

SURVEY DATA

The State of Supply Chain Integrity for Retailers in 2025



A data accuracy gap is limiting visibility into retail supply chains.

A complete and accurate view of supply chain operations is critical to achieving supply chain integrity, which refers to the reliability, security, and accuracy of all elements within the supply chain. Supply chain integrity ensures that products and services are delivered as intended without disruption, tampering, or counterfeiting.

In a recent [cross-sector survey of 1,000 supply chain leaders](#)¹, we found that supply chain integrity matters greatly. Organizations with real-time supply chain visibility can make informed, data-driven decisions that help optimize inventory, boost efficiency, and reduce costs. At the same time, they are better equipped to handle disruption and rapidly changing customer demands.

Our survey findings uncovered a critical issue hindering supply chain integrity in 2025: 85% of retail supply chain leaders surveyed believe² that their organization is equipped to drive accurate supply chain visibility. However, just 36% consistently drive accurate, 360°, real-time inventory visibility.

The inability to ensure data accuracy can create or exacerbate existing operational challenges and may limit the potential success of future supply chain transformation initiatives. In fact, 41% of retail supply chain leaders are experiencing difficulties with their supply chain.

The data accuracy gap results in competitive disadvantages caused by operational inefficiencies, inventory mismanagement, and missed opportunities to enhance customer satisfaction.

Our survey results also demonstrate that while many retailers recognize the importance of data accuracy, a substantial number lack the necessary tools and processes to achieve it consistently.

46% of retail respondents stated that supply chain integrity is a key concern for their organizations. Meanwhile, 22% indicated that driving supply chain integrity is challenging.

Another 17% identified vulnerabilities in their supply chains, directly affecting their ability to maintain accurate data and ensure operational efficiency.

This report looks at internal and external factors contributing to retailers' challenges with data accuracy. It also explores how data accuracy gaps influence strategically important areas for retailers, including market competitiveness, regulatory compliance, sustainability, and retailer reputation.



41%
of retail supply chain
leaders surveyed are
experiencing difficulties
with their
supply chain³

¹ Impinj partnered with research experts Censuswide to survey 1,000 US supply chain professionals at director-level and above between 08.15.24 - 08.27.24. 250 respondents surveyed work within the retail industry. Additional respondents covered food, logistics, and other sectors. See Supply Chain Integrity Outlook 2025: Closing the Data Accuracy Gap for additional results.

² 'Strongly agree' and 'Somewhat agree' responses combined.

³ 'Driving supply chain integrity is a challenge for my organization', 'My organization's supply chain is vulnerable to disruption and rapid changes in customer demand' and 'We lack the level of insights, visibility, and accuracy required to drive confidence in our supply chain integrity' responses combined.

Contents

How labor availability influences data accuracy in retail 4

The data accuracy gap and market competitiveness..... 5

The data accuracy gap and sustainability initiatives..... 6

The data accuracy gap and retailer reputation 7

How retailers are investing in closing the data accuracy gap 9

Methodology..... 10



Ashley Burkle is the Business Development Director for Retail at Impinj. Ashley creates retail solutions using RAIN RFID to improve retailer operations and enhance the shopper experience. Building on proven technology and partnering with leading retail software and services providers, Ashley develops solutions that allow organizations to connect items to applications, delivering visibility, control, efficiency, and accuracy while reducing costs and increasing customer delight.

How labor availability influences data accuracy in retail

In recent years, labor shortages have exacerbated problems related to the data accuracy gap. Increasingly, fewer workers are available to complete the manual tasks necessary to give retail operations leaders confidence in their supply chain's integrity.

34% of retail respondents identified labor shortages as a critical operational challenge impacting their supply chain integrity.

Some innovators in the retail sector have deployed new technologies, recognizing that solving the data accuracy gap with labor alone is difficult to scale and sustain.

