The State of In-Store Retailing: Opportunities To Redefine Operations

March 27, 2024

Executive Summary

We delve into the critical challenges that lie between retailers and optimal store efficiency, including out-of-stocks and mispricing. Based on a Coresight Research survey of US-based retailers in the DIY, drugstore, grocery, mass merchandise and warehouse club sectors, we identify opportunities for retail companies to better navigate pressures in managing out-of-stocks, executing pricing and promotion, ensuring planogram compliance, and managing allocation and assortment planning. We also explore the transformative potential of store intelligence technologies to optimize operations through enhanced efficiency, agility and innovation.

Market Scale and Opportunity

Our survey found that, on average, retailers in the US DIY, drugstore, grocery, mass merchandise and warehouse club sectors report losing 4.5% in revenue due to in-store inefficiencies. Solving these problems would drive an additional revenue opportunity for retailers in these sectors of $127.9 billion in 2024, growing to $143.3 billion in 2027, Coresight Research estimates.

Coresight Research Analysis

Retailers Experience Significant Challenges in Store Planning and Operations

- **Over 90%** of surveyed retailers experience challenges in pricing and promotion execution (96%), planogram compliance (93%), allocation and assortment planning (93%), and managing out-of-stocks (92%).

- **Less than 30%** of retailers have full visibility of each of the four store-related business functions, which could mean that challenges are even more substantial than retailers realize. Out-of-stocks is the area with the lowest visibility, according to our survey, as 45% of respondents report moderate/slight/no visibility.

- Without a clear understanding of how they are performing in this area or a complete picture of the challenges they are experiencing, retailers may struggle to implement effective strategies to address the underlying issues impacting their operations. A mechanism for tracking data and what's happening in stores can empower retailers to gain visibility into their operations, identify opportunities for improvement and make informed decisions to enhance efficiency.

96%
experience challenges in pricing and promotion execution
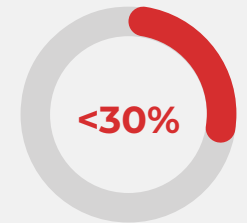
<30%
have full visibility of each of the four store-related business functions

Product Pricing Errors and a Lack of Real-Time Information on Stock Levels Are Critical Obstacles to Success

- The most widespread challenges that retailers face—cited by **at least 35%** of respondents as among their **top five challenges**—are product pricing errors, a lack of real-time information on stock levels, a lack of real-time information on product location, misplaced or missing items on store shelves, and overstocking/understocking of products. Among other impacts, such challenges can frustrate customers, waste staff time and result in lost sales. Retailers need to address these challenges to enhance operational efficiency, improve customer satisfaction and drive sustainable business growth.

- Pricing errors are the topmost challenge: **three-quarters** of surveyed retailers reported a mispricing rate of at least 5%, and **one in five** retailers reported a rate of above 15%. (A mispricing rate is defined as the percentage of all products mispriced in any given selling period.) High mispricing rates have multiple negative consequences, including loss of revenue, customer dissatisfaction and damage to brand reputation. By investing in robust pricing systems, implementing effective quality-control measures and providing comprehensive training to staff, retailers can reduce the likelihood of errors and bring down the mispricing rate.

Top Five Challenges That Retailers Face

1 Product pricing errors

2 Lack of real-time information on stock levels

3 Lack of real-time information on product location

4 Misplaced or missing items on store shelves

5 Overstocking/understocking of products

Store Inefficiencies Drive Significant Financial Losses

- Around **40%** of retailers have experienced gross sales loss of more than 5% due to each of the four types of store inefficiency, according to our survey, with an overall average of **4.5% loss**. Poor pricing and promotion execution drives the greatest loss, on average (4.8%), followed by out-of-stocks (4.7%), a lack of planogram compliance (4.3%) and insufficient allocation and assortment planning (4.2%). These significant financial losses—especially, in percentage terms, for retailers with revenue of at least $5 billion—underscore the urgent need for retailers to address and mitigate in-store challenges to protect their top line and remain competitive in the market.

- **At least 70%** of surveyed retailers report losing more than 5% operating margin due to each of the four types of store inefficiency. The impact on pricing and promotional execution is the most severe.
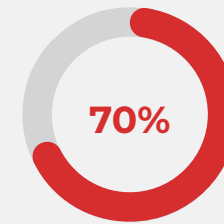
70%

report losing more than 5% operating margin

40%

have experienced gross sales loss of more than 5%

Retailers Recognize the Importance of Tech in Optimizing Store Operations To Enhance Efficiency

- Our survey revealed that around **half of all retailers** are currently investing in store intelligence technologies to manage out-of-stocks, execute pricing and promotion, ensure planogram compliance, and optimize allocation planning. For each function, **at least four in five retailers** that are not currently investing have plans to do so within the next 12 months. These high proportions reflect retailers' increasing awareness of the importance of technology in optimizing store operations.

- Store intelligence technologies play a pivotal role in revolutionizing retail operations by optimizing critical store-related processes. The most widespread positive impacts of these technologies are in the domains of price planning and out-of-stock reduction, according to our survey (each cited by 49% of respondents).

are currently investing in store intelligence technologies

that are not currently investing have plans to do so within the next 12 months

Retailers Are Turning to Store Intelligence Technologies for Advanced Data Analytics, Optimized Pricing and Automated Inventory Tracking

- Among surveyed retailers that are currently investing in store intelligence technologies, the highest proportions are investing in advanced data analytics solutions (62%), promotion and price planning/optimization (60%) and automated inventory tracking systems (58%).

62%

are investing in advanced data analytics solutions

- Automated inventory tracking systems emerged as the top technology in terms of planned investments in the future. Partnering with vendors that offer automated inventory tracking systems presents retailers with an opportunity to improve operational efficiency, enhance customer satisfaction and gain a competitive edge in the retail market.

- Our survey found that **58%** of retailers that are planning to invest in store intelligence technologies in the next 12 months will spend at least $100,000, and **17%** are planning to invest at least $200,000. On average, retailers will invest $160,450, we calculate, indicating the importance that retailers place on using technologies to drive in-store business growth and reduce labor and operational costs.

Automated inventory tracking systems are the top technology in terms of future investment

What We Think

Our survey findings illuminate the pervasive challenges facing retailers in managing in-store operations, highlighting issues such as out-of-stocks, pricing and promotion errors, planogram non-compliance, and ineffective allocation and planning, driven by supply chain disruptions and data deficiencies. Inefficient operations lead to revenue loss, eroded customer trust and diminished brand reputation, emphasizing the urgent need for technological investment, particularly in store intelligence capabilities, to enhance efficiency and competitiveness.

Retailers recognize the transformative potential of technology to optimize pricing, promotions and inventory management while fostering stronger supplier collaboration. The retail landscape is highly competitive, with consumer expectations continuously evolving. Retailers must leverage technology to stay ahead of competitors, enhance operational efficiency and deliver superior customer experiences. Failure to invest in store intelligence technologies may result in retailers falling behind competitors that have embraced innovation and are better equipped to meet changing consumer demands.

Companies Poised To Gain Advantage

- Retailers that invest in store intelligence technologies stand to gain a competitive advantage by improving operational efficiency, optimizing pricing and promotions, and enhancing the customer experience. These retailers can leverage advanced data analytics and automation to streamline processes, mitigate losses and forge stronger partnerships with suppliers, ultimately driving sustainable business growth and resilience.

Companies That Risk Losing Advantage

- Retailers that fail to address store inefficiencies and adapt to evolving consumer demands risk losing their competitive advantage and market share. Without investments in technology and data-driven insights, these businesses may struggle to maintain optimal inventory levels, execute effective pricing strategies and deliver seamless customer experiences, thereby falling behind more agile and innovative competitors.

Contents

Introduction

Understanding store dynamics is critical in driving success for retailers, but achieving end-to-end operational efficiency continues to be challenging. There are multiple challenges—such as out-of-stocks, lack of planogram compliance, mislabeled price tags, allocation inefficiencies and more—that are straining supply chains and merchandising functions and putting pressure on store operations. These challenges are compounded by additional factors, including staff availability and accountability, a lack of technology infrastructure and a lack of actionable and unified data. Such factors directly impact store execution across the entire supply chain, from delivery logistics to e-commerce operations, and from supplier relationships to brand partnerships.

In this report, we delve into key challenges in store planning and operations to identify opportunities for US retail companies to better navigate pressures in managing out-of-stocks, executing pricing and promotion, ensuring planogram compliance, and managing allocation and assortment planning. We also explore the transformative potential of store intelligence technologies to optimize operations through enhanced efficiency, agility and innovation.

Our analysis is informed by a Coresight Research survey of 150 decision-makers at US-based retailers in the DIY, drugstore, grocery, mass merchandise and warehouse club sectors, conducted in January 2024. Many of these sectors have unique store planning and operational challenges related to inventory management, shelf stocking, perishable goods handling and customer flow. They also often deal with fast-moving consumer goods and have different operational requirements compared to other sectors such as apparel.

This report is produced and made available to non-subscribers of Coresight Research in partnership with Simbe, a store intelligence technology provider that offers solutions for out-of-stock management, pricing and promotion execution, planogram compliance and inventory management.

Below, we define key terms used throughout this report as we discuss store planning and operations.

