

The Wide-Ranging

# IMPACT OF RFID ON THE SUPPLY CHAIN

## A PROVEN SOLUTION

# FOR EMERGING DEMANDS

Since 2020, the myth of a dependable, efficient supply chain has been shattered. Today, ops leaders contend daily with an unpredictable, fragmented yet interdependent supply chain that's vulnerable to shock from any direction at any time. Political upheaval, pandemic shutdowns, spiking fuel costs, disappearing workers...it's all in play. At the same time, consumers now expect a streamlined digital shopping experience with reliable BOPIS, same-day, and next-day delivery options.

**Where a vulnerable supply chain meets omnichannel fulfillment demands, RFID supply chain solutions integrate the digital and the physical to deliver:**

- **Visibility**—now possible at virtually every link in the supply chain, in real time, from item level to systems level
- **Accuracy**—reduced human error and faster, easier cycle counting mean better information
- **Speed**—touchless, automated, and in-motion data collection
- **Productivity**—empower a limited workforce to achieve more
- **Integration**—shared data access can drive process insights and efficiencies everywhere

For years, major brands have been using RFID tags for inventory and asset management, but Walmart's 2022 supplier RFID mandate<sup>1</sup> signals a turning point and demonstrates the benefits that RFID tracking systems can deliver at every stage of the supply chain.

At the same time, RFID's maturity means the technology is now more affordable to implement, with the average tag cost dropping 80% over the past decade.<sup>2</sup> Industry leaders have already established use cases and ROI that more than justify the investment—especially in today's (and tomorrow's) omnichannel environment.

**Where and how has RFID impacted the supply chain? In short, everywhere visibility, accuracy, speed, and productivity matter most.**



**REAL-TIME VISIBILITY**

# **RAISES AWARENESS**

Where can RFID start protecting and strengthening the value chain? The closer to the original source that a GS1-compliant RFID tag is applied, the more people can benefit from visibility into the status of the merchandise and/or material. When suppliers, distributors, and retailers choose systems for interoperability, that situational awareness can inform procurement and purchasing, and start adding value long before products head toward DCs and retail shelves.

Coordination between material and component suppliers, manufacturers, distributors, and retail businesses can effectively reduce stockouts, shortages, and costly practices such as maintaining high levels of safety stock to compensate for the risk.

**STEADY OPERATIONS**

# **BALANCE A DELICATE SUPPLY CHAIN**

Assets, equipment, and consumable inventory like parts and maintenance supplies are integral to keeping operations running smoothly. RFID asset tracking solutions aren't just for inventory; they can also account for every device, tool, and part, so operations can ensure a solid working foundation that doesn't pile on additional layers of vulnerability to an already fragile supply chain ecosystem.

## DOCK DOOR VERIFICATION

# ELIMINATES UNKNOWNNS

When deliveries can be automatically identified, counted, and validated against orders before they even enter a facility, it allows the receiver to discover any errors and respond immediately, preventing a costly cascade of wasted time and effort.

And if the supplier is using the same RFID scanning technology when assembling pallets and preparing outgoing shipments, the likelihood of mistakes getting to a receiving door in the first place is even lower.

The same benefit can apply when locating items within a DC or warehouse facility. Products that are urgently needed for production or order fulfillment can easily be misplaced and can be difficult to locate. Whether this involves items in a staging area waiting to be moved to their storage location, or products that have been picked and staged for shipment, if those items have been RFID tagged, they're visible to the RFID system, so they're easy to locate.

The higher the value of the goods, and the longer the distance between points, the greater potential value an RFID tracking system can deliver.

## RETAIL LOCATIONS SERVE AS

# MORE THAN JUST STORES

The integration of retail stores into omnichannel distribution networks just makes sense. It better enables retailers to minimize the distance goods need to travel, makes greater use of expensive real estate, and can improve enterprise sustainability—especially as more consumers opt for BOPIS, reducing packaging, DC labor, and shipping costs.

