THE 2019 RFID INTEGRATION GUIDE

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INTRODUCTION

Today, many retailers are promoting omnichannel retail initiatives in order to offer their services and products to more consumers on more marketing platforms. It’s no secret that retailers with growing omnichannel initiatives see strong benefits with RFID from the DC to receiving to the back room, and the selling floor.

When the retailers you sell to hand down an EPC mandate, make sure you are prepared with a well thought out strategy to ensure the best possible outcome. We’ll show you how to start with a pilot RFID project, and turn it into a big success for your operation.

Written by one of the most knowledgeable minds in the entire Auto-ID industry, The 2019 RFID Integration Guide will give you tremendous insight into EPC mandates. To help you understand the intricacies of EPC mandates, RFID implementation, and, most importantly, how to benefit from a mandate, we decided to publish this guide. We hope you’ll find this document helpful.
2018: A YEAR OF CHANGES FOR RETAIL

2018 saw big changes in the retail sector. Momentum around multichannel shopping has grown as retailers endeavor to answer consumer demands. However, in-store sales remained strong. 2018 could be called the year of omnichannel retail.

Selling seamlessly between online marketplaces and in-store is no longer an ambitious futuristic objective. It is a necessary strategy for retailers to stay relevant in a crowded and competitive industry. Retailers need to attract consumers online, but retain prevalence in physical spaces. According to Forbes.com, physical stores garner 90% of all retail sales. Still, that doesn’t mean retailers haven’t felt the pinch of online retail shopping.

A big change in 2018 saw “chore” shopping become more streamlined. Amazon Dash and Google Express, for example, are looking to offer consumers simple solutions to buying day-to-day goods like laundry detergent, paper towels, toiletries, and groceries. Many of these products offer two-day shipping or even same-day delivery. To handle this, shippers need heightened supply chain visibility.

In-store shoppers often look for a more exclusive shopping experience. “Cherish” retail lets customers connect with a brand or products in a more intimate way. Curated merchandise sets and artisan products in boutique style shops, for example, improve brand loyalty, and offer that feeling of uniqueness consumers value. Consumers look for this distinctive experience all while retailers retain that tech edge of buying items online and offering in-store pickups.

New technology such as “click-and-collect” shopping is another perfect example of retail needing to stay limber. Just a few years ago this was a rather exclusive convenience. Now it's a ubiquitous requirement for most, if not, all major retailers. Shoppers want to buy anywhere, and also have options when it comes to fulfillment. Retailers who don’t offer a multitude of buying/fulfillment options simply lose out on sales.

For 2018, a seamless shopping experience became the new normal.

WHAT’S IN STORE FOR 2019

A big goal for retailers and brands is to stay relevant, and stay in front of their customers, and also offer different products. Kroger, for example, recently announced a partnership with Walgreens to offer curated items in Walgreens drug stores. Consumers will likely look to online retailers to fulfill “chore” shopping at an increased rate while keeping high expectations on omnichannel retail at large.

Convenience is at the heart of these changes, and in 2019, retailers will look to add more convenient shopping experiences for customers. The question is, how will these expectations get successfully fulfilled?
TURNING AN EPC MANDATE INTO REVENUE

Since you already sell to retailers, sooner or later you’ll be mandated to RFID tag merchandise. It’s no secret that retailers with growing Omni-Channel initiatives see strong benefits with RFID from the DC to receiving to the back room, and the selling floor. But, did you know that every RBO (Retail Brand Owner) can also benefit from this empowering technology?

When leading retailers publish their plans for implementing RFID, they roll it out by category and region. The buyer will send a letter informing you when to begin shipping goods with EPC-compliant RFID tags. Depending on the retailer, and your category, you will have a few choices on how to comply. If the roll out is partial, you can begin by tagging merchandise in your DC. Typically, this is done at a VAS (Value Add Station). If the quantities of goods to be tagged represent a major portion of your sales, you may choose to have the products tagged at source.

Manufacturers & distributors who implement RFID technology into their supply chain see an 80% improvement in shipping/picking accuracy.

With merchandise tagged with RFID, retail brand owners can increase inventory count rates from 200 to 12,000+ items per hour.

