



RFID IS READY TO REVOLUTIONIZE THE RETAIL INDUSTRY

The powerful tool drives superior customer service beyond inventory management

by CRAIG GUILLOT

Much has been said about its ability to track inventory, but the implications of RFID go far beyond attaching a chip to a sweater to track its movement through the supply chain. The technology can positively impact everything from sales and online cart abandonment to pricing and in-store customer service. And when combined with omnichannel technologies and capabilities, RFID has the potential to revolutionize the entire retail industry.

Nearly 75 percent of retailers surveyed in research firm Kurt Salmon's 2016 RFID in Retail study said they were currently implementing or piloting RFID, and more retailers are discovering the technology can offer worthy results: 90 percent said they were measuring their return on investment by inventory accuracy with an average improvement of 25 percent.

While inventory visibility and accuracy itself can be a compelling benefit of RFID, it barely scratches the surface of the contributions it can make in other areas of operations.

"Inventory accuracy is huge and has been pretty documented about RFID," says Steven Platt, director of the Platt Retail Institute

and research director at the Retail Analytics Council at Northwestern University. "It also affects everything from ordering to market down, customer services and a whole host of other things."

The Platt Retail Institute recently released a working paper which analyzed data from a 15-month period of RFID testing by Macy's. The retailer is on a path to tag 100 percent of its merchandise with RFID by the end of 2017 and has asked all product vendors to supply merchandise already fitted with tags.

Macy's has had strong results so far. The use of RFID substantially improved the rate of display compliance, which drove overall

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customer satisfaction. Inventory accuracy (as measured by gross unit variance) showed significant improvements as Macy's could conduct more regular cycle counts of items tagged with RFID.

Researchers also found that making single merchandise units visible and for sale across all omnichannel channels was highly beneficial — test stores significantly outperformed control stores in terms of fulfillment requests, units picked and units sold. Unsurprisingly, data also revealed that RFID-tagged items could be located and sold much easier than non-tagged items.

The report said RFID can generate information that can be combined with other store-level data and provide valuable insights in areas including demand forecasting and merchandise trends, dynamic pricing, fitting room utilization and conversion, merchandise placement and in-store marketing.

Platt says RFID data is arguably the “single most important merchandise-related information available” to help retailers improve the relationship between customers and products. While several studies have analyzed RFID as a facilitator of supply chain management, researchers wanted to consider other available data and see how it might impact other areas of retail operations.

“I think for the vast majority [of retailers], this kind of inventory visibility and supply chain management will be critical,” Platt says. “But there’s a lot more to it than that.”

RFID IN PRACTICE

Platt says the principle advantage of RFID tags versus traditional bar codes is that they can hold more information about products, such as size, price, color and location. In many cases, the time required to collect such information is also faster and more accurate than traditional bar code scanning.

While RFID tagging has been used for more than a decade (Walmart began requiring suppliers

to tag cases and pallets in 2003), only recently have powerful cloud-based platforms made more information available. Retailers now have a means to not only tag individual products but also collect more information and process it in a meaningful manner.

Researchers considered four main uses cases with the Macy's pilot: display audit, inventory accuracy, single unit fulfillment and back to front. They found RFID substantially improved the rate of display compliance and customer satisfaction through their ability to “find items.”

They also discovered that 1 percent more sales were made at full price, and 2.6 percent more sales were made at full price and after the first markdown during the post-RFID deployment.

Platt says if the retail industry is to move to dynamic pricing based on supply and demand dynamics, it will need accurate knowledge of where the inventory is at any point in time.

Other retailers are already using RFID on individual products to enhance the customer experience. Lululemon has implemented Tyco's TrueVUE RFID Inventory Visibility system to report real-time inventory to customers. The retailer also implemented the Tyco Retail RFID Fitting Room, which offers visibility to item-level inventory in the fitting room with additional insight into the stockroom and sales floor. This helps sales associates better assist customers, monitor the area to combat shrink, enable fitting room merchandising and promotional opportunities, and boost sales.

Brent Brown, vice president and general manager at Tyco Retail Solutions, says it's a highly effective way to make stores more relevant and drive shoppers back to bricks-and-mortar through differentiation and personalization. “It becomes a pretty powerful competitive advantage, especially when you start to marry the links between online and bricks-and-mortar,” Brown says.

