

The Upstream and Downstream Benefits of **RFID**

With the rise of the consumer-centric supply chain, retailers and their trading partners have been challenged with connecting digital and physical worlds. The reality is the consumer doesn't see "omnichannel," they just want options and speed. The time-tested Electronic Product Code (EPC®)-enabled Radio Frequency Identification (RFID) technology enables the item-level visibility needed to connect inventories with consumers, and the retail industry is collaborating to drive RFID implementation forward like never before.

Several major retailers have recently announced their plans to expand the use of EPC-enabled RFID — demonstrating its tangible benefits and ability to deliver on the omnichannel promise to the consumer. It's also important to note that manufacturers benefit equally from RFID tagging due to enhanced efficiencies throughout the entire supply chain. Let's examine the upstream and downstream benefits of RFID, supported by key statistical data, industry stakeholder perspectives and real-world examples.

Inventory visibility: If you can't see it, you can't sell it

EPC-enabled RFID provides tangible benefits and results for retailers, brand owners and other trading partners because of its ability to deliver inventory visibility — a key pillar of omnichannel retailing. Through the automated identification created by EPC-enabled RFID, electronic tags are capable of receiving, storing and transmitting digital information by means of radio waves. Without RFID, a retailer may be able to sell an item online, but may be unable to fulfill the order if it cannot find the item in the store.

Retailers and brand owners alike are turning to EPC-enabled RFID technology to help them quickly and accurately identify, capture and share product information and location data. "EPC-enabled RFID is the foundation for actionable intelligence. If you can't 'see' something, you can't measure it — and if you can't measure it, you can't control it. And if you can't control it, then it's probably cost-

EPC-enabled RFID provides tangible benefits and results because of its ability to deliver inventory visibility — a key pillar of omnichannel retailing.



ing your business too much," says Bill Hardgrave, PhD, Dean of the Harbert College of Business and Founder of the RFID Lab, Auburn University.

Retailer value: Driving sales and lifting margins

To date, 2015 is proving to be the year of RFID with several major retailer roll-outs. Recently, Target and Amazon announced programs that will integrate RFID technology into their supply chains, enabling better flexibility and sustainability as consumers' needs and behaviors grow and change.

A recent survey conducted by GS1 US measured the current and projected usage of RFID in retail. Of the retailers surveyed, more than half (57 percent) reported that they are currently implementing RFID, and another 19.3 percent plan to implement RFID within the next 12 months. Additionally, 10.5 percent plan to implement RFID in 13 to 24 months. Respondents reported that on average 47 percent of the items received by apparel and general merchandise retailers have RFID tags.

Numerous retailers around the globe are using RFID to enhance inventory accuracy. Using RFID, inventory read rates can be improved from an average of 63 percent to between 95 percent to 99 percent, according to RFID Lab studies. This means a retailer is now able to see 33 percent more of its inventory, which was previously invisible. Other noteworthy benefits include driving point-of-sale improvements, decreasing out-of-stocks, improving loss detection, enhancing stock conversion reporting and expediting the returns process.

Many retailers recognize that these benefits can be realized with greater industry collaboration. The GS1 US Apparel and General Merchandise Initiative is comprised of suppliers, retailers and other trading partners who are collaborating to determine best practices and guidelines for various retail industry standards. An Initiative member, CatLook, a Li & Fung company, which provides interactive in-store technologies, says RFID enables efficient omnichannel fulfillment models. ▶

Peg Kastner, Vice President of Professional Services, Checkpoint Systems



“Improved inventory accuracy has been shown to improve product availability and delivery times, particularly when coupled with accurate sales forecasting and timely replenishment activities,” said Alastair Drew, vice president of sales and marketing, CatLook. “With improved product visibility in-store and full availability of all styles, colors and sizes, fashion retailers are much more likely to enjoy high levels of customer satisfaction that inevitably leads to increased loyalty and good word of mouth marketing.”