At the same time, retail stores are still stores, and workers need tasks and responsibilities streamlined if they're going to deliver an excellent shopping experience for customers. An RFID system can virtually eliminate inventory discrepancies, because items are tagged at the supplier. So when they're received at the DC and/or the store, every physical item gets its own "digital twin," and retail workers can quickly and confidently serve customers. It also makes fulfillment easier, enabling those store employees to deliver greater value in less time. And that delivers bonus value during labor shortages.



**INVENTORY IS KEY TO**

# **OMNICHANNEL FULFILLMENT**

Omnichannel fulfillment means inventory is always in motion, both into and out of countless DCs and retail locations, with online orders received around the clock. So to do it well, retail enterprise needs inventory management that's always on. Research demonstrates RFID solutions can improve inventory accuracy by more than 25%, which can translate to a 1–3.5% increase in full-price merchandise sell-through.<sup>2</sup>

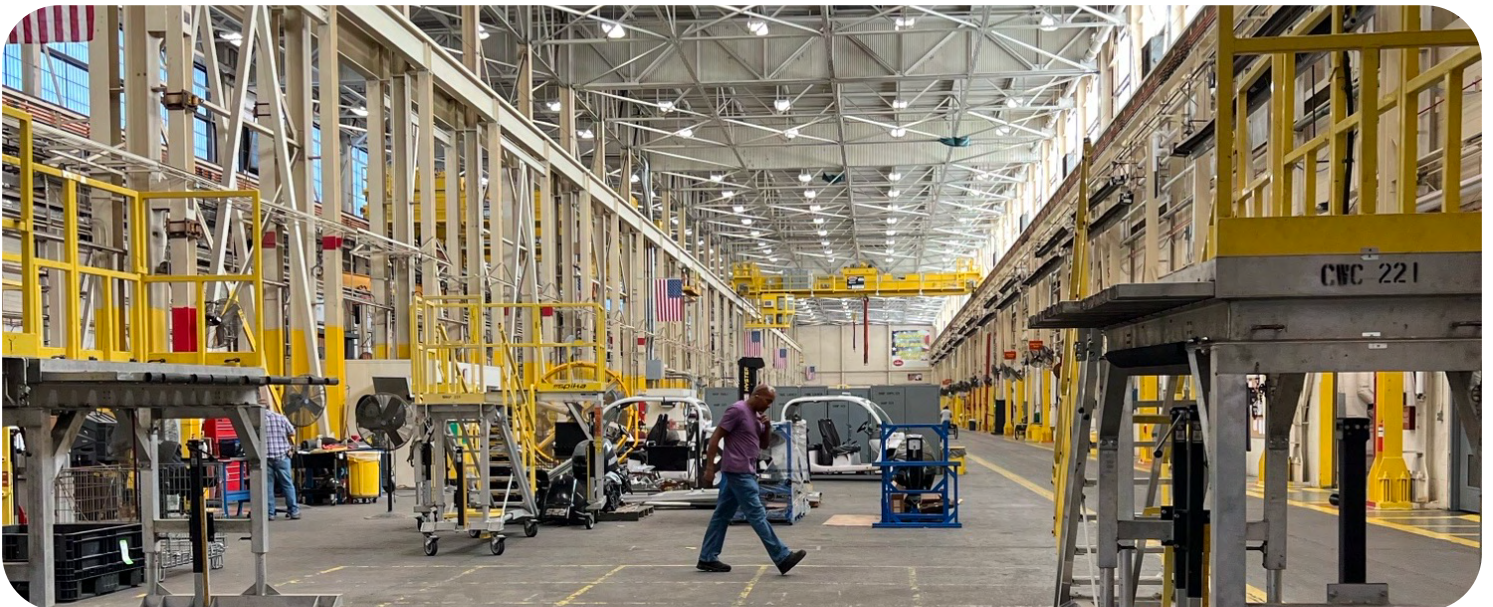
Shared inventory visibility can simplify and streamline geographical rebalancing, further reducing the need to hold supply chain buffer stock while also limiting exposure to the risk of failed “just-in-time” delivery. Studies estimate a potential reduction of 10-15% in labor hours spent on inventory activities.<sup>2</sup> Organizations can also monitor trends for better forecasting, planning, and logistics.

