Global Apparel Manufacturer Adopts GS1 Standards for Item-Level Tagging

Executive Summary

When a trading partner required that radio frequency identification (RFID) tags be placed on a global apparel manufacturer's bras, the company stepped up to the challenge, taking decisive actions to make EPC-enabled RFID tagging part of the retailer's order fulfilment process. With support from GS1 US® Solution Partners, the manufacturer implemented item–level tagging in its distribution centre. Using GS1 Standards, an EPC RFID tag is attached to each garment and encoded with a Serialized Global Trade Item Number® (SGTIN®) that uniquely identifies the item and its attributes. The SGTIN is linked to the garment's barcode that will be scanned at the retail register, giving the manufacturer greater visibility of items throughout its supply chain.

Best practices recommended by the manufacturer include:

- **Adopt GS1 Standards.** The manufacturer made a strategic decision to use GS1 Standards. This ensured its investment in RFID tagging would satisfy the trading partner's requirement as well as any future requirements by other retailers. The company also takes advantage of the data provided by GS1 Standards for accurate order fulfilment.
- **Create a team of experts.** The manufacturer assembled a core team from across its supply chain to gain multiple perspectives and inputs. Another critical step was choosing experienced RFID technology partners certified in GS1 Standards. This provided the manufacturer's team with the knowledge base they needed to work through the implementation and resolve any technical issues.
- **Partner with retailers and employees.** The manufacturer worked closely with the retailer to test and confirm its new RFID tagging process, updating them each step of the way. The company emphasizes the importance of engaging and training the employees who will be working with the new process, in order to ensure a successful launch.

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>
> *– Apparel Manufacturer*

A global intimate apparel manufacturer, headquartered in the U.S., has long been a believer in the value of GS1 Standards, having adopted Universal Product Codes (UPC/EAN) for all its garments ever since barcodes were introduced in retail commerce.

In 2011, when a trading partner required that this manufacturer place RFID tags on all its bras, the company made sure GS1 Standards were adopted to leverage its RFID technology investment while satisfying any future requirements by other retailers.

Senior leadership initially sponsored the upfront investment in RFID in response to the retailer's compliance requirement, understanding the use case and long-term benefits associated with EPC-enabled RFID tagging. "Although we implemented item-level tagging in our distribution centre, we strongly believe the benefits will come with its future expansion to tagging at the source," says a member of the manufacturer's team.

Recognized as a brand that consumers can count on, the manufacturer is committed to be in the right channel at the right time. When a consumer needs one of the company's white bras in a 36B, she needs to find it every time, regardless of the store she chooses. RFID is the right technology to fulfil on that commitment. And as RFID tagging of items becomes a retail technology of choice, the company is committed to work collaboratively with more retailers as well.

Creating the Right Team

The manufacturer assembled a core team from across its organisation—representation from warehouse management, distribution engineering, information technology and senior management. The company decided to implement EPC RFID tagging in its distribution centre based in the Southeastern United States, to meet the short-term deadline for compliance.

The team realized that choosing the right RFID technology partners was critical for the initiative's success. After a formalized evaluation, they chose software provider CYBRA Corporation, a GS1 US Solution Partner, to be part of the team. CYBRA recommended and worked with other GS1 US Solution Partners, Zebra Technologies for printing and Alien Technology for the readers, to achieve an end-to-end stable solution.

"CYBRA assembled the components like the printers and scanners, using its EdgeMagic software as the 'glue' to connect them. We also worked closely to design the new environment for the new RFID tagging service area, and to troubleshoot process and technology issues," says a member of the manufacturer's team.

Equally important for the initiative was each partner's experience with GS1 Standards. CYBRA, Alien Technology and Zebra Technologies are all certified in GS1 Standards—giving them the expertise to enable the proper use of the GS1 Standards, including EPC RFID standards.

GS1 Standards Supporting Item-Level Tagging

Unique to the intimate apparel industry are the number of attributes used to classify its products. For example, a bra has attributes for size and dimension, as well as those for colour and style. These product identifiers and the combinations of attributes give an intimate apparel manufacturer many stock-keeping units (SKUs) to manage and add exponentially to what an RFID tag must communicate.

Since the introduction of the RFID item-level tagging process, the manufacturer fulfils the retailer's orders as it normally would. However, instead of sealing the items in the cartons once fulfilled, the team diverts the cartons and its items for EPC tagging.

