



# Item-Level Visibility is Working for Retail

*RFID solutions empower retailers to see what's on the shelves, what's in the stock room, and what's selling so they can efficiently replenish items and maximize sales.*

INCLUDING REFERENCE PROJECT





# A Familiar Solution Solves New Use Cases



Radio frequency identification (RFID) technology is familiar to retailers. It's been the center of loss prevention solutions for decades. However, retailers exploring new ways to leverage this technology to gain a competitive edge are finding that RFID can help them overcome hurdles that have previously limited their efficiency and growth potential.

## ACCURATE INVENTORY DATA IS MORE IMPORTANT THAN EVER

Consumers expect accurate inventory data on demand, and when other shopping options are available with just a click, consumers won't wait for retailers to track down out-of-stock items.

The 2021 Zebra Retail Vision Study<sup>1</sup> found that 41 percent of shoppers abandon purchases because the item they wanted is out of stock. Additionally, the study found that 83 percent of store associates say real-time visibility into inventory is a challenge, and 64 percent say they need better tools to manage inventory and keep accurate counts.

Inventory visibility is also emerging as essential to controlling costs. An accurate count at each store and warehouse is pivotal to enabling stock transfers and order fulfillment without carrying expensive volumes of safety stock. And transfers aren't just occurring between physical stores – they're also taking place between channels. According to a 2022 Sailthru and Coresight Research survey<sup>2</sup>, consumers expect omnichannel experiences, and McKinsey categorizes omnichannel as “a requirement for survival.”<sup>3</sup> Optimizing an omnichannel retail operation is key to staying liquid while having in-demand items on the shelves and available on the e-commerce storefront to capture every sale.



RFD90

## HOW DOES BLUESTAR ADD VALUE?

BlueStar is Zebra's top distribution partner and provides resellers with:

- Financing Options
- Drop Shipping Direct to End Users
- Custom Configuration Services
- End-User Lead Generation Program
- Dedicated Zebra™ Business Development Team

## WHERE RFID SEES THE GREATEST GAINS IN RETAIL

Although RFID technology adoption is common among North American retailers, Europe has seen phenomenal growth in recent years. Statista reports retail RFID adoption<sup>4</sup> increased from 92 percent to 93 percent in North America. However, it's grown from 27 percent to 77 percent in Europe.

Insights from EuroCIS<sup>5</sup> shed some light on this trend. RFID allows retailers to enhance in-store experiences, including streamlining point of sale (POS) experiences. RFID also provides retailers with a practical way to track stock, provide accurate inventory information to shoppers, and help shoppers find retail locations that are closest to them that have the items they want in stock.

<sup>1</sup> Source: [https://connect.zebra.com/Shop2021\\_us](https://connect.zebra.com/Shop2021_us)

<sup>2</sup> Source: <https://go.sailthru.com/2022-retail-personalization-index-retailer-consumer-survey/>

<sup>3</sup> Source: <https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/the-survival-guide-to-omnichannel-and-the-path-to-value>

<sup>4</sup> Source: <https://www.statista.com/statistics/1192510/rfid-adoption-in-retail-by-macro-region/>

<sup>5</sup> Source: <https://www.sml.com/rfid-technology-in-retail-trends-from-eurocis-2022/>





# The Choice and Versatility of RFID

With various RFID solutions available, retailers can deploy the technology differently according to the use case. However, RFID solutions generally have three components: RFID tags, RFID readers, and software applications that manage the data they collect.

## RFID TAGS AND LABELS

RFID tags and labels store information about merchandise retailers use to track inventory. RFID tags hold more information than barcodes, enabling suppliers and retailers to encode them with origin, shipping histories, expirations, and basic product information. Additionally, RFID tags are read/write devices that can be updated at milestones in the supply chain, and data can be encrypted and password protected. Suppliers and retailers can use this feature to their advantage in various ways, such as assuring consumers that high-value products like wine or designer accessories are authentic, creating a farm-to-fork story for grocery items, or supporting seed-to-sale tracking in the medicinal cannabis industry.

RFID tags and labels are available in a wide range of form factors, from plastic-covered tags to tags the size of a button to stickers and labels that contain RFID chips.

Additionally, retailers can use different RFID tags and labels depending on the use cases.

- **Active:** RFID tags contain a battery to transmit a signal.
- **Passive:** RFID tags don't have an internal power source and are activated by RFID readers.

The costs of RFID tags vary depending on their capabilities. For example, active RFID tags are more expensive than passive tags. However, an active RFID

tag may be the best choice for locating and securing high-value items. Other factors also impact the cost of RFID tags and labels, such as frequency range and tag life. Low-cost tags can bring automation to stock-counting processes and enable retailers to have accurate inventory data between counts.