- **Store intelligence technologies:** Store intelligence for the purpose of this report is limited to four key functions—out-of-stock management, pricing and promotion execution, planogram compliance, and allocation and assortment planning. We classify store intelligence technologies as advanced technologies that are powered by automation, computer vision and artificial intelligence (AI).

- **Store inefficiencies:** Challenges and shortfalls in out-of-stock management, pricing and promotion execution, planogram compliance, and allocation and assortment planning which hinder business decision-making.

  o **Out-of-stock management:** The process of monitoring and controlling inventory levels to ensure that products remain available for customers to purchase.

  o **Pricing and promotion execution:** The process of ensuring that products are accurately priced and promotions are effectively implemented in retail environments.

  o **Planogram compliance:** The process of ensuring that retail shelves and displays are organized according to predefined layouts or planograms.

  o **Allocation and assortment planning:** The process of determining the optimal distribution of products to different locations and planning the appropriate product mix to meet customer demand and maximize sales.

In charting our survey data across the four areas of store inefficiency, we use a consistent order (from product level up to store level) through this report: out-of-stocks, pricing and promotion execution, planogram compliance/insights, allocation and assortment planning.

Market Scale and Opportunity

Our survey found that, on average, retailers in the US DIY, drugstore, grocery, mass merchandise and warehouse club sectors report losing 4.5% in revenue due to in-store inefficiencies—with out-of-stocks leading to 4.7% revenue loss, poor pricing and promotion execution causing 4.8% loss, a lack of planogram compliance causing 4.3% loss, and insufficient allocation and assortment planning causing 4.3% loss.

Solving these problems would drive an additional revenue opportunity for retailers in these sectors of $127.9 billion in 2024, growing to $143.3 billion in 2027, Coresight Research estimates.

Retailers can achieve huge financial benefits from addressing challenges in store efficiency

Figure 1. Selected US Retail Sectors*: Potential Sales Gain by Solving In-Store Inefficiencies (USD Bil.)

$143.3

$127.9

2024E   2027E
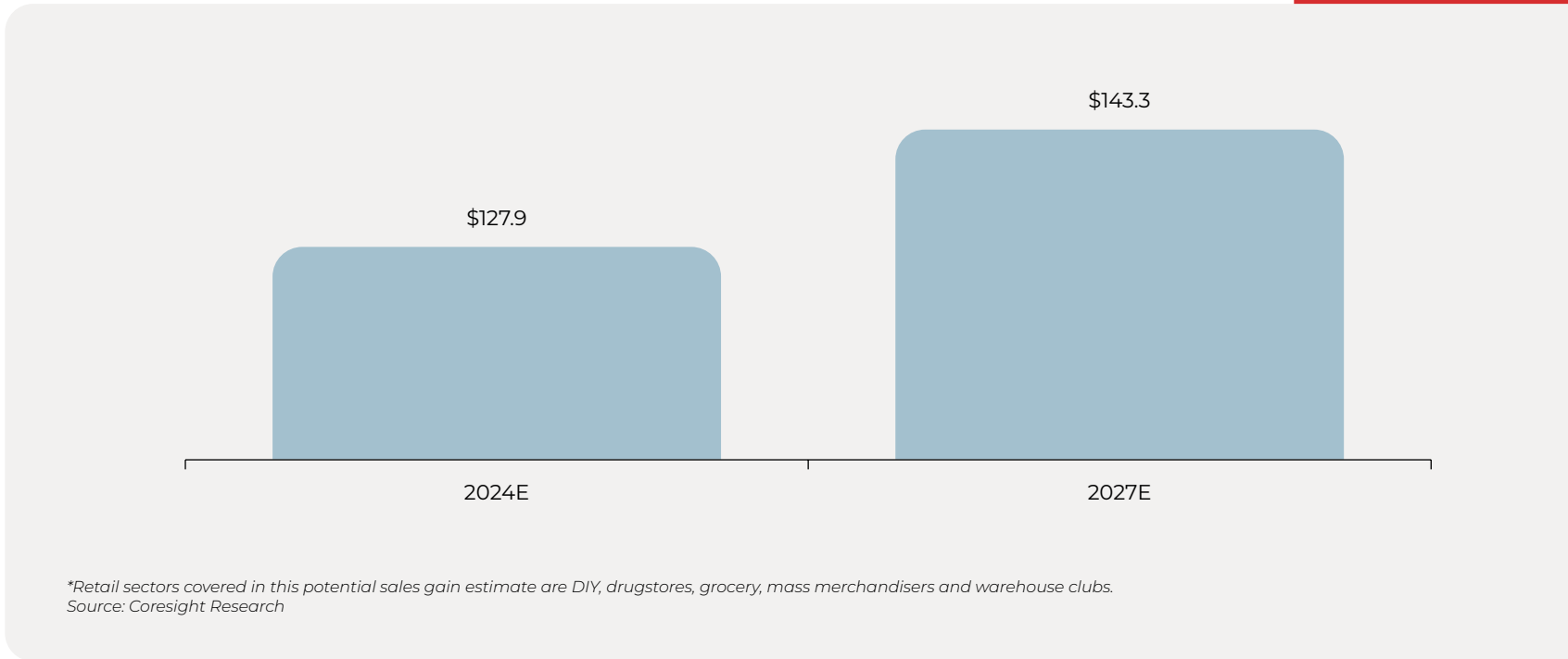
*Retail sectors covered in this potential sales gain estimate are DIY, drugstores, grocery, mass merchandisers and warehouse clubs.
Source: Coresight Research

The State of In-Store Retailing—Opportunities To Redefine Operations: Coresight Research Analysis

We summarize key findings from our survey analysis in Figure 2, and explore each in detail below.

Figure 2. Summary of Key Survey Findings

Key Data	Implications
More than 90% of retailers experience challenges in managing out-of-stocks, executing pricing and promotion, achieving planogram compliance, and optimizing allocation planning.	Retailers must recognize the multifaceted nature of these challenges and adopt holistic strategies to address them effectively.
Product pricing errors (part of price and promotion execution) and **a lack of real-time information on stock levels** (managing out-of-stocks) are the most challenging in-store inefficiencies.	Pricing errors can lead to customer dissatisfaction, revenue loss and reputational damage, while inadequate stock visibility can result in missed sales opportunities and suboptimal inventory management. Retailers need robust systems and processes to mitigate these inefficiencies and ensure accurate pricing and inventory management in real time.
For each of the four types of store inefficiency, around **40%** of retailers lose **at least 6%** in gross sales (4.5% loss overall, on average) and at least 70% of retailers lose more than 5% operating margin.	In-store inefficiencies have a direct impact on revenue and profitability, underscoring the urgency for retailers to address challenges.

Figure 2. Summary of Key Survey Findings (continued)

Around **half** of all retailers are currently investing in store intelligence technologies to manage out-of-stocks, execute pricing and promotion, ensure planogram compliance, and optimize allocation planning. For each function, **at least four in five** retailers that are not currently investing have plans to do so within the next 12 months.

The most widespread positive impacts of store intelligence technologies are in the domains of **price planning** and **out-of-stock reduction**, according to our survey (each cited by 49% of respondents).

We are seeing a strategic shift among retailers toward leveraging technology to drive operational excellence. Retailers acknowledge that investments in technology can yield significant returns by enhancing efficiency, improving customer satisfaction and achieving a competitive advantage.

Among retailers that are currently investing in store intelligence technologies, the highest proportions are investing in **advanced data analytics solutions** (62%) and **promotion and price planning/optimization** (60%).

Automated inventory tracking systems emerged as the top technology in terms of planned investments in the future.

Among retailers that are planning to invest in store intelligence technologies in the next 12 months, **58%** plan to invest at least $100,000. On average, retailers will invest **$160,450**.

Demand is growing for innovative solutions that address key operational challenges. Store intelligence technologies offer retailers the ability to automate processes, gain actionable insights and make data-driven decisions to optimize in-store operations and drive business performance.