Retail manufacturers & distributors who implement RFID technology into their supply chain see an 90% Improvement in receiving time.

Source: GS1

REINVESTING IN YOUR RFID TAGS

Do you just tag your inventory without utilizing the RFID tags themselves? Too often, this is the minimum effort that suppliers expend to meet their retail customer RFID mandates. Operations folks are simply told to tag the goods and ship them to the correct Store or DC. If you’re going to the expense and effort of tagging your merchandise, why not use the technology internally? Why not use it to improve your supply chain processes and improve your profitability? Retailers are adding product categories and rapidly expanding their RFID compliance mandates.

In short, it’s full speed ahead. Some brand owners are shipping goods with EPC-compliant RFID tags, but not taking advantage of any of the benefits the technology offers. Being in that category can cost you thousands. Most brand owners interested in RFID have some obvious initial questions such as “How do we begin?” and “How do we justify the cost of investing in RFID infrastructure?” It all starts with realizing the ROI of RFID.
If only a portion of your stock needs to be tagged, you can begin by tagging merchandise in your DC. Typically, this is done at a VAS (Value Add Station). What is the equipment required? An RFID printer can print and encode EPC labels to affix to those products shipping to the mandating customer. Add a mobile computer with RFID and you can start to take advantage of such labor savers as RFID cycle counting and RFID pack and ship validation.

This will give you a taste of the benefits of RFID. As you tag more and more merchandise an investment in fixed RFID infrastructure such as dock door portals and RFID-enabled MHE (Material Handling Equipment) will give you even more bang for the buck.

As you roll out more RFID enabled processes, the investment made to comply with your customer mandates will immediately begin to reduce chargebacks and lower labor costs as you process more shipments with more accuracy, in less time.

To help customers quantify the ROI (Return on Investment) of RFID, we asked the brand representatives if they would share the size of the chargebacks they are assessed. We were amazed at the costs these brands are shouldering. The chargebacks ranged from tens of thousands of dollars to millions of dollars for the largest brand owners.

There are lots of reasons shipments are charged back – merchandising issues, compliance marking, concealed shortages, assortment errors, etc. – but packing and shipment errors are easily addressed with RFID technology and anything the brand can do to lower the chargebacks directly impacts the bottom line. By implementing an RFID inventory management system, manufacturers on average see an 80% improvement in shipping/picking accuracy.

This same process, investment, and infrastructure can RFID Audit In Bound cartons from source. You will validate tag encoding, and generate a tag vendor score card, before they get to your retail customers. Just by reducing chargebacks alone, an RFID system will quickly pay for itself.

Minimize chargebacks by recording every outbound carton’s contents. The CYBRA RFID Cage and EdgeMagic gives you the tools and data to fight chargebacks.

See more at CYBRA.com/RFID-Cage

R.O.I. BEGINS WITH REDUCING CHARGEBACKS

START WITH A PILOT - THEN SCALE
BENEFITING FROM YOUR RFID TAGGING MANDATE

By investing in robust RFID software Platform, and infrastructure, additional benefits can be reaped. For example, we are helping brand owners track pre-production samples and molds, job tickets and employee applications, reusable pallets and trolleys, and IT assets. Once installed, you’ll find dozens of processes that can be quickly and easily enhanced. RFID becomes the gift that keeps on giving. By putting RFID to work inside your four walls, you will reduce the operational costs, and you will be able to pay for the RFID investment with a major reduction in chargebacks.

Here are four ways RFID can benefit retail brand owners.

1. RECEIVING

Now that the goods are tagged at the source, here’s how customers are taking advantage of RFID technology. Scanning the GS1-128 barcode does not confirm whether or not the correct product is in the carton and whether it has concealed shorts. Operations must audit a fair number of cartons to see if in fact the contents match the purchase order to the factory.

Fixed RFID readers read the tags of every single item in the carton. The system compares the ASN (Advance Ship Notice) from the factory and confirms that each carton contains exactly what was ordered. This validation is an audit of every single carton arriving from overseas and it happens in real time without any misreads and without slowing down the receiving line.