Pam Sweeney, senior vice president of logistics systems for Macy’s, agrees that a main driver of RFID implementation is achieving customer satisfaction and repeat business. “High item accuracy gives our associates the confidence that the product is there to complete the order,” says Sweeney. “Item-level RFID provides a sustainable item accuracy level allowing retailers the ability to optimize fulfillment from any channel and not disappoint the customer.”

Additionally, Macy’s and other retailers have been particularly encouraged by the ability to sell at higher margins once their inventory is visible and, therefore, more easily discoverable by consumers. With the ability to significantly boost bottom lines, retailers increasingly view RFID as being completely essential to executing an omnichannel strategy.

Manufacturer value: Inventory intelligence and cost savings

For brand owners, true inventory visibility starts at the factory, where value is first achieved in the inbound audit process at the domestic point of receipt. Many suppliers are realizing the benefits of tagging items with RFID at the point of manufacture, rather than at the distribution center. Source-tagging enables all trading partners to gain the most efficiency.

Further benefits are then derived by using EPC-enabled item level RFID through the entire supply chain for electronic proof of delivery (EPOD) as well as for improving receiving, pick/pack and shipping accuracy. RFID Lab data shows receiving time can be lowered by almost 90 percent, and shipping and picking accuracy can be improved by up to 80 percent when RFID is in use. Addi-

Apparel: The battleground for consumer engagement is playing out via omnichannel, with each player challenged to offer multiple places and ways apparel can be ordered and fulfilled (e.g. order online pick up in store, order in-store, order online pick up in car, etc.). The only way to meet this uptick in channels is by holding great reserves of “security” stock, or by having close to 100 percent visibility into your inventory. Are you seeing substantially more examples of cases in which item-level RFID is enabling the latter, and in those instances, in addition to minimizing the expense of overstock, what are some of the additional benefits that are accruing to retailers that are evolving to higher inventory accuracy levels?

KASTNER: Omnichannel order fulfillment is quickly becoming a primary driver for item-level RFID deployments. Customer expectations for product availability and convenience are high, and only getting higher — a recent UPS/ComScore report stated that fast shipping/pickup in store (vs. free shipping, promotional offers) is the number one priority for 11 percent of online shoppers vs. only 7 percent the same time last year.

Brick-and-mortar retailers are using Buy Online Pick up in Store (often called BOPUS or BOPIS) to bring more online shoppers into stores, knowing that shoppers are likely to purchase complementary items once they are in the store. In apparel we are seeing retailers use the average transaction size to predict sales uplift from omnichannel orders. If the average shopper purchases 4.6 items when in store, and they are stopping by to pick up an online order, a significant percentage of shoppers will pick up two to three items while in store to round out their purchase.

But retailers need to ensure customer orders are fulfilled in an accurate and timely fashion. Without inventory visibility, omnichannel orders are at risk. The less confidence a retailer has in its inventory accuracy, the more likely it is to hold reserve inventory in anticipation of these orders. Our discussions with retail supply chain leaders have uncovered inventory buffers as high as 15 percent to 20 percent. The resulting impact on working capital (and margins) is not sustainable. Item-level RFID data, integrated with systems of record and with core inventory management processes, can help retailers meet (and continue to adapt to) consumer needs, while keeping inventory at reasonable (and profitable) levels.

Apparel: Winning consumer hearts and minds also comes from getting product to market as quickly as possible, before the customer has moved on to the next trend. That means better collaboration within your four walls as well as with your factory and logistics partners, and all others along the supply chain. In the past year, how has RFID embedded itself deeper into back-end supply chain processes?

KASTNER: Early RFID pilots and rollouts put most of the responsibility for maintaining accuracy on store operations at the local level. As retailers move to chain-wide deployments, they need to consider shifting some of these processes to DCs and source manufacturing. We are working with an

increasing number of retailers to manage tagging, encoding and shipment verification at source manufacturing and DCs.