Base: 150 US-based retailers, surveyed on February 1–2, 2024
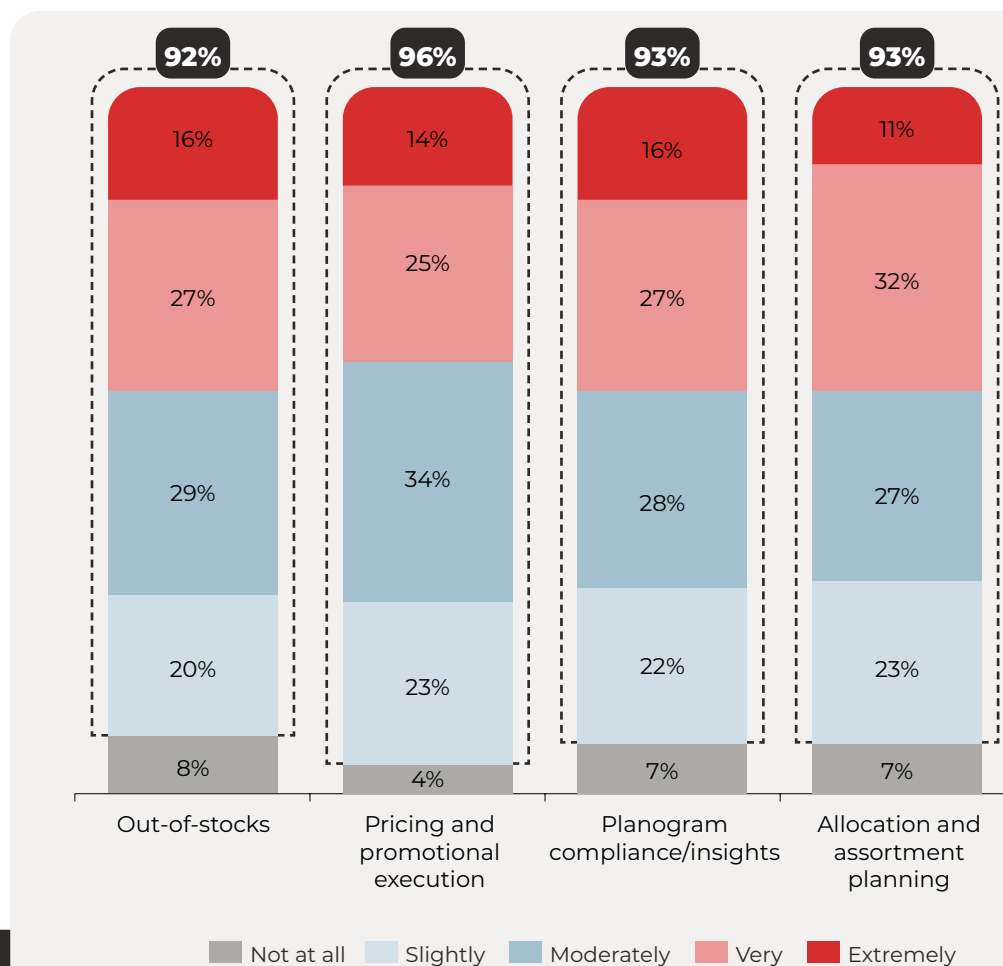*Source: Coresight Research*

Retailers Experience Significant Challenges in Store Planning and Operations

Over 90% of surveyed retailers experience challenges in pricing and promotion execution (96%), planogram compliance (93%), allocation and assortment planning (93%), and managing out-of-stocks (92%), as shown in Figure 3. These challenges are driven by factors including the complexity of retail operations, supply chain disruptions (such as delays in delivery), a lack of accurate inventory data, manual errors such as mislabeling, and poor inventory management practices.

Challenges in store planning and operations can have significant negative impact on business performance:

* When products are unavailable to customers, they may choose to shop elsewhere, resulting in missed sales and potential long-term customer dissatisfaction.

* Pricing errors, promotional discrepancies and poor planogram compliance can dilute a retailer's brand image and erode customer trust.

* Inefficient allocation and assortment planning can strain operational resources and increase complexity in inventory management and logistics. These challenges will also impact trade relationships. Suppliers may perceive retailers as unreliable partners if they consistently fail to maintain adequate inventory levels and execute the right pricing and promotion strategies.

Over 90% of surveyed retailers experience challenges in each of the four business functions, indicating huge opportunity to improve retail operations and drive business benefits

Figure 3. Extent of Challenges Across Store-Related Business Functions (% of Respondents)

	Out-of-stocks	Pricing and promotional execution	Planogram compliance/insights	Allocation and assortment planning
Total	92%	96%	93%	93%
Extremely	16%	14%	16%	11%
Very	27%	25%	27%	32%
Moderately	29%	34%	28%	27%
Slightly	20%	23%	22%	23%
Not at all	8%	4%	7%	7%

Legend: Not at all | Slightly | Moderately | Very | Extremely

Base: 150 US-based retailers, surveyed on January 30–31, 2024
Source: Coresight Research

By having a clear view of store operations, retailers can identify areas where challenges can be solved. However, our survey revealed that less than 30% of retailers have full visibility of each of the four store-related business functions (see Figure 4), which could mean that challenges are even bigger than retailers realize.

Out-of-stocks is the area with the lowest visibility, according to our survey, as 45% of respondents report moderate/slight/no visibility.

Without a clear understanding of how they are performing in this area or the challenges they are experiencing, retailers may struggle to implement effective strategies to address the underlying issues impacting their operations. A mechanism for tracking data and what's happening in stores can empower retailers to gain visibility into their operations, identify opportunities for improvement and make informed decisions to enhance efficiency.

High proportions of all surveyed retailers have poor visibility of each of the four business functions

Figure 4. Level of Visibility into Store-Related Business Functions (% of Respondents)
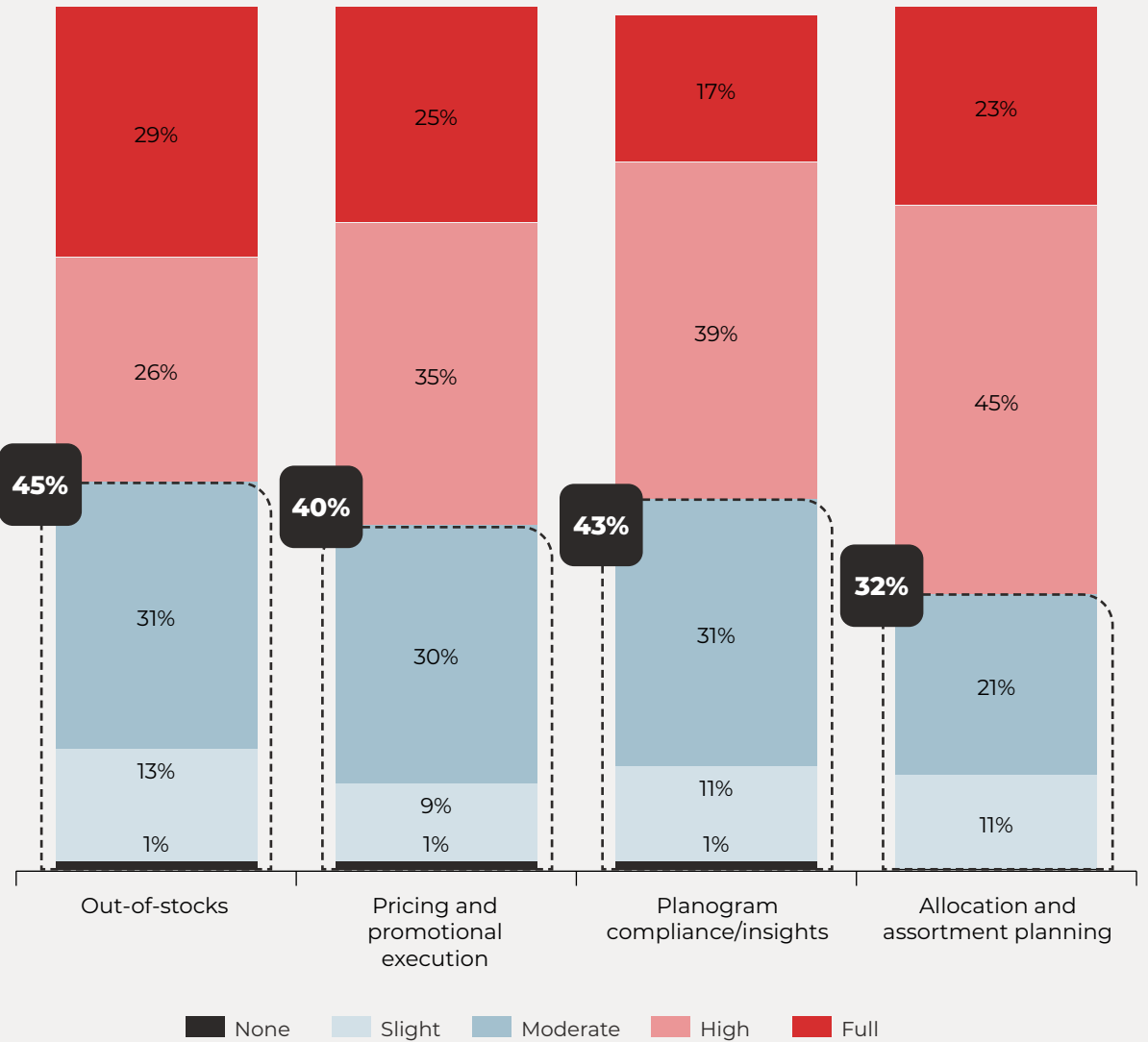
	Out-of-stocks	Pricing and promotional execution	Planogram compliance/insights	Allocation and assortment planning
Full	29%	25%	17%	23%
High	26%	35%	39%	45%
Moderate	31%	30%	31%	21%
Slight	13%	9%	11%	11%
None	1%	1%	1%	

Callouts: 45%, 40%, 43%, 32%

Legend: None | Slight | Moderate | High | Full

Percentages may not sum to 100% due to rounding
Base: 150 US-based retailers, surveyed on January 30–31, 2024
Source: Coresight Research