For one customer whose goods are tagged at source, fixed RFID readers on inbound conveyors read the tags of every single item in the carton. This is the first place they put those RFID tags to work for them. Once they read the EPC’s in the carton, they have now RFID enabled a bar-coded carton. All they have to see is one EPC, and they know where the carton is anywhere in their facility.

2. SHIPPING

Validation is one of RFID’s most compelling benefits. Each carton loaded into an outbound trailer passes through an RFID Portal and is checked to confirm it is going on the right truck. In addition, this final validation also acts as a trigger for generating an EPOD (Electronic Proof of Delivery) record.

By investing in RFID portals at outbound dock doors, you can validate each carton loaded into an outbound trailer and confirm it is going on the right truck. RFID validation can automatically “close” a shipment and act as a trigger for generating an EPOD (Electronic Proof of Delivery) record. The EPOD Record enables the rapid payment of invoices, in weeks instead of months. This is a huge ROI benefit to the financials.
3. PACKING
This is the next place to put those RFID tags to work. By adding RFID reading to each pack station, operators do not have to scan each barcode as they pack an order.

By validating the carton contents in real time, the customer benefits in two ways: the packing process is faster with the reduction in hand barcode scanning.

By adding fixed RFID readers at each pack station, orders are validated in real time, the packing process is faster with the reduction in product handling and hand barcode scanning, and errors are reduced to zero as operators can be signaled instantly if the wrong item is placed in the carton.

During peak shipping seasons, customers can reduce seasonal staffing by 30%, because they are shipping more cartons per hour, at Pick/Pack.

4. CYCLE COUNTING
There’s no need to shut the DC and hire third party counters for a few days to conduct physical inventory. A small team armed with mobile RFID readers can count inventory in a fraction of the time compared to traditional barcode based methods.

Because it is easier and faster to count, you can cycle count more often with greater accuracy. Remember, you RFID enabled your bar-coded cartons during receiving.

These four areas alone are just the beginning when it comes to internal benefits with RFID. Once your warehouse is filled with tagged items you can cycle count in a fraction of the time compared to traditional methods.

Once the infrastructure is in place, RFID helps brand owners track pre-production samples, job tickets, and raw material bundles. Even showroom sales processes can be quickly and easily enhanced using RFID.

By putting RFID to work for your brand, you will reduce the costs of receiving, packing, and shipping goods, and you’ll minimize chargebacks with improved order and shipment validation – with EPOD (Electronic Proof Of Delivery) to back up your claims.
Now you’ve made the commitment to turn the cost of an EPC (Electronic Product Code) retail compliance mandate into a supply chain enhancing investment that will boost your bottom line, here’s how to ensure success as you roll out an RFID project from the pilot stage to full production. Whether you tag merchandise in your DC at a VAS (Value Add Station), or you have your products tagged at source, all successful RFID implementations turn the cost of an EPC mandate into benefits for your organization and share a number of key characteristics.

**GOING FROM PILOT TO PRODUCTION**

The most important ingredient for RFID success is project ownership at the executive level. It is essential that this RFID champion has the complete backing of management, right up to the CEO. The RFID champion has to push the RFID project through milestones and must have the authority to create a cross functional team, with representation from various departments, e.g. Manufacturing, Operations, Packaging, Warehouse Management, Security, Finance and IT. We have seen installation schedules stretch out and costs spiral because of a lack of ownership of the project. It is the RFID Champion who is responsible to ensure that team members are available as needed, and that there are dedicated technical resources for the duration of the implementation to ensure project success. These technical resources must have a working knowledge of the business application software, databases, corporate system architecture, infrastructure, and facilities.

**WHAT IS YOUR RFID PLAN?**

The RFID Champion should follow a deployment plan with milestones and measurable performance gains. Here is a typical five stage deployment plan:

1. Research & Scope
2. Survey & Document
3. Test & Analyze
4. Pilot & Refine
5. Roll Out & Production
1. RESEARCH & SCOPE
What can you accomplish? What ways do you envision RFID will help your business? RFID can improve your bottom line by reducing inventory audits, increasing stock visibility, reducing operating costs, increasing asset utilization, reducing shrinkage, and other areas. Define where you will get the greatest impact for your investment. Speak with your customers, and friendly competitors, to see how they are using RFID to improve their operations.