Francisco Melo, vice president and general manager of global RFID at Avery Dennison, says while many companies already see a return on investment, the question is how and when they should implement RFID. Melo says a retailer should first know the level of accuracy it currently has and the impact that accuracy has on its business. The retailer also needs the ability to act on that information with a level of store operations discipline and capacity to execute plans that produce improvements.

“The technology today has been very successful, in particular with retailers and brands that are across a large footprint,” Melo says. “The more widespread you are, the most successful it tends to be.”

Brown says while the “low-hanging fruit” revolves around supply chain and inventory management,

the "second-use cases" are becoming the powerful story about RFID. Companies can deliver superior customer service because both online and bricks-and-mortar consumers can instantly find the products they want in with 100 percent accuracy. Retailers are starting to understand "there's a lot more value to this than just controlling inventory," he says.

Dean Frew, chief technology officer and senior vice president of RFID solutions for SML Group, says RFID could offer apparel retailers strong insight into how shoppers view products and journey through the sales process.

"A consumer took three shirts in the dressing room and came out with two," he says. "What's wrong with that style or color? Why are people taking it in, trying it on and not buying it?"

MEASURING ROI

Despite its benefits, few retailers are using RFID to its full potential. One of the reasons is that it can be difficult to fully quantify the return on investment. Piatt says retailers such as Macy's are interested in information about ROI because it can be more cost-effective for brands to tag products during the manufacturing stage rather than incur the added time and labor costs of adding tags at distribution centers.

As a pervasive technology that can run through the supply chain and offer benefits from the manufacturing floor to the sales floor, Piatt says more awareness could spark greater adoption. "There's hope that as more retailers adopt it, there will be more of a push on the vendors, particularly in the apparel segment, to start labeling at the source," he says.

The price for an RFID tag has fallen from \$1 in 2003 to approximately 10 cents today. Yet in addition to tags and installation, retailers also need to consider Internet of Things equipment, software and how people will utilize it. They'll also need a means to consider how they'll quantify their savings in time and their improved customer experience. Tyco has a Retail RFID ROI Estimator that factors in things such as the number of items to be tagged, number of stores, average unit retail and gross profits for tagged items, store SKU accuracy, labor costs and inventory turns.

Brown says RFID ultimately aids retailers in their management of working capital. He says the payback from RFID implementation is "strong and fast," and that the second-order use cases become more powerful to build the organization and drive exponential customer experience and business value.

RFID is being deployed in other retail segments as well. "Clearly we're in the area of fashion and apparel," Brown says, "but we're beginning to have

conversations, even in food and drug, around some of the higher value, higher tracking areas of meat and produce."

In a grocery case, other technologies can be attached to the RFID tag to tell not only where the product is and how long it has been sitting on a shelf but also track temperature. Tracking such products on a consistent and continual basis could avoid a lot of waste and spoilage. This model could also be applied to some high-value components in the drug and cosmetic markets where high profits and high value in consumers' minds make inventory management even more important.

As more retailers expand their omnichannel capabilities, they'll place more value on inventory visibility. Brown says most retailers typically start losing visibility of 3 to 5 percent per month from June through the end of the year and end up with 65 to 75 percent visibility by the holidays; RFID becomes a "powerful tool and competitive advantage" when retailers use it to join the links between online and bricks-and-mortar, he says.

Melo says that it will create a better connection between consumers and products. "I think that sort of connected product, that connection of that unique identity, starts with the RFID for the consumer. That's really where we are and what we're going to be seeing in the years to come."

It's less a matter of if then when RFID will be deployed on a mass scale. Demand for RFID tags is steadily rising — a forecast from IDTechEx said retailers will deploy more than 5 billion tags in 2017.

SML Group, one of the largest RFID technology companies in the world, made more than 1 billion tags for the apparel industry last year. Frew says the market for RFID applications in retail is only at 6 percent penetration, equating it to Geoffrey Moore's model of "crossing the chasm" where there are multiple segments of technology adopters, all with their own behavioral characteristics.

It says the most difficult step is to make the transition between the early adopters and the pragmatists, the early majority. It ultimately takes momentum to tip the scale. "What we're seeing is that all those retailers like Decathlon, Macy's, Marks & Spencer, American Apparel and Zara are on one side of the chasm," Frew says. "On the other side, we have a whole series of retailers [that] are just very pragmatic." **STORES**

Craig Guillot is based in New Orleans and writes about retail, real estate, business and personal finance. Read more of his work at www.craigguillot.com.