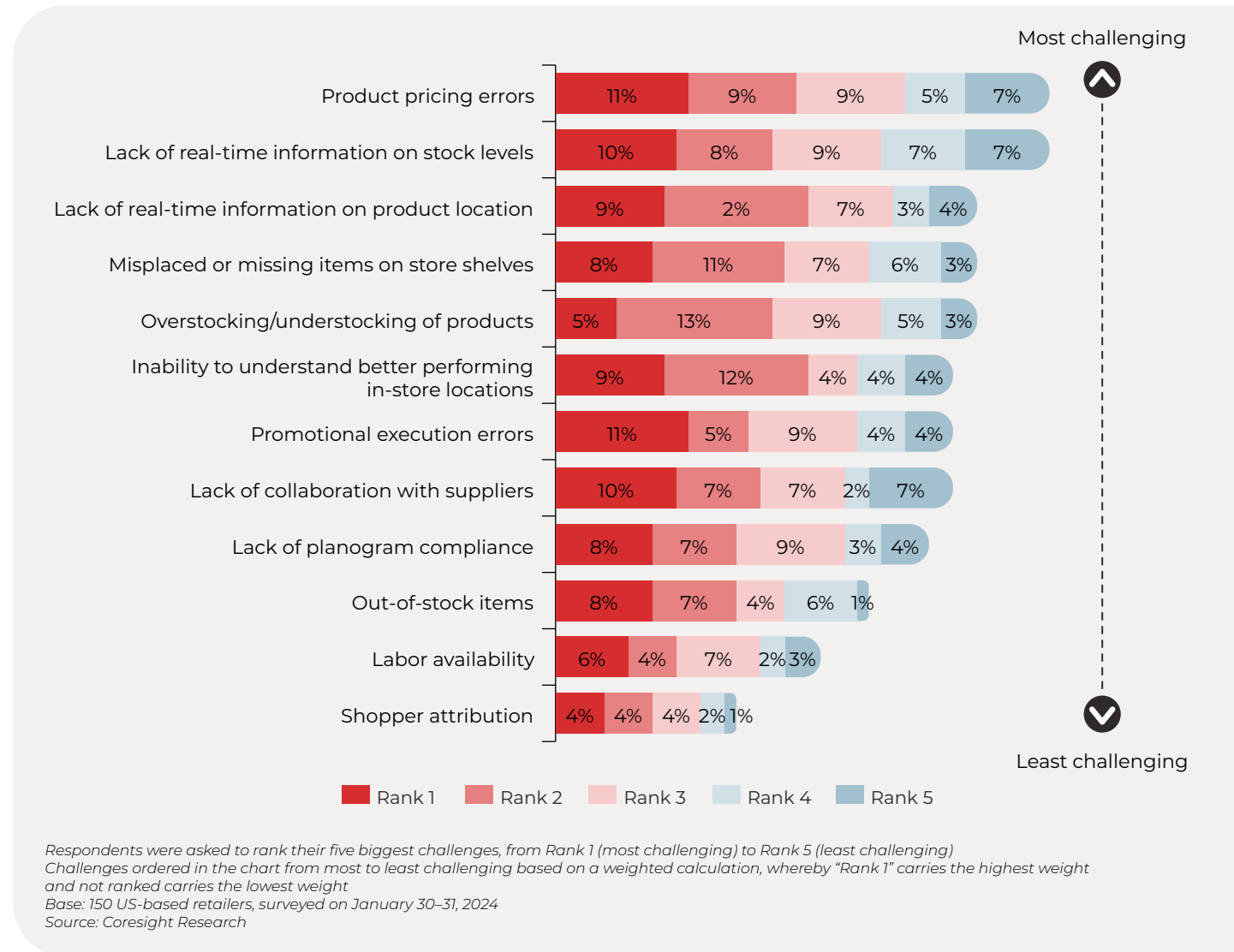# Product Pricing Errors and a Lack of Real-Time Information on Stock Levels Are Critical Obstacles to Success

Delving into the four key areas of in-store inefficiencies in further detail, our survey revealed that the most widespread challenges that retailers face—cited by at least 35% of respondents as among their top five challenges, as shown in Figure 5—are as follows:

- Product pricing errors— which can lead to customer dissatisfaction and revenue loss

- Lack of real-time information on stock levels—which can result in stockouts or overstocking, affecting profitability

- Lack of real-time information on product location—which can frustrate customers and waste staff time

- Misplaced or missing items on store shelves—which can result in lost sales and waste staff time

- Overstocking/understocking of products—which ties up capital/results in lost sales

Retailers need to address these challenges to enhance operational efficiency, improve customer satisfaction and drive sustainable business growth.

Figure 5. Challenges That Retailers Face with In-Store Inefficiencies (% of Respondents)

Most challenging

Challenge	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5
Product pricing errors	11%	9%	9%	5%	7%
Lack of real-time information on stock levels	10%	8%	9%	7%	7%
Lack of real-time information on product location	9%	2%	7%	3%	4%
Misplaced or missing items on store shelves	8%	11%	7%	6%	3%
Overstocking/understocking of products	5%	13%	9%	5%	3%
Inability to understand better performing in-store locations	9%	12%	4%	4%	4%
Promotional execution errors	11%	5%	9%	4%	4%
Lack of collaboration with suppliers	10%	7%	7%	2%	7%
Lack of planogram compliance	8%	7%	9%	3%	4%
Out-of-stock items	8%	7%	4%	6%	1%
Labor availability	6%	4%	7%	2%	3%
Shopper attribution	4%	4%	4%	2%	1%

Least challenging

■ Rank 1 ■ Rank 2 ■ Rank 3 ■ Rank 4 ■ Rank 5

Respondents were asked to rank their five biggest challenges, from Rank 1 (most challenging) to Rank 5 (least challenging)
Challenges ordered in the chart from most to least challenging based on a weighted calculation, whereby "Rank 1" carries the highest weight and not ranked carries the lowest weight
Base: 150 US-based retailers, surveyed on January 30–31, 2024
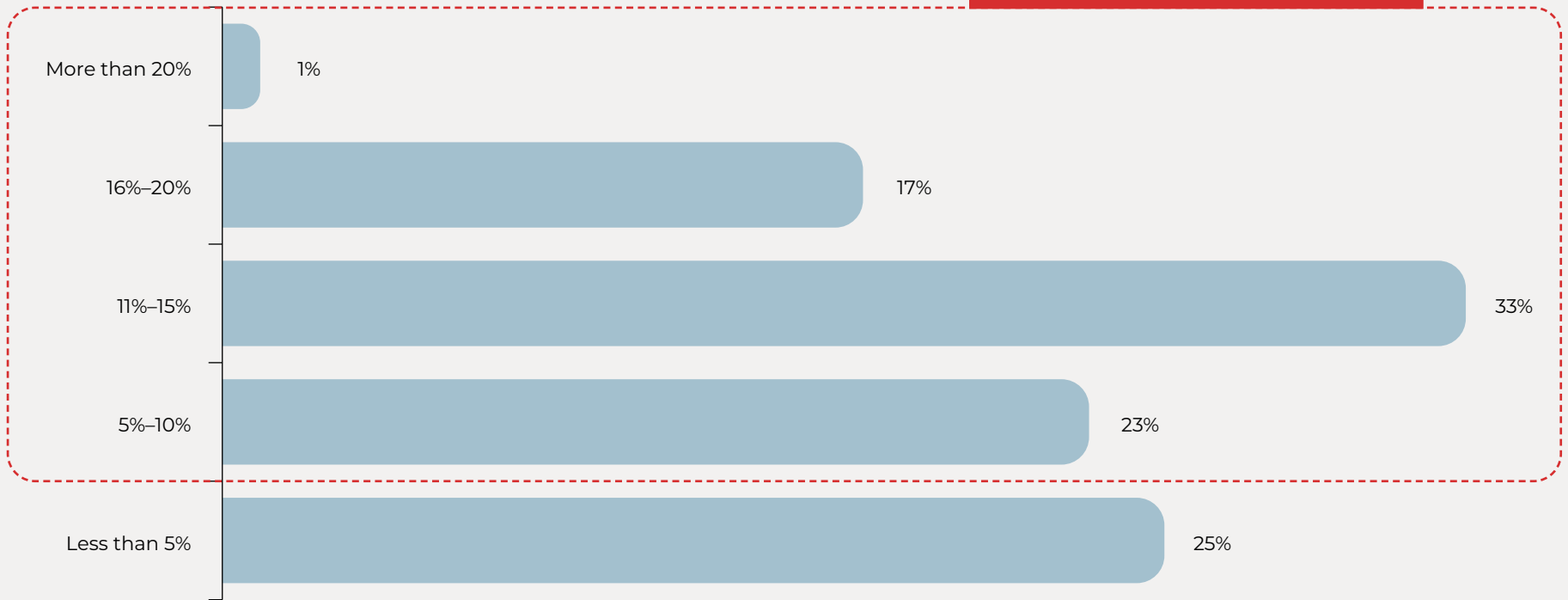*Source: Coresight Research*

Pricing errors are the topmost challenge: three-quarters of surveyed retailers reported a mispricing rate of at least 5%, and one in five retailers reported a rate of above 15%, as shown in Figure 6. (A mispricing rate is defined as the percentage of all products mispriced in any given selling period.)

High mispricing rates have multiple negative consequences, including loss of revenue, customer dissatisfaction and damage to brand reputation. By investing in robust pricing systems, implementing effective quality-control measures and providing comprehensive training to staff, retailers can reduce the likelihood of errors and bring down the mispricing rate.

Three-quarters of surveyed retailers experience a mispricing rate of at least 5%, emphasizing the widespread need to address pricing-related challenges

Figure 6. Mispricing Rate* (% of Respondents)

*Percentage of products that are mispriced on average in any given selling period
Base: 150 US-based retailers, surveyed on January 30–31, 2024
Source: Coresight Research

Store Inefficiencies Drive Significant Financial Losses

Around 40% of retailers have experienced gross sales loss of more than 5% due to each of the four types of store inefficiency, according to our survey (shown in Figure 7), with an overall average of 4.5% loss, we calculate.