"The garments are sent to a 'value-added' services area comprised of RFID work stations where EPC tags are applied," explains CYBRA's vice president of Solutions. "The operators scan each item's UPC barcode and the CYBRA EdgeMagic software does a database look-up and assigns an SGTIN that uniquely identifies the item and its attributes. The SGTIN is encoded in the EPC RFID tag and is also printed on the EPC label in a human readable format. The SGTIN containing all the item's attributes are linked to its UPC that will be scanned at the retail register."

The encoded RFID tags, which are cut automatically by the printer, then slide into the operator's hands and are attached to the garments. As the last tagged garment goes into the box, a "ping" tells the operator that validation is complete and the carton can continue on to shipping.

One of the manufacturer's key operational requirements was the time it took to scan the UPC/EAN to the output of an RFID tag to attach to the garment. It had to be less than two seconds. This objective has been achieved: The company is able to reliably print at that speed—and for the number of garments typically packed.

While forecasts vary throughout the year, the company estimates it will tag two million items annually for this retailer alone. And as other retailers' items are added, its long-term solution will be to shift the RFID item-level tagging to the source since it is not sustainable in the distribution centre.

Creating a Piece of the Future Today

The manufacturer's management supports RFID item-level tagging as a "piece of the future" that is here today—something that must be leveraged for the business and the industry. Its goal is to get a repetitive process in place at the manufacturing source to gain efficiencies and control costs. And with greater visibility of items within its supply chain, the company anticipates gains in managing its inventory.

"We learned a lot from the RFID tagging initiative—lessons we are applying as we gear up to support additional retailers. In fact, we are in the process of selecting a partner to apply integrated tags—combining the UPC and RFID data—to embed in our sourcing process to alleviate the need to tag in our distribution centre," says a member of the manufacturer's team.

Benefits for Both

The symbiotic benefits of RFID item-level tagging for both retailers and manufacturers are being catalogued as more and more retailers understand the upside impact. On retailers' floors, RFID tagging means that when they sell products, replenishment orders are readily generated so the next consumers will find products in the sizes and colours they need, resulting in store loyalty from the consumer.

Another benefit is the swift accumulation of trending data enabled by RFID tagging: retailers are able to see in a matter of hours or days that apparel in "dark blue," for instance, is selling exceptionally well, enabling them to send in replenishment orders while notoriously fleeting apparel trends are in full swing. Manufacturers of dark blue items are able to alter production schedules and increase sales revenue because consumer behaviour has been verified at the cash register.

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The company shares its top lessons and advice:

Take advantage of the data. "We made a strategic decision to use the CYBRA software and GS1 Standards to validate and ensure the accuracy of each individual carton before releasing it to the shipping dock," advises a member of the manufacturer's team.

Create a team of experts. The company chose its team members and solution partners wisely. "When you have all the right people involved with the right skills, problems are easier to resolve," says a member of the manufacturer's team. "When we ran into a problem, we would literally get all partners together on the distribution centre floor to troubleshoot the issue. Our partners and internal team helped us work through the process as well as resolve some major technical issues. As a result, we made modifications to the layout of the RFID services area."

Engage the people in the new process. "People signing up to work the RFID tagging process need to fully understand the job," says a member of the manufacturer's team. "These types of initiatives involve people as well as technology, so you need to give them adequate time and training to learn and get used to the new process. This should not be overlooked."

Partner with the retailer. The company worked closely with its trading partner to test and confirm its new process, updating them each step of the way. "We had about three months to get our RFID tagging process in place, so frequent communications and collaboration with our retailer was a very important piece of the initiative," says a member of the manufacturer's team. "And we'll continue to partner heavily with our retailers to make RFID tagging mutually beneficial."

Get started sooner rather than later. With this RFID initiative, the company has gained invaluable experience. "We implemented the RFID initiative because we knew we had to do it for this specific retailer, but we know it's an investment for the future,'" says a member of the manufacturer's team.

CYBRA adds, "Manufacturers need to start RFID tagging now, when the pilots are smaller and more manageable. Retailers will soon require full RFID compliance, necessitating tagging at source. EPC management is going to be a huge undertaking and choices for implementation may be limited and far more difficult to integrate."

The company is aware that the full measure of its RFID-tagging story has yet to be written. "While we are still in the infancy stages of implementing RFID item-level tagging, we made significant progress to advance up the learning curve with the RFID initiative," says a member of the manufacturer's team. "We are an early adopter since the future of RFID and its anticipated benefits is fast approaching."

For more information :

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Contact GS1 US : +1 937.435.3870 /
EPCReadinessProgram@gs1us.org

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