RFID is an IT project that impacts operations. Define a Statement of Work (SOW) for the software integration points that will need to be addressed.

Meet with RFID vendors who have experience in your industry, and learn how they can help you achieve your objectives, starting with a site survey.

2. SURVEY & DOCUMENT
An RFID site survey is a physical survey of the premises where the RFID processes will occur. A survey identifies the optimal locations for readers so the RFID processes work all of the time.

The goal of an RFID site survey is to gather enough information and data to determine the number and placement of readers that will provide the coverage required.

The site survey will also detect the presence of radio interference coming from other sources that could degrade the performance of the RFID system, as well as analyze the electrical and data network requirements at the proposed read points.

Once you have the final site survey report in hand, you can put actual numbers in a spreadsheet and develop a realistic budget.

3. TEST & ANALYZE
Before you commit to pilot RFID, you need be sure your product will perform when tagged. For example, if you sell footwear, and you want to be sure that your proposed RFID system can read fast moving cartons on a conveyor, then you will need to ship a dozen or more cartons of your merchandise to an RFID testing lab that contains a race track with RFID readers. This high speed simulation will determine the probability of success of your proposed solution.

Once you are assured that RFID will perform in your environment and with your products, you are ready to pilot a solution.
4. PILOT & REFINE
Pick one application area to pilot RFID. Your RFID solution provider can help you identify where to pilot RFID so it will not disrupt your existing workflow. Typically, the RFID hardware is temporarily installed so it can be moved easily as you refine the system based on the results of the pilot. Software needs to be configurable to allow the ease of adapting and changing as the pilot reveals process improvements.

Often a custom mounting solution may be crafted for the pilot, but keep in mind that temporary mounts will not stand up to the rigors of a full production system, and custom hardware will be difficult to roll out.

How long should you pilot RFID? The easy answer is as long as you need to gather enough data. Each application area you target (receiving, shipping, packing, etc.) will need to be piloted, and will need to stand on its own merits. At the conclusion of the RFID pilot, you will have the data you need to make a decision whether to schedule a roll out.

5. ROLLOUT & PRODUCTION
The speed of the roll out will be determined by your choice of hardware and software, available internal resources, and geographic factors. The choice of RFID hardware is critical for the following reasons: Instead of replicating a custom, temporary mounting solution that was OK for a pilot, an off the shelf portal solution that is in stock and ready to ship can be quickly and easily rolled out to meet any schedule.

In addition, RFID technology is constantly evolving and in five years, you may want to swap out readers or antennas for higher performance newer models. For example, the Return On Investment (ROI) on RFID portals shouldn’t stop- ever.

Once the portal and initial electronics have been installed, the electronic parts can then be changed out many times over the life span of the portal hardware — RFID Readers, Antennas and other accessories such as Motion Sensors, Photo-eyes, Light Stacks, can be swapped out as needed. This way you will not be locked in to one reader vendor or technology. A quality RFID portal should last in the field for more than 30 years.

Your choice of RFID software, too, is a critical factor in the roll out. Ideally, you should be able to quickly and easily create read zones and reader or antenna configurations without custom programming.

While one team is installing the hardware, the RFID Champion can launch a browser session on any device and watch the system roll out as each reader comes on line and the RFID tag activity begins to populate the charts and graphs of the RFID software dashboard.
EDGEMAGIC RFID PLATFORM SOFTWARE

CYBRA’s EdgeMagic RFID solutions help Retail Brand Owners and retailers of all sizes manage inventory from the dock door to the sales floor. CYBRA’s EdgeMagic RFID Solutions feature real time Inventory Status dashboard, Loss Prevention notifications, and powerful RFID-enhanced picking, packing, shipping, and receiving functions.

Use EdgeMagic to manage your inventory, warehouse supply chain, asset tracking, shrink monitoring and so much more. CYBRA has many years of experience helping retail customers, as well as customers in a wide range of other industries, solve some of their most vexing auto-ID challenges. We have achieved success by deploying our unified RFID Platform that quickly and easily integrates with customer business software.

Contact us today to learn how our auto-ID solutions can positively impact your bottom line.

ABOUT THE AUTHOR

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