As we highlighted earlier, poor pricing and promotion execution drives the greatest loss, on average (4.8%), followed by out-of-stocks (4.7%), a lack of planogram compliance (4.3%) and insufficient allocation and assortment planning (4.2%).
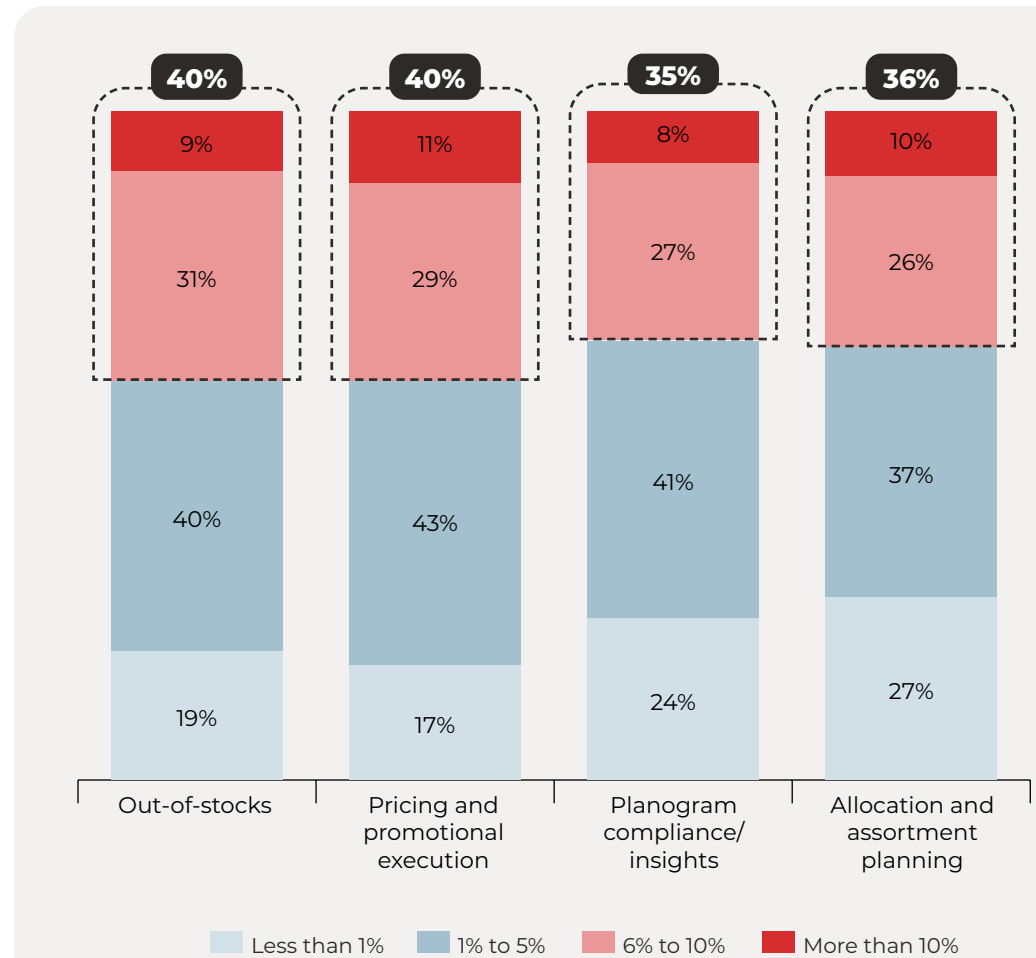
Diving into the data by annual revenues (using the specific, reported average sales loss for each subset), we estimate that store inefficiencies overall are resulting in the following absolute gross sales losses, on average:

- Retailers with revenue of $5–10 billion (average 5.5% loss)—$206.8 million

- Retailers with revenue of $3 to <5 billion (average 3.2% loss)—$63.8 million

- Retailers with revenue of $1 to <3 billion (average 3.8% loss)—$8.4 million

- Retailers with revenue of $100 million to <$1 billion (average 4.8% loss)—$2.1 million

These significant financial losses—especially, in percentage terms, for retailers with revenue of at least $5 billion—underscore the urgent need for retailers to address and mitigate in-store challenges to protect their top line and remain competitive in the market.

On average, retailers report overall gross sales loss of **4.5%** due to store inefficiencies

Figure 7. Percentage of Gross Sales Lost Due to Store Inefficiencies Across Store-Related Business Functions (% of Respondents)

	Out-of-stocks	Pricing and promotional execution	Planogram compliance/ insights	Allocation and assortment planning
(top label)	40%	40%	35%	36%
More than 10%	9%	11%	8%	10%
6% to 10%	31%	29%	27%	26%
1% to 5%	40%	43%	41%	37%
Less than 1%	19%	17%	24%	27%

Legend: Less than 1% | 1% to 5% | 6% to 10% | More than 10%

At least 70% of surveyed retailers report losing more than 5% operating margin due to each of the four types of store inefficiency, as shown in Figure 8. The impact on pricing and promotional execution is the most severe.

Figure 8. Percentage of Operating Margin Lost Due to Store Inefficiencies Across Store-Related Business Functions (% of Respondents)

At least 70% of surveyed retailers lose **more than 5%** operating margin due to each of the four types of store inefficiency

Function	5% or less	6% to 10%	11% to 20%	21% to 30%	More than 30%
Out-of-stocks	27%	37%	19%	11%	6%
Pricing and promotional execution	17%	39%	25%	14%	5%
Planogram compliance/insights	30%	31%	21%	15%	3%
Allocation and assortment planning	27%	29%	27%	14%	3%

Legend: 5% or less | 6% to 10% | 11% to 20% | 21% to 30% | More than 30%

Base: 150 US-based retailers, surveyed on January 30–31, 2024
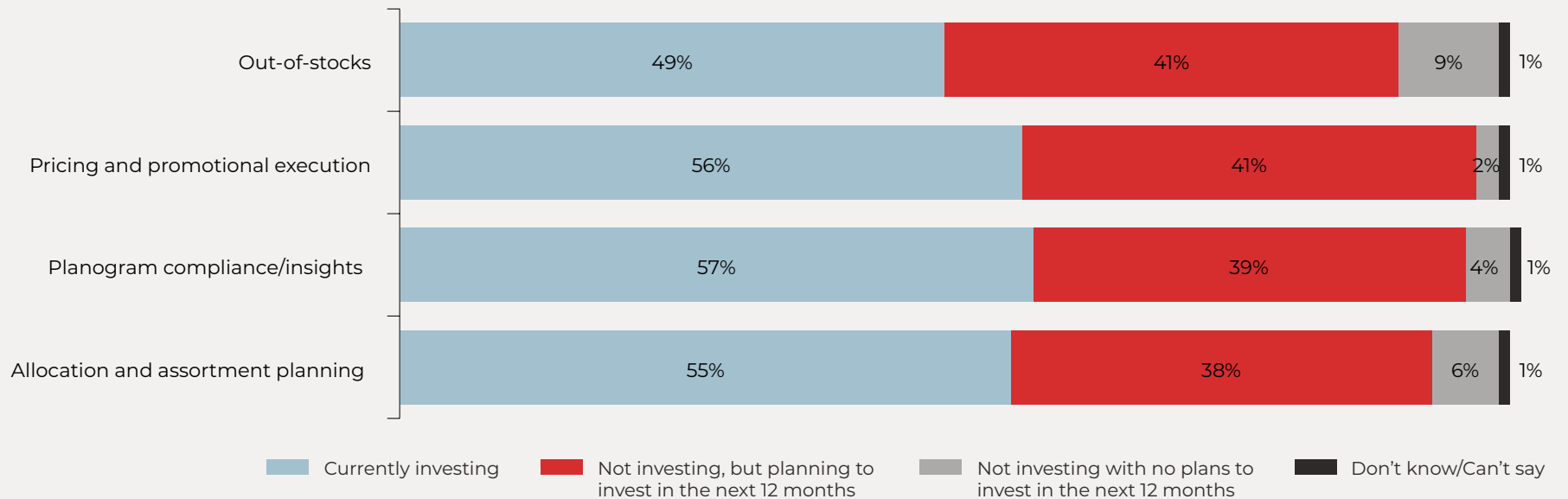*Source: Coresight Research*
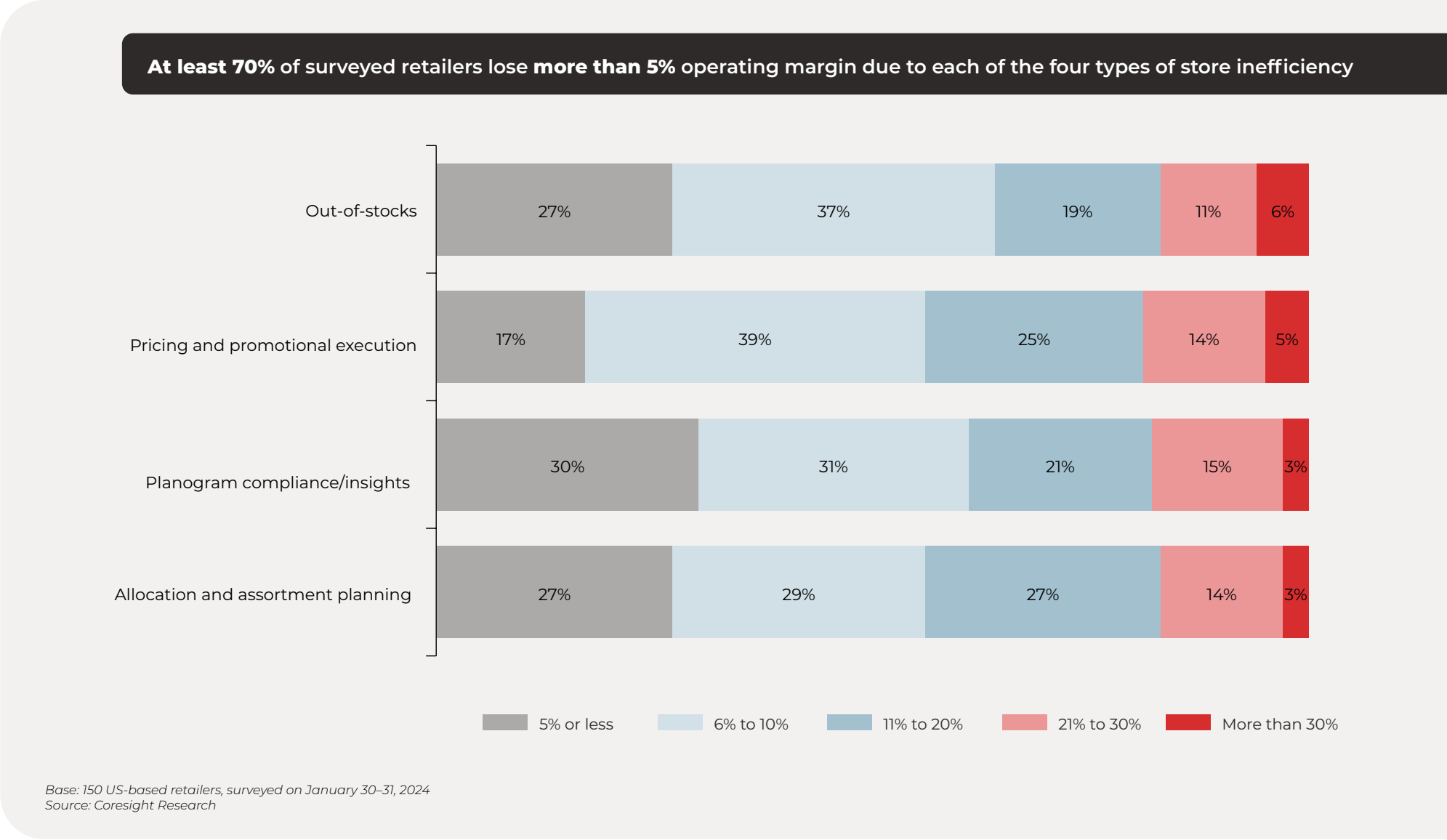
Retailers Recognize the Importance of Tech in Optimizing Store Operations To Enhance Efficiency