## RFID READERS

RFID readers are available in three form factors, allowing retailers to choose functional, ergonomic readers to match each application.

- **Handheld:** These mobile devices allow sales associates to carry RFID readers and scan tags as they walk through store aisles, stockrooms, or warehouses. Associates can use handheld readers to encode tags or collect data from them.
- **Fixed:** Stationary RFID readers can collect data from RFID tags or labels as items pass through a door at receiving or move from one location in a facility to another. Fixed RFID readers can read multiple tags at once, accelerating processes.
- **Vehicle-mounted:** RFID readers can also be mounted onto forklifts or other vehicles to collect data as inventory is transported.

## RFID SOFTWARE OR MIDDLEWARE

RFID software sits between RFID readers and business applications to format data from RFID tags so the inventory management system or other applications can use it.

Zebra Technology reports that 71 percent of best-in-class retail enterprises integrate RFID data with other business processes, infrastructure, and inventory management systems.<sup>6</sup>

<sup>6</sup> Source: [https://www.zebra.com/content/dam/zebra\\_new\\_ja/en-us/solutions-verticals/product/RFID/GENERAL/White%20Papers/WP\\_Item-Level\\_Supply\\_Chain\\_0413.pdf](https://www.zebra.com/content/dam/zebra_new_ja/en-us/solutions-verticals/product/RFID/GENERAL/White%20Papers/WP_Item-Level_Supply_Chain_0413.pdf)

# Where Retailers benefit from RFID

RFID has the potential to optimize processes and enhance customer experiences throughout a retail operation.

## RECEIVING

Automates verifying shipments, minimizes delays at chokepoints, increases data collection accuracy, and identifies items and commissions new tags if necessary.

## FITTING ROOMS

RFID-enabled dressing rooms aid in cross-selling and upselling, item tracking, loss prevention, and collecting data for restocking.

## SALES FLOOR

Continuous real-time inventory, on-demand cycle counting, item security for decreased shrinkage, locate high-value items with RFID asset tracking.

## CHECKOUT

Deactivate item-level security, update inventory data based on sales, and loss prevention.

## TRANSITION POINTS

Track product movement from the stockroom to the sales floor for inventory visibility and increased sales.



## Apparel Retailer Gains Visibility Down to Size and Color of Each Item on the Sales Floor

*RFID keeps the boutique stocked and increases sales.*

American Apparel stores display merchandise boutique-style, keeping only one item of each style, color, and size on its racks or shelves at any time. Inventory can turn quickly and accurately replenishing stock from its 26,000 SKUs to prevent lost sales was a time-consuming and labor-intensive challenge.

The business needed real-time inventory on the floor and in the stock room, as well as improved inventory processes and count accuracy. American Apparel also required a more effective system for loss prevention, determining that about 60 percent of shrinkage was linked to employee theft.

### THE SOLUTION

American Apparel conducted a pilot, affixing RFID tags to each item of clothing or merchandise. It used Zebra Technology handheld RFID readers during the pilot and subsequently chose Zebra MC3190-Z handheld readers for cycle counting and asset location use cases.

The retailer also selected Zebra FX7400 fixed RFID readers for receiving, transfers, dynamic fill list, point of sale, and encoding. American Apparel also chose tags from Avery Dennison's Retail Information Services and LSIS and Xterprise's Clarity ARS application which leverages Microsoft's BizTalk RFID middleware. Xterprises's Clarity ARS application provides real-time inventory capability and back-end integration for inventory data accuracy.



### THE RESULTS

Leveraging the solution, American Apparel kept a well-stocked store, increased sales, and enhanced customer interactions with instant, accurate inventory information. Data from the system enabled the retailer to optimize buying processes, minimizing out-of-stock items. Additionally, the time spent on inventory counts decreased from 6-8 employees spending 6-8 hours to two people completing inventory in 2.5 hours. The solution was also effective in reducing theft that was occurring internally.

Following the pilot, American Apparel rolled out its RFID inventory system to its stores across North America and Europe. Using the system across its entire enterprise enables more efficiently transferring merchandise to balance stock. It also provides data on consumer preferences in different regions to optimize its merchandise mix per location.

## Retail Chain Increases Speed, Accuracy, and Frequency of Inventory Counts

*RFID enables daily inventory counts, enhanced customer experiences and increased sales*

Latin American retail giant Falabella Group operates department, home improvement, and grocery stores in Chile, Peru, Argentina, and Colombia. Falabella recognized RFID technology's potential to streamline processes but waited while it watched for verifiable proof that the technology would provide the accurate, item-level inventory data that its operation needed.