“With labor in such short supply, retailers are most likely planning to allocate budget to boost supply chain efficiency next year. Many supply chain leaders recognize that investing in technology, such as RAIN RFID, is a good way to achieve efficiency. For example, Impinj Gen2X could save a single retailer dozens of hours per inventory cycle count when reading RAIN tagged items.”

– Ashley Burkle, Impinj Business Development Director, Retail

Many of the supply chain leaders we surveyed aim to drive efficiency that will help overcome the issues presented by labor shortages (29%), saying they plan to invest in:

- New technologies and business models that will allow them to respond more rapidly to changes in customer demand (36%)
- Implementing new AI and automation technologies (36%)
- Upskilling their existing workforce in the coming year (31%)

RAIN RFID: A labor multiplier

RAIN RFID is a battery-free wireless technology that allows retailers to track, locate, and identify every tagged item quickly and accurately. RAIN can identify up to 1,000 items per second, does not require line-of-sight to read tagged items, and can read tags at close range or from a distance.

With fast and accurate inventory capabilities, RAIN allows staff to take inventory in a fraction of the time it takes with barcode scanning. This not only maximizes labor efficiency, allowing employees to focus on delivering an outstanding customer experience instead of focusing on time-consuming, manual tasks; it also contributes to stronger retail supply chain data, offering operational benefits that enhance supply chain integrity.

The data accuracy gap and market competitiveness

In the fast-moving and hypercompetitive world of retail, the data accuracy gap threatens market competitiveness, slowing down decision-making, increasing operational costs, and negatively impacting customer experiences.

30% of retail respondents identified real-time inventory visibility and accuracy as one of their biggest challenges related to supply chain integrity.

This foundational issue exacerbates other challenges respondents reported, including:

- Responding to rapid spikes or changes in customer demand (26%)
- Implementing new fulfillment models to meet shifting customer demand (27%)
- Getting accurate data to feed automated and AI-enabled systems (26%)

“Leading retail innovators have been investing in closing the data accuracy gap for some time now, and it’s starting to pay big dividends. For example, RAIN RFID is a key to unlocking omnichannel strategies like BOPIS (Buy Online, Pickup In Store) and same-day delivery. Meanwhile, retailers who aren’t solving these challenges can’t offer those services reliably, and they are falling further behind to the ones that have.”

– Ashley Burkle, Impinj Business Development Director, Retail

Compete today and innovate tomorrow with RAIN RFID

RAIN RFID represents an important pivot point for many retailers, helping them transform operations, drive efficiency, and elevate customer service. RAIN-based enterprise solutions also pave the way for innovations that help retailers remain competitive in the future, for example by engaging more frequently with customers.

Chipset makers like [Qualcomm](#) are working to extend RAIN RFID reading to enterprise mobile devices, an important first step toward similar capabilities in consumer mobile devices. Once consumers can read RAIN-tagged items, opportunities are limitless. For instance, imagine never having to rifle through a stack of folded clothes again to find the right size, or locating (and ordering) a SKU via your mobile when the desired size or color isn’t available in the store, or scanning an item to learn the most efficient way to recycle a garment at its end of life. In this paradigm, retailers will have many opportunities to deliver engaging brand experiences, both during and between purchases.

¹ ‘Strongly agree’ and ‘Somewhat agree’ responses combined.

The data accuracy gap and sustainability initiatives

While sustainability initiatives are presented as a customer value, they're often driven by a desire to reduce costs or comply with regulations.

Retailers have been delivering on both fronts, though at a slower rate than organizations in the food, grocery, transportation, and logistics sectors.

Over a fifth (22%) of retailers say that reducing their environmental impact is the biggest challenge they currently face related to supply chain resiliency and integrity.

Among supply chain leaders, 40%¹ indicated their organizations are implementing recycling/circularity initiatives, and 37% are reducing excess inventory or safety stock. Meanwhile, over half (52%) are improving measurement around the impact of their sustainability efforts, 44% are improving last-mile delivery efficiency, and 41% are reducing waste through more efficient operations.¹

Retailers may be looking to follow suit, as 31% of retail supply chain leaders surveyed say they plan to invest in improving supply chain sustainability in the next year.