Our survey revealed that around half of all retailers are currently investing in store intelligence technologies to improve store efficiency across each of the four specified areas (see Figure 9), and a further ~40% are not currently investing but are planning to invest in the next 12 months. These high proportions reflect retailers' increasing awareness of the importance of technology in optimizing store operations.

Figure 9. Current Investment Status of Store Intelligence Technologies To Improve Store Efficiency Across Store-Related Business Functions (% of Respondents)

For each business function, at least four in five retailers that are not currently investing have plans to do so within the next 12 months
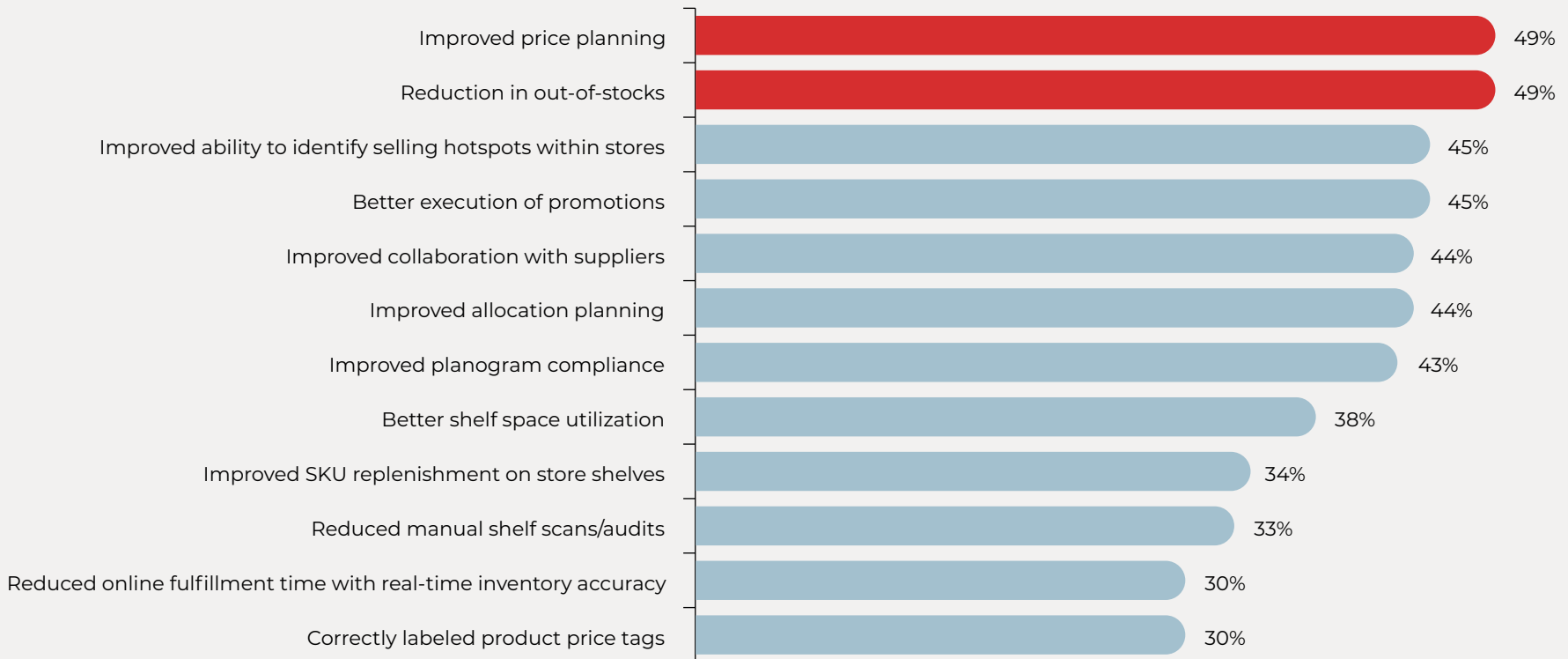
Business Function	Currently investing	Not investing, but planning to invest in the next 12 months	Not investing with no plans to invest in the next 12 months	Don't know/Can't say
Out-of-stocks	49%	41%	9%	1%
Pricing and promotional execution	56%	41%	2%	1%
Planogram compliance/insights	57%	39%	4%	1%
Allocation and assortment planning	55%	38%	6%	1%

Percentages may not sum to 100% due to rounding
Base: 150 US-based retailers, surveyed on January 30-31, 2024
Source: Coresight Research

Store intelligence technologies play a pivotal role in revolutionizing retail operations by optimizing critical store-related processes, with the most widespread positive impacts being in the domains of price planning and out-of-stock reduction, according to our survey (each cited by 49% of respondents).

Figure 10. Benefits of Store Intelligence Technologies That Retailers Have Seen Since Investing (% of Respondents)

Store intelligence technologies drive positive impacts across a variety of retail operations—notably, in price planning and out-of-stock reduction

Benefit	%
Improved price planning	49%
Reduction in out-of-stocks	49%
Improved ability to identify selling hotspots within stores	45%
Better execution of promotions	45%
Improved collaboration with suppliers	44%
Improved allocation planning	44%
Improved planogram compliance	43%
Better shelf space utilization	38%
Improved SKU replenishment on store shelves	34%
Reduced manual shelf scans/audits	33%
Reduced online fulfillment time with real-time inventory accuracy	30%
Correctly labeled product price tags	30%

Base: 150 US-based retailers that have previously invested in store intelligence technologies or are doing so currently, surveyed on January 30–31, 2024
Source: Coresight Research

Retailers Are Turning to Store Intelligence Technologies for Advanced Data Analytics, Optimized Pricing and Automated Inventory Tracking

Among surveyed retailers that are currently investing in store intelligence technologies, the highest proportions are investing in advanced data analytics solutions (62%), promotion and price planning/ optimization (60%) and automated inventory tracking systems (58%), as shown in Figure 11. These investments reflect retailers' efforts to stay competitive by meeting evolving customer expectations in today's dynamic retail landscape.

Furthermore, automated inventory tracking systems emerged as the top technology in terms of planned investments in the future. Such systems play a crucial role in improving in-store planning and operations by providing real-time visibility of inventory, facilitating efficient replenishment, enabling better forecasting and supporting data-driven decision-making. Partnering with vendors that offer automated inventory tracking systems presents retailers with an opportunity to improve operational efficiency, enhance customer satisfaction and gain a competitive edge in the retail market.

