Kroger Adopts RFID to Maximize Grocery Freshness and Reduce Waste

The grocery chain announced an RFID initiative that represents a potential "tipping point" for the food industry.

Soon there will be something new on the shelves of Kroger's bakery department. Among the freshly baked bread, cookies, and muffins will also be tiny RFID tags, enabling the grocery giant to maximize food freshness, manage inventory, reduce waste, and optimize employee time.

Impinj partner Avery Dennison, in an **October 22 announcement**, said it is working with Kroger to attach RFID-embedded labels to most products in its bakery department. Over the next six quarters, the rollout will expand to most of Kroger's 2,750 stores, which include brands such as Fred Meyer, Dillons, and Ralphs across the United States.

"This is going to be for us a very important tipping point for the industry. It's the first visible marker that food and grocery will go" with RFID, Avery Dennison President and CEO **Deon Stander told investors**. "And when people realize the scale of the ubiquity of that benefit, like in apparel," he continued, "I think it will act as a catalyst for further acceleration and adoption."

With item-level RFID tagging of its bakery items, Kroger will be able to accelerate inventory counts and automatically track the freshness of products at the grocery chain's bakeries and stores. According to Avery Dennison, bakery products are ideal for an initial RFID program because they are largely contained to one department and one supply chain.

Kroger is adding RFID tags to bakery items to maximize freshness and enhance inventory management.

Bakery items are exceptionally perishable, and making sure shelves are stocked with fresh products is a highly manual process. The Kroger RFID solution will significantly improve labor effectiveness and the employee experience, Stander said, as well as drive operational efficiency and reduce waste.

"Based on those results," he said, "our anticipation is that we will then move to categories like proteins and leafy greens as we move forward."

Benefits of RFID in food and grocery

RFID tagging is expanding across the retail industry, perhaps most notably at Walmart, which is mandating its suppliers to affix RFID tags to products in an expanding list of categories. The world's largest retailer **has seen "dramatic results"** in improved inventory management and customer satisfaction.

RFID (radio-frequency identification) is a form of wireless communication that uses radio waves to identify and find objects. **RAIN RFID** is a passive, battery-free wireless technology that allows retailers to track and locate every tagged item quickly and accurately, bringing powerful insights and real-time visibility to inventory and operations.

RAIN RFID, which is the **foundation of the Impinj platform**, stands alone in its ability to:

- Uniquely identify individual items beyond just their product type
- Identify and locate items without direct line of sight
- Identify many items quickly (up to 1,000 items per second)
- Read items within a range of between a few centimeters to several meters

Because of the wide range of benefits derived from accurate inventory data and the low cost of individual tags, RAIN RFID deployments are uniquely scalable across very large systems, tracking hundreds of thousands — even billions — of individual items.

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For grocery chains, this means unprecedented ability to automate inventory management with real-time insights, ensure the food they sell is fresh, minimize unsold products due to expiration, and speed up inventory counts. **As for all retailers**, the Impinj platform can also underpin automated self-checkout, omnichannel fulfillment, and additional customer experiences.

Yet the benefits can extend through the entire food supply chain, enabling **item-level traceability from farm to plate**. RAIN RFID food traceability solutions can track data such as where a product originated, what stops it has made on its journey, its batch/lot number, and its expiration dates.

In the event of a recall, products associated with a specific lot number, for example, can quickly be identified and pulled from grocery stores. Historical RAIN data can trace the product back to its source, where steps can also be taken to prevent future outbreaks of food-borne illness.

Food a bigger opportunity than apparel

In November 2022, the U.S. Food and Drug Administration implemented Section 204 of the Food Safety Modernization Act (FSMA) for food traceability and supply-chain record keeping. The law gives companies two years to enable stricter, more comprehensive record keeping.

"I do think the more recent FSMA regulations that have come out in the United States will act as an accelerant for the food-safety drive," Stander said, "and, by definition, I think they're going to lean into RFID as an enabling technology."

For Avery Dennison, the food segment represents a larger opportunity for RFID than logistics or apparel, where RFID is gaining a foothold as the go-to technology for digital transformation. That said, as in logistics and apparel, industry-wide adoption will take time, Stander told investors.

Kroger is a leader in its industry and has set environmental, social, and governance (ESG) goals through its **Zero Hunger, Zero Waste** action plan. The company also is in the middle of a **proposed acquisition of Albertsons**, another grocery giant that owns brands such as Safeway, Pavilions, and Vons.

"For the first time," Stander said, "the Kroger announcement puts an exclamation point under the fact that (RFID) technology has ubiquity and has value in driving demonstrable return on investments for food customers, particularly at the grocery level."

Learn more about **RAIN RFID solutions for food and retail**, and how the Impinj platform enables **inventory management**, **automated self-checkout**, **supply chain traceability**, and **sustainability initiatives**.

Article tagged as: Automated Checkout, Blog, Customer Experience, Food & Beverage, Industry Trends, Inventory Management, Retail, Sustainability

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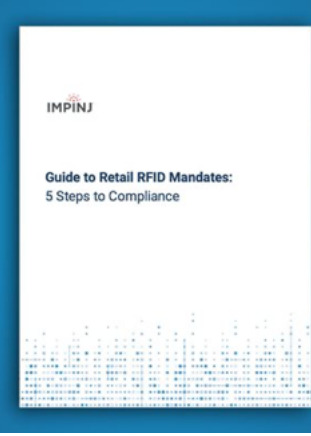29 APR 2025

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