**ROBUST DATA POWERS UP**

# **PREDICTIVE AI AND AUTOMATION**

The ability to use RFID to gather accurate inventory data truly becomes powerful when the data can be put to advanced use, and that requires streamlined technical integration with other key platforms and systems. Whether the tag is used to trigger an automated event, or a robust tranche of data is needed to power predictive analytics, it's fundamental to be able to integrate RFID with warehouse management, enterprise resource planning, warehouse control systems, ecommerce, and more.

Just as it pays off to tag items as early as possible in the supply chain, enterprise integrations offer enormous potential to increase RFID's ROI.



## COMBAT THE BULLWHIP EFFECT WITH **SPEED AND ACCURACY**

By introducing automation opportunities, reducing human error, and eliminating gaps between cycle counts and use of the data, every layer of the supply chain stands to increase accuracy and improve responsiveness.

Trimming that lag time can reduce the reliance on buffer inventory throughout the supply chain. That can reduce risk of exposure to the dreaded bullwhip effect, which can result from the aggregation of all those small amounts of slack throughout the supply chain.

## ALWAYS BE **READY TO SCALE**

A changing landscape means constantly changing opportunities, especially for industry leaders who position themselves well. The visibility and accuracy that RFID can deliver to an organization enable leaders everywhere in the enterprise to better understand and respond to those opportunities as they arise. An RFID solution that's designed and built to flex and scale can make an enterprise more agile and adaptable.

In a global business environment that has been anything but predictable, that kind of agility can make the difference between the enterprises that successfully navigate supply chain challenges and the businesses that lose customers to them.



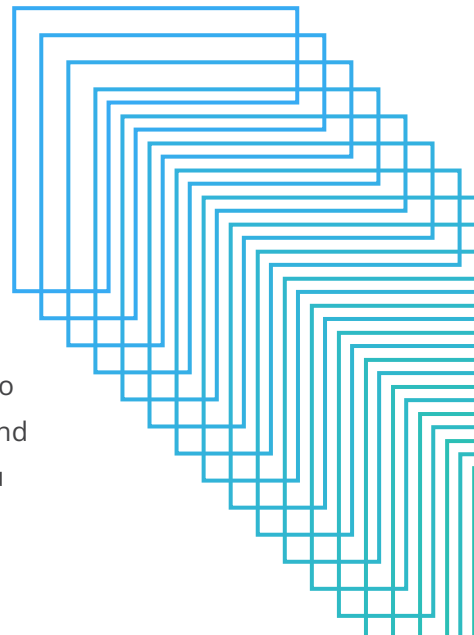


**DON'T LET**

# THE COMPLEXITY STOP YOU

To meet the demands of a complex supply chain, you're smart to put your RFID implementation in the hands of an expert team.

When you work with an experienced technology integrator like DecisionPoint you can trust that your RFID investment is built to meet your needs today and into the future. We put our expertise into helping you choose the right components and build an RFID ecosystem that delivers the visibility, accuracy, and productivity you need to confidently master today's—and tomorrow's—supply chain challenges.



**WANT TO LEARN MORE ABOUT**

# WHAT RFID SUPPLY CHAIN SOLUTIONS CAN DO FOR YOU?

Reach out to the experts at DecisionPoint. We can't wait to show you how we help businesses like yours rise to new challenges and grow.

**REQUEST YOUR CONSULTATION**



Call 1.888.412.SCAN (7226)

[decisionpt.com](https://decisionpt.com)