Retailers Are Turning to Store Intelligence Technologies for Advanced Data Analytics, Optimized Pricing and Automated Inventory Tracking

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Figure 11. Levels of Investment in Store Intelligence Technologies by Retailers: Current Investment and Future Plans (% of Respondents)

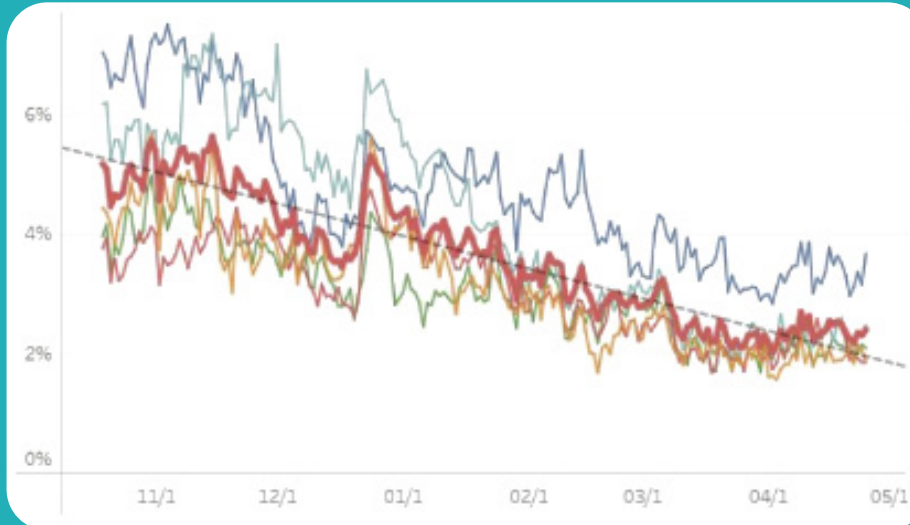|	Technologies	Solutions Included	Currently Investing	Plan To Invest in the Future
	Advanced data analytics solutions	**AI/ML-driven algorithms:** AI can analyze large datasets collected from various sources—such as sales transactions, product information, customer interactions and inventory levels—to generate insights. Techniques may include statistical analysis, machine learning (ML) and predictive modeling.	**62%**	**59%**
	Promotion and price planning/ optimization	**AI/ML-driven algorithms:** Dynamic pricing algorithms and scenario analysis enable retailers to adjust prices in real time based on market conditions, competitors' actions and customer preferences to maintain competitiveness and drive sales.	**60%**	**56%**
	Automated inventory tracking systems	**IoT sensors:** Coupled with barcode scanning and RFID (radio-frequency identification), IoT (Internet of Things) sensors monitor inventory levels in real time. RFID tags or barcodes attached to products allow for accurate tracking of items as they move through the supply chain and within the store. IoT sensors embedded in shelves or storage areas continuously monitor inventory levels and automatically update inventory management systems, enabling retailers to optimize stock levels, reduce out-of-stocks and minimize overstocking. **AI/ML-driven software:** Retailers can use AI and ML solutions to monitor sales, SKU (stock-keeping unit) and pricing data to identify anomalies (such as shrink) and inform replenishment decisions.	**58%**	**63%**
	Allocation and assortment planning software	**AI/ML-driven algorithms:** AI and ML solutions analyze sales data, inventory levels and market trends to determine the optimal assortment of products for each store or channel.	**51%**	**54%**
	Centralized communication platform with suppliers	**Centralized communication platform:** This technology provides a collaborative environment for retailers and suppliers to exchange information, coordinate activities and manage relationships more effectively. Such platforms typically include features such as messaging, document sharing, order management and performance tracking.	**45%**	**57%**
	Shelf-monitoring technologies	**Robotics:** Automated robots equipped with sensors, cameras and image-recognition algorithms can monitor product availability, shelf organization and promotional compliance in retail stores. **Shelf-edge cameras:** Cameras are typically installed at the front edge of retail shelves, usually facing downward or at a slight angle, to capture images of the products displayed on the shelves.	**41%**	**43%**

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Simbe's Dozens of Customers Reduce Out-Of-Stocks by Nearly 60% and Price Errors by Around 90%

We are already seeing notable examples of retailers leveraging technologies to improve store operations and planning and driving real business benefits as a result.

In a period of six months, across various retailers, Simbe's autonomous robot, Tally, helped multiple retailers reduce their out-of-stock rate by nearly 60%.

Simbe's Retail Clients That Use Tally: Out-of-Stock Rates (%)

Source: Simbe

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Below, we present case studies from Simbe that demonstrate the potential of these technologies in optimizing business decisions, enhancing customer satisfaction and boosting sales performance.

- **A Leading Food Distributor and Grocer Improved ROI**: A global food distributor and grocer rolled out Simbe's Tally and store intelligence platform in half its corporate-owned stores after proof of value in 15 stores. The retailer earned weekly labor savings of up to 30 hours, a 50% reduction in out-of-stocks, a 90% average reduction in pricing errors, a 4X ROI (return on investment) within 90 days of deployment in a store, and improved crime deterrence, according to the retailer and Simbe.

- **A Supermarket Chain Saved Labor Hours and Reduced Out-of-Stocks**: A leading regional supermarket chain based in the US improved operational efficiency and accuracy through the implementation of Simbe's platform. Tally helped detect out-of-stock items, outperforming manual store team counts by up to 10X, according to Simbe.

Tally has also driven significant labor savings, with an estimated reduction of 20 hours per store per month in PI (perpetual inventory) clerk hours compared to non-Tally locations. With potential operational expansion to automate ordering and checkout Tally could potentially save up to 35 hours per store per month, representing a substantial 70% reduction in PI clerk hours.

According to Simbe, Tally not only replaces existing activities conducted by store teams but also generates incremental output due to its ability to conduct multiple scans daily, highlighting its potential to revolutionize inventory management and operational efficiency in retail environments.

Simbe's Customer Benefits

- » Weekly labor savings of 20—30 hours
- » 50% reduction in out-of-stocks
- » 90% fewer pricing errors
- » 4X ROI within 90 days of deployment
- » 10X accuracy versus manual counts

| Images captured many times / day | Items & price tags localized / decoded | Missing & available items identification | Differentiation of low & OOS items | Insights by store chain-wide |

The process of how Tally captures, processes and analyzes data
(Note: OOS = out-of-stocks)
Source: Simbe

Simbe's crawl-walk-run framework (see Figure 12) is derived from dozens of industry leaders' best practices across multiple chain-wide deployments.
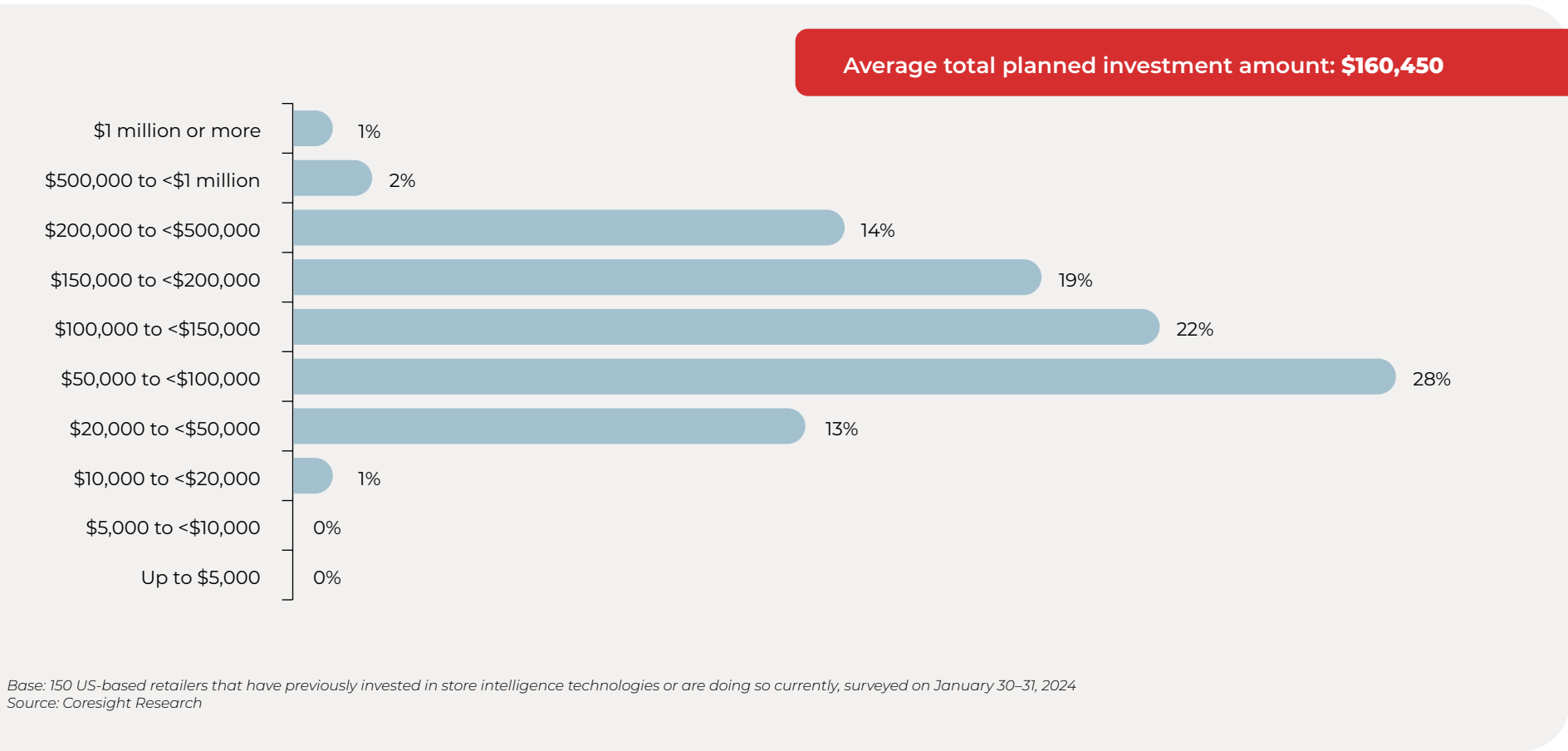
Figure 12. Simbe's Crawl-Walk-Run Framework for Technology Implementation