Explore sustainable business models with RAIN RFID

With RAIN RFID, retailers can achieve accurate inventory data that helps to reduce waste, overproduction, and safety stock, all of which are critical to achieving long-term sustainability and business value.

“While SKU-level data from barcodes provides a basic level of information, RAIN RFID can help you know where all your inventory is at any given moment, helping you to understand and forecast demand, almost in real-time. This allows even fast fashion brands to explore more sustainable models like just-in-time inventory.”

– Ashley Burkle, Impinj Business Development Director, Retail

Digital Product Passports: A Sustainability Enabler

A Digital Product Passport (DPP) is a digital record containing key information about a product's composition, origin, and lifecycle intended to support transparency about physical goods and sustainability initiatives. July 2027 is the deadline for retailers and suppliers to comply with Digital Product Passport requirements for textiles.

From our research

- 49% of retailers are concerned about their ability to meet DPP legislation.
- Nearly 60% of retailers are preparing for DPP, whether or not they think they'll be ready.
- 37% of retailers are not yet actively preparing, and 37% don't think they'll meet the compliance deadline.

Though DPP regulations are being set by the European Union (E.U.), American retailers should not delay making preparations, as anyone selling into the E.U. must comply.

Though legislation is still being written, there are ways to start preparing now.

[Learn how to prepare for Digital Product Passports with RAIN RFID](#)

¹ Responses from general supply chain manager group

The data accuracy gap and retailer reputation

Lost and damaged goods, counterfeits, waste, and theft are persistent issues that negatively impact customer experiences and put consumer safety and retailer reputations at risk.

Almost two-thirds (65%) of retail supply chain leaders agree¹ that it is a challenge for their organization to reduce counterfeit goods entering their supply chain.

Meanwhile, 3 in 5 (60%) agree¹ that it's a challenge for their organization to reduce its rate of shrink/theft.

In a bid to reduce their rate of shrink and theft, supply chain leaders are adding more security staff (40%) and adding locks or barriers to high-value inventory (34%). But these approaches both rely on hard-to-come-by labor and add friction to the shopping experience, threatening retailer reputation.

“Recently we’ve seen retailers stocking their shelves with more “clean”, cruelty-free, and non-toxic products, which they hope will resonate with their target shoppers and boost their reputation at the same time. However, these efforts are often undermined when a staff member is needed to push a button to retrieve locked up goods.”

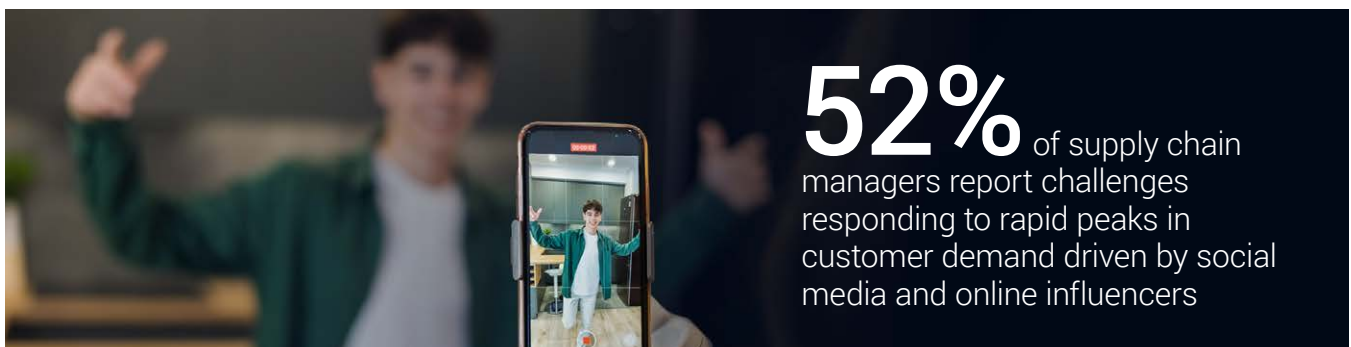
– Ashley Burkle, Impinj Business Development Director, Retail

The social media effect

Supply chain managers report challenges driven directly by social media. The top three challenges are:

- Responding to rapid peaks in customer demand driven by social media and online influencers (52%)
- Changes in customer demand caused by growth in social media storefronts (49%)
- The rise of the thrift movement (47%)

Further, the rise of organized crime presents a challenge for 36% of supply chain managers.