When Falabella saw the proof that the Gen 2 RFID Standard delivered high reliability, the company planned a pilot to enable daily inventory cycle counts, aiming for 98 percent RFID accuracy and to prove the cost benefits of the technology.

### THE SOLUTION

Falabella selected Zebra MC9090-G handheld readers for receiving processes and built mobile carts with readers and antennas for inventory counting. The retailer also chose OATSystems for RFID software. For the pilot, Falabella tagged two lines of men's apparel with RFID tags from Paxar (Avery Dennison) so that they could be inventoried daily. At receiving, the system tracked items entering store inventory and had store associates conduct inventory each morning before the store opened. At checkout, associates removed the tags and ran item lists from the system to guide restocking.



### THE RESULTS

The results of the pilot exceeded expectations, delivering 98.4 percent inventory accuracy and enabling staff to count 9,000 items in one hour. During the pilot, the store decreased out-of-stock items by 25 percent. The pilot proved that the hundreds of labor hours required by traditional cycle counting processes could be replaced with only a few hours – and with greater accuracy.

Rollout to its locations is expected to improve inventory visibility and store efficiency, enhance customer experiences, and decrease shrinkage.



# Retailer Captures More Sales with Fully Stocked Displays

*RFID enables daily counts and a 2 percent boost in sales*

Sales associates at the shoe department of Lord & Taylor's Fifth Avenue store in New York struggled to keep up with restocking displays, but their legacy system required them to scan the barcode on every pair of shoes. It was so time-consuming that the team could only perform counts weekly – but in the meantime, dozens of popular styles may be missing from the floor, and dozens of sales lost.

Joy Weinstock, divisional VP– Merchandising/ Operations, Ladies Shoes, Lord & Taylor, comments, “The customer can't go into our stockroom. She can only shop from what she sees on the floor. So maintaining samples on the floor is our number one priority.”

## THE SOLUTION

The company estimated that it could see a 2 percent increase in shoe sales if it could increase inventory counts. Lord & Taylor planned a pilot with EPC Gen 2 passive ultra-high-frequency (UHF) RFID tags on each pair of shoes on the sales floor. Associates used Zebra MC3190 RFID handheld readers to commission the tag, read tagged products, and generate reports. Before the department opened each day, two associates walked through the department with handheld readers to inventory shoes and then generated a missing sample report. Then sales associates replaced the missing samples.



## THE RESULTS

The pilot successfully allowed one or two people about an hour to accomplish a count that previously took an entire workday. As a result, Lord & Taylor could have the floor display at least 95 percent full at all times, and sales increased by the anticipated 2 percent.

After the pilot, the retailer rolled out the solutions to its 48 stores in the U.S. and conducted a pilot at Hudson's Bay in Canada.

# Put RFID to the Test

In each success story, the retailer had a clear objective, researched RFID solution providers for the best options for their use case, and designed a pilot to confirm that the system they planned to implement would deliver the expected results.

And in each case, the RFID technology the retailers used met or exceeded expectations, allowing them to achieve their goals.

## START AT BLUESTAR FOR INFORMATION ON RFID SOLUTIONS FOR RETAIL OPERATION

BlueStar provides the most diverse RFID solutions in the industry, including low frequency, high frequency, ultra-high frequency, and active and passive RFID. Experts on BlueStar's team can help retailers choose the optimal hardware, software, media, and value-added services for their needs.

BlueStar also offers its partners support through educational opportunities, events, and one-to-one support, to ensure their projects are successful.

## CLOSING THOUGHTS: IT'S TIME

Retailers who have put RFID technology in a box as a solution only for loss prevention are missing out on the benefits that can make them more competitive and profitable.

RFID can scan hundreds of tags simultaneously, track or locate items quickly, save hours from cycle count times, increase inventory accuracy, and collect data that leaders can use to navigate their businesses toward a successful future.

Additionally, although retailers are using RFID to streamline inventory count processes and replenish merchandise or samples more efficiently, retailers haven't yet discovered all of RFID's potential.



Identify the need and the objectives for deploying RFID, then contact BlueStar to begin to explore the possibilities.

## LEARN MORE ABOUT RFID SOLUTIONS FROM BLUESTAR

<https://www.bluestarinc.com/emea-en/solutions/rfid-solutions.html>

<https://www.bluestarinc.com/emea-en/manufacturers/manufacture-microsites/zebra-technologies/featured-products/zebra-rfid.html>



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