Verifying outbound orders from DC to store using an ASN validation process with RFID shipping tables or portals ensures that each store receives accurate inventory from the start. This frees store operations from inventory reconciliation and enables them to focus on customer-facing inventory tasks: locating items in the fitting room, fulfilling omnichannel orders and restocking out-of-shelf items.

Supply chain leaders are realizing, in an omnichannel world, that their responsibility doesn't end in the DC, but when the product reaches the customer. DCs can also derive additional benefit from RFID data, including real-time inventory allocation, route optimization and other areas.

Apparel: The consumer used to sit at the end of a very long supply chain, but now she influences all processes, from how product is designed, to how it is delivered, to what offers are displayed on her web page. How will the design-to-retail process continue to change now that the consumer sits at the center, instead of the tail end, of an increasingly interwoven supply web?

KASTNER: Omnichannel retailing has broken the traditional supply chain, and is wiping out many of the efficiencies gained from centralized distribution, as aggregated shipments and scheduled deliveries are making way for hundreds of small expedited shipments from store to store, or directly to the end consumer.

A "supply web" (vs. a traditional supply chain) requires real-time, actionable data to dynamically sense and respond to changing consumer needs. RFID-enabled processes from source to DC to store to shopper can help retailers create the same operational efficiencies and insights in the brick-and-mortar world as they do online.

Fashion retailers were some of the first to leverage RFID data for dynamic inventory allocation, since historical sales figures are less reliable for retailers who carry few replenishment items. Cross-channel RFID inventory accuracy at the item level enables store inventory allocation to be more dynamic, sending products where they are most likely to be sold, and keeping inter-store transfers and transportation costs to a minimum. RFID-enabled DC processes can also help create efficiencies at flagship stores and hubs near population centers, who are taking on additional omnichannel order fulfillment responsibilities.

In stores, connecting data from RFID and IoT sensors to loyalty apps and systems of record enable retailers to provide relevant offers and product recommendations at the point of consideration (and to ensure the item being offered is in-stock). Sensor data from multiple read points in store can be analyzed to understand browsing behavior and improve merchandise placement.

Perhaps the takeaway from this is that all retailers have the potential to use sensor data to better understand and engage with shoppers. The way that they choose to collect, aggregate, contextualize and act on this data, will separate leaders from laggards in an increasingly consumer-driven environment.

Vendor Viewpoint is a regular Apparel advertorial feature.

tionally, RFID helps improve supplier compliance, saves on operational costs, reduces obsolete inventory write-downs and increases margins.

Manufacturers are not far behind their retailer partners in terms of RFID implementation and usage, according to the GS1 US survey. It found that nearly half (48.2 percent) of the manufacturers surveyed responded that they are currently implementing RFID, and another 21.1 percent plan to implement RFID within the next 12 months. Additionally, 18.4 percent plan to implement RFID over the next 13 to 24 months. Respondents reported that 40 percent of items made by apparel and general merchandise manufacturers have RFID tags.

How to get started

With such compelling evidence that RFID works to complete the omnichannel supply chain, it's time for manufacturers and retailers to take action, if they haven't already. Getting educated on industry best practices is the first step. Many supply chain stakeholders are incorporating their expertise into educational tools and resources through participation in the GS1 US Apparel and General Merchandise Initiative, including its GS1 US EPC Item Level Readiness Program. The Initiative explores ways that omnichannel retailing can be achieved using standards-based solutions and procedures.

GS1 Standards such as Global Trade Item Numbers (GTINs) also give businesses a head-start when they want to implement an RFID program, as RFID can usually be integrated fairly quickly into their existing barcode and software systems with a shorter ROI and less risk.

Ultimately, there is no question RFID is gaining traction in the retail supply chain as pilot programs and category expansions confirm solid results for all trading partners. As we head into the final quarter of 2015, make RFID implementation a priority — or risk playing catch-up in 2016. ■

Melanie Nuce is Vice President of Apparel and General Merchandise at GS1 US and leads the GS1 US Apparel & General Merchandise Initiative.