52% of supply chain managers report challenges responding to rapid peaks in customer demand driven by social media and online influencers

¹ 'Strongly agree' and 'Somewhat agree' responses combined.

Drive agility and remove friction with RAIN

The high degree of inventory visibility that RAIN delivers helps retailers ensure their inventory is adequately stocked and in the right place at the right time. This helps remove friction from the shopping experience while also driving agility required to respond to rapid peaks in demand and fast-moving trends. It can further boost in-store and omnichannel shopping by enabling:

- Out-of-stock reduction of up to 50%¹
- Automated self-checkout with seamless loss prevention
- Omnichannel fulfillment
- Shipment and delivery accuracy
- Personalization

“Frictionless” shopping requires retailers to master the operational basics. The fancy stuff doesn’t matter if simple things like products being in the right place when retailers need to sell them aren’t properly taken care of.”

– Ashley Burkle, Impinj Business Development Director, Retail



¹ The Seven Ways RAIN RFID Is Changing Retail for the Better, Impinj

How retailers are investing in closing the data accuracy gap

A lot has changed for retailers over the past 15 years.

The once-linear path from manufacturing to point of sale has become more complex as retailers have added whole new categories of customers, retail partners, and direct-to-consumer channels.

Just over 2 in 5 (41%) retail supply chain leaders surveyed are implementing new tracking technologies for tracking goods to reduce shrink/theft and 3 in 10 (30%) are investing in improving shipment accuracy and reducing delivery errors.

At the same time, a third (33%) of retail supply chain leaders surveyed are investing in new systems and technologies to optimize delivery and fulfillment, and nearly 2 in 5 (36%) are investing in new technology and business models to more rapidly respond to changes in customer demand.

Now, more than ever, retailers require complete supply chain visibility if they are to deliver outstanding frictionless customer experiences while driving sustainability and growth.

If a supply chain data accuracy gap is stopping you from getting the all-important basics right, and you're looking for ways to restore your supply chain's integrity, RAIN RFID may be the solution.

Visit impinj.com/industries/retail to learn more.

Trends among retail supply chain leaders surveyed

41%

are implementing new tracking technologies for tracking goods to reduce shrink/theft

33%

are investing in new systems and technologies to optimize delivery and fulfillment

30%

are investing in improving shipment accuracy and reducing delivery errors

36%

are investing in new technology and business models to more rapidly respond to changes in customer demand

Methodology

Impinj partnered with research experts Censuswide to survey 1,000 US supply chain professionals with titles of director level and above. See demographic breakdown by industry and company size below.

The data was collected in August 2024.

Industry

Food/Grocery/Restaurant 25%
Retail 25%
Supply chain/Transportation/Logistics 25%
Other sectors 25%

Company size

50 - 99 employees 17%
100 - 249 employees 30%
250 - 500 employees 24%
More than 500 employees 29%

Censuswide abides by and employs members of the Market Research Society and follows the MRS code of conduct and ESOMAR principles. Censuswide is also a member of the British Polling Council.



**Ready to discuss how Impinj
can help your business?**

Contact us: www.impinj.com

Impinj (NASDAQ: PI) helps businesses and people analyze, optimize, and innovate by wirelessly connecting billions of everyday things—such as apparel, automobile parts, luggage, and shipments—to the Internet. The Impinj platform uses RAIN RFID to deliver timely data about these everyday things to business and consumer applications, enabling a boundless Internet of Things.