (ROI). As we hit this third anniversary, we review what the industry has learned and forecast the future of RFID in improving retail interactions.

The current state: Over the past three years, the number of Wal-Mart (nyse: WMT - news - people) stores using RFID has increased tenfold, from 100 stores in 2004 to 1,000 stores in 2007. For retailers overall, though, the pursuit of RFID has slowed. The plan for RFID installation in Wal-Mart distribution centers is behind schedule; expansion plans for Target (nyse: TGT - news - people) and the DoD have been delayed; and the Albertsons pilot has been discontinued.

The elusive ROI: In 2006, Wal-Mart announced that RFID pilots resulted in a 16% reduction in the number of times products went out of stock. Its findings show that the use of RFID improved the efficiency of moving products from the backroom to the store shelves by 60%. What has this meant for the consumer products manufacturer? After three years of work, is there a ROI?

Let's contrast results from two pilots:

Company A ships branded products using a traditional multi-tier warehouse distribution system. In 2006, in an effort to better understand the ROI, the company conducted a test to look closely at the impact of RFID on net sales of 17 products in two categories. To do this, product sales in RFID-enabled Wal-Mart stores were compared to control stores (non-RFID Wal-Mart stores with similar demographics) for two store formats: grocery and mass merchant. In the Wal-Mart RFID pilot stores, sales increased by 10% in one category and 15% in a second.

Company B is eight times the size of Company A, ships through multi-tier warehouse systems, and has products in more categories. To determine the ROI for RFID, the company analyzed the impact of RFID on out-of-stock items in Wal-Mart test stores using resources from RFID technology providers, such as those from T3CI and True Demand. At the start of this pilot, the assumption was that out-of-stocks at retail locations were at the industry average of 7.9%. As a result of the pilot, Company B determined that actual out-of-stocks were 3%, translating to incremental sales in the Wal-Mart RFID pilot stores of 1.6%.

What this means: The analysis takes a look at two very different ways to analyze the Wal-Mart stores with very different results. Here are three basic conclusions:

--Not enough companies have evaluated the ROI.

--There is merit in both types of analysis.

--A compliance focus has blinded consumer products companies to the use of the technology to drive greater opportunities.

What clients have learned: While there is no definitive answer on the ROI for consumer products companies from the RFID pilots, the aggregate results offer great insights on improving the supply chain response.

The opportunity: The impact out-of-stocks have on the manufacturer is greater than most companies thought. Based on eight pilots, the results support that 25% to 27% of out-of-stock problems can be fixed by improving the consumer products company's supply chain response.

The battle: When an item is out of stock, the disruption is longer than originally thought based on the consumer products company's supply chain response. Today's processes for demand sensing and shaping take seven to nine days to correct an out-of-stock. These pilots support that 80% of lost sales days are from out-of-stock episodes that last more than seven days. With most out-of-stocks occurring in heavily promoted products and new product launches (products that are essential to the enabling of growth strategies), seven days is just too long.

The challenge: Retail perpetual inventory accuracy is worse than originally believed. The inaccuracies of even Wal-Mart's store-level inventory data trigger manufacturing replenishment two days too late at the store level. Improving store-level inventory accuracy is an opportunity for both the retailer and the consumer products company to drive pull-based replenishment. This is a challenge, since in a recent study of 62 grocery retailers, only 48% have had store-level perpetual inventory systems for more than a year.

Longer-term impact: Global data synchronization is a foundation for a new wave of business-to-business commerce for demand and supply visibility and price synchronization in the industry. Already, we see the impact of these investments in the reduction of transportation costs, driving improvements in receiving (through advanced shipping notices) and reducing deductions.

RFID's highest value: The cost to tag products is consistent with the 2004 predictions. As a result, RFID propagation will continue to be focused on high-value, low-volume products.

For all, the third anniversary is a good time to reflect on what we have learned and what are the right next steps to improve our businesses.

For the full content of this article, please click here.

Lora Cecere is a research director at AMR Research. Her work focuses on supply chain best practices, specifically for consumer products companies.

More On This Topic
Companies: WMT | TGT
E-Mail Newsletters: Sign Up Now To Stay Informed On A Range Of Topics
Attaché: Customize Forbes.com Now To Track This Author And Industry

Article Controls

E-Mail | Print | Comments | Request Reprints | E-Mail Newsletters

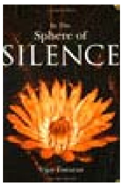
del.icio.us | Digg It! | My Yahoo! | RSS

Related Sections
Home > Business > Logistics

Related Business Topics
Distribution Software | Shipping Containers

CEO Book Club

BOOK REVIEW
Jazz Mecca Still Swings



BOOK REVIEW
The Sound Of Silence
Paul Maidment
Having trouble managing your business? Maybe you talk too much.

Today On Forbes.com

Citigroup: The Breakup Investors Sought

Carl Gutierrez

The financial supermarket model lies in ashes as the bank is splitting into two parts.

- Bury Sandy Weill's Legacy
- Citigroup Comes Undone
- Wall Street Mulling Citigroup Changes


U.S. Bails Out BofA, Again


Breaking The Spiral


The Oracle of Doom


New Loans For Small Businesses

News Headlines | More From Forbes.com | Special Reports

Subscriptions >

Subscribe To Newsletters **Subscriber Customer Service**

SITEMAP HELP CONTACT US INVESTMENT NEWSLETTERS FORBES CONFERENCES FORBES MAGAZINES

Ad Information Forbes.com Mobile RSS Reprints/Permissions Subscriber Services
Privacy Statement Terms, Conditions and Notices About Our Ads

Stock quotes are delayed at least 15 minutes for Nasdaq, at least 20 minutes for NYSE/AMEX. U.S. indexes are delayed at least 15 minutes with the exception of Nasdaq, Dow Jones Industrial Average and S&P 500 which are 2 minutes delayed.