Why RFID Is Becoming a Game-Changer for Warehouses

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01 Enhanced Tracking and Visibility

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02 Reduced Labor Costs and Staff Time

The labor market for warehouse operations continues to be tight.

03 Improved Inventory Value Management

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04 Optimized Capacity Utilization

With logistics facilities facing significant space constraints, the efficient use of physical capacity becomes essential.

05 Elevated Customer Satisfaction

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Introduction

Radio frequency Identification technology is rapidly transforming the way that modern warehouses and distribution operations function. With roots going back to World War II, RFID has evolved from a niche technology into a mainstream tool for supply chain management, driven by advances in hardware, software and connectivity. It also helps meet rising customer expectations.

RFID isn't a new technology, but it's surging in adoption today. Sean Stephens, business development executive at Lyngsoe Systems, points to widespread demand across business segments, with companies seeking to enhance efficiency, reduce costs and maintain a competitive edge in an environment centered around customers. It's no surprise that modern consumers expect speed, accuracy and transparency in their orders. With e-commerce and same-day or next-day delivery standards now the norm, warehouses are forced to find ways to manage increasing volumes without compromising service quality. RFID meets this need by providing real-time visibility into inventory and allowing for smarter decision-making.

Stephens and Wes Coleman, industry principal/ warehouse with Zebra Technologies, outline five ways that RFID enhances warehouse and distribution operations:

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Enhanced Tracking and Visibility

Accurate and real-time tracking is fundamental to an efficient supply chain. Coleman emphasizes that visibility is an absolute necessity. RFID allows warehouses to monitor the precise location of goods, from receiving to storage to shipping.

The business case for RFID is also stronger than it was in the past, Coleman adds. The price of a tag has decreased sharply from 30 cents in 2003 to three

cents today — while performance and reliability have improved. Advances in both mobile and fixed RFID readers have also taken place, helping to ensure integration into a variety of warehouse environments. These tech and cost improvements pave the way for even smaller facilities and lower-value products to benefit.
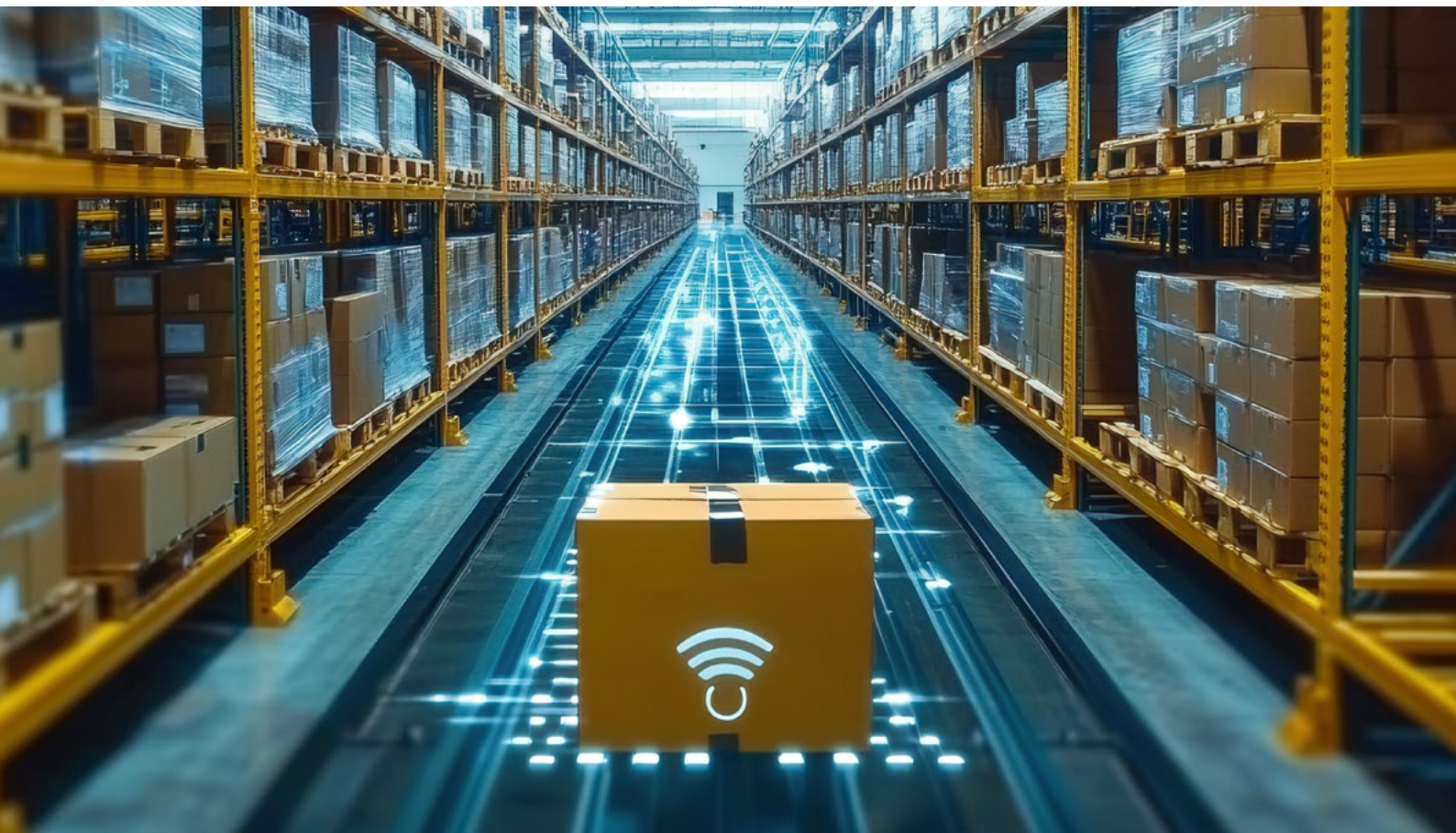
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Reduced Labor Costs and Staff Time

The labor market for warehouse operations continues to be tight, with facilities often facing shortages and high turnover.

"Still to this day, warehousing logistics operations can't hire enough people to do the work that needs to be done, so they need to find creative ways, leveraging technology to make their current staff more efficient," Stephens says.

What's more, with consumers demanding products to be delivered same-day and next-day, extra strain is being placed on the labor force. It's critical for the workers to become more productive in their day-to-day activities. RFID helps achieve this objective.

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Improved Inventory Value Management

Effective inventory management requires more than counting units. It demands the ability to track individual and grouped items, their origins and their status within the supply chain. Coleman notes that RFID can differentiate between items of varying value and quantity.

"An example," he says, "is the need to identify heads of lettuce versus a specific head of lettuce — where it came from, where it went."

RFID's implementation isn't difficult, Coleman adds. It integrates smoothly with other warehouse technologies.

"Choose a workflow where RFID can improve productivity and accuracy, analyze that and expand where needed," he says.

Modern-day RFID can facilitate strategic decisions regarding high- versus low-value goods. Previously, high tag costs meant that the technology could only be used on more expensive products. Now, it's percolated down to items with lower price points.

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Optimized Capacity Utilization

With logistics facilities facing significant space constraints, the efficient use of physical capacity becomes essential. "A lot of these warehouses, distribution centers and third-party logistics providers are facing a lot of constraints with actual physical capacity," Stephens says. "It's because they need to get product in and out the door as fast as possible. If they run into bottlenecks, that product will pile up in the warehouse inside the four walls, and they'll have more difficulty finding it.

"Having that visualization piece, knowing where your product is within the four walls and within the supply chain, allows you to get it to the next spot more efficiently," Stephens says.

Companies are under growing pressure to build newer and sometimes smaller warehouses closer to their consumers, not just the million-square-footers that have become so prevalent in the e-commerce age. RFID today is providing visibility across all types of facilities.

Especially in the case of last-mile deliveries, time becomes crucial, Stephens says, and RFID makes possible "quick windows" for getting product out the door.

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Elevated Customer Satisfaction

The ultimate beneficiary of RFID deployment is the end customer. Accurate tracking, efficient fulfillment and timely delivery translate directly to happier buyers. Coleman says businesses equipped with RFID can better service their accounts by providing visibility into order status and expected delivery times.

The technology extends all the way to the customer's door. While customers may not see RFID in action directly, they experience its benefits in the form of accurate, on-time deliveries and reliable communication about their orders. In today's e-commerce-driven market, these capabilities are essential for maintaining trust and loyalty.

Collaborating for End-to-End Solutions

Lyngsoe Systems and Zebra Technologies work together to deliver comprehensive RFID systems tailored for warehouses and logistics operations. Zebra contributes its hardware and ecosystem, while Lyngsoe integrates this technology into RFID solutions that drive visibility, efficiency, and operational excellence.

Lyngsoe's end-to-end solution covers all of RFID deployment, from software and integration to tags, implementation, and ongoing support. Lyngsoe sources and integrates Zebra's state-of-the-art RFID hardware — including scanners, tags, and printers — to ensure high performance across the entire supply chain. Together, they enable companies to implement RFID across all operational stages with maximum reliability and return on investment (ROI). Customers get a seamless, fully integrated system from a single provider, Lyngsoe Systems. See how Lyngsoe and Zebra can optimize your warehouse operations – schedule a demo today.

Video Link:
https://www.supplychainbrain.com/articles/42330-watch-why-deploy-rfid-in-your-warehouse?oly_enc_id=

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