Phase	Jobs To Be Done	Tested Use Case	Involved Departments	Number of Stores	Time to Value
0	• Define priority use cases • Develop assessment criteria • Identify measurement channels • Align on Phase 1-3 success metrics • Hone business case	• In-store availability • Price & promotion execution • Real-time item location information • Inventory count data	Store Operations IT/Technology Finance Innovation	N/A	2–4 months
1	• Measure success metrics in one channel • Produce daily reports • Create prioritized lists to rectify issues	• Replenish items • Reorder products • Update prices & promotions	Store Operations Store Teams & Management IT/Technology	5-15	1–3 months
2	• Expand number of measured channels • Broaden metrics to include tier 2 benefits • Integrate with other systems	• E-commerce inventory • Online order fulfillment • Trade agreement compliance	Store Operations Store Teams & Management IT/Technology	100	3–6 months
3	• Investigate other applications • Monetize what you've learned	• ESL • Shrink reduction • Resell pricing, promotion & placement insights • Resell virtual walk capabilities	Store Operations IT/Technology Finance	Chain-wide	6–12 months

Source: Simbe

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Our survey found that 58% of retailers that are planning to invest in store intelligence technologies in the next 12 months will spend at least $100,000, and 17% are planning to invest at least $200,000. On average, retailers will invest $160,450, we calculate, indicating the importance that retailers place on using technologies to drive in-store business growth and reduce labor and operational costs.

Figure 13. Planned Investment (USD) in Store Intelligence Technologies in the Next 12 Months (% of Respondents)

Average total planned investment amount: $160,450

Investment Range	%
$1 million or more	1%
$500,000 to <$1 million	2%
$200,000 to <$500,000	14%
$150,000 to <$200,000	19%
$100,000 to <$150,000	22%
$50,000 to <$100,000	28%
$20,000 to <$50,000	13%
$10,000 to <$20,000	1%
$5,000 to <$10,000	0%
Up to $5,000	0%

Base: 150 US-based retailers that have previously invested in store intelligence technologies or are doing so currently, surveyed on January 30–31, 2024
Source: Coresight Research

Vendors can capitalize on retailers' willingness to invest by offering comprehensive solutions that address various aspects of store intelligence, including inventory management. By providing integrated solutions that meet retailers' evolving needs, vendors can position themselves as valuable partners in driving business growth.

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As the store technology landscape rapidly changes, retail decision-makers must understand the nuances of available platforms and solutions. Below, we present a checklist for retailers to use in adopting new store technologies.

Figure 14. Adopting New Technologies: Checklist for Retailers

Internal Readiness

Is the business ready to support technology innovation?

The success of a technology implementation requires support from all parts of the organization: management, the technical team and the front-line workers. Selecting the right tools derives from a clear view of the business case, as well as expected outcomes.

Are business and IT leaders aligned?

Impactful implementations of in-store technology depend on harmonization between the store operations and technology teams. It is also crucial that the new technology integrates well with the existing tech stack.

Has training been incorporated in the project plan?

It is important to ensure that employees support the project and that management has planned to make the changes to the organization, including procedures and training, to support the new technology.

Business Value

How does the ROI overlay onto your business?

Effective store technology deployment can yield positive ROI across the organization if the technology is chosen and implemented correctly. Retailers need to require vendors to supply case studies and metrics from several customers corroborating the success and ROI generated by targeted use cases.

Do capabilities contribute to multiple value streams?

Technologies can contribute multiple value streams, so it is important that retailers understand their use cases. Valuable use cases may include price and promotion accuracy, item location, planograms, supplier relationships, e-commerce efficiency, shrink and loss prevention as well as the corrective actions anticipated.

How fast is setup and time to value?

Retailers should understand that both full-chain deployment and time-to-value are both achievable, with proven installations indicating feasibility, ideally within a few months.

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Figure 14. Adopting New Technologies: Checklist for Retailers (continued)

Critical Proof Points

Has the technology been tested at scale?

After successful pilot testing, the retailer needs additional testing be confident that the technology can be deployed across hundreds of locations—if not chain-wide. Conducting background reference calls are important.

Will customers provide references on why they've been happy for years?

It is essential to have happy customers who can cite concrete examples about the long-term value of the technology, service, and business outcomes they have received.

Technology and Service Capabilities

What is the best sensing modality for your store format?

For example, autonomous robots are best suited for grocery and large-format environments, where one robot can traverse each location multiple times a day. Fixed cameras are best suited for smaller formats such as convenience stores, where retailers do not need to purchase, maintain and upgrade thousands of the expensive devices.

Regardless of sensor device type, do the computer vision devices offer sufficient precision to surface AI-driven insights?

Sensors and AI software need to provide accurate, repeatable results that do not require substantial human correction or interaction.

What SLAs does the partner provide?

Service level agreements (SLAs) should be vetted to ensure compliance across the organization and span coverage assurances, accuracy standards, time to value and hardware support.

What are the IT/infrastructure requirements?

Retailers need to plan for the infrastructure needs of any new hardware platform, such as connectivity, bandwidth requirements, as well as electrical and space requirements.

Source: Simbe/Coresight Research

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What We Think

Our survey findings illuminate the pervasive challenges facing retailers in managing in-store operations, highlighting issues such as out-of-stocks, pricing and promotion errors, planogram non-compliance, and ineffective allocation and planning, driven by supply chain disruptions and data deficiencies. Inefficient operations lead to revenue loss, eroded customer trust and diminished brand reputation, emphasizing the urgent need for technological investment, particularly in store intelligence capabilities, to enhance efficiency and competitiveness.

Retailers recognize the transformative potential of technology to optimize pricing, promotions and inventory management while fostering stronger supplier collaboration. The retail landscape is highly competitive, with consumer expectations continuously evolving. Retailers must leverage technology to stay ahead of competitors, enhance operational efficiency and deliver superior customer experiences. Failure to invest in store intelligence technologies may result in retailers falling behind competitors that have embraced innovation and are better equipped to meet changing consumer demands.

Implications for Retailers

- Retailers must prioritize technology investment to optimize pricing, promotion and inventory management, thereby improving customer satisfaction and driving sustainable growth.

Companies Poised To Gain Advantage

- Retailers that invest in store intelligence technologies stand to gain a competitive advantage by improving operational efficiency, optimizing pricing and promotions, and enhancing the customer experience. These retailers can leverage advanced data analytics and automation to streamline processes, mitigate losses and forge stronger partnerships with suppliers, ultimately driving sustainable business growth and resilience.

Companies That Risk Losing Advantage

- Retailers that fail to address store inefficiencies and adapt to evolving consumer demands risk losing their competitive advantage and market share. Without investments in technology and data-driven insights, these businesses may struggle to maintain optimal inventory levels, execute effective pricing strategies and deliver seamless customer experiences, thereby falling behind more agile and innovative competitors.

Implications for Technology Vendors

- Technology vendors specializing in store intelligence solutions are well positioned to capitalize on retailers' growing demand for innovative technologies. By offering advanced data analytics platforms, automated inventory tracking systems and pricing optimization tools, vendors can cater to retailers' needs for enhanced operational efficiency, revenue optimization and customer satisfaction. Moreover, technology vendors that prioritize collaboration and scalability in their offerings can build long-term partnerships with retailers and drive mutual success in the rapidly evolving retail landscape.

Notes

Data in this report are as of March 15, 2024.

Methodology

Informing the data in this report is an online survey of 150 decision-makers at US-based retailers, conducted by Coresight Research during January 30–31, 2024. The results have a margin of error of +/-10% at a 95% confidence interval.

Respondents in the survey satisfied the following criteria:

- Companies: Operating in the retail sector (including DIY (home improvement), drugstores, grocery, liquor, mass merchandisers and warehouse clubs/wholesalers), with annual revenues of at least $100 million

- Job title: Senior Director or above who are familiar with the performance metrics of their retail stores

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Sunny Zheng **Steven Winnick**
Senior Analyst Vice President—Innovator Services

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About Simbe

Simbe is a provider of in-store Intelligence™ technology, including solutions for out-of-stock management, pricing and promotion execution, planogram compliance and inventory management. Dozens of global customers use Simbe in four countries and the majority of US states to improve store performance while elevating their store teams' and shoppers' experience. For more information, visit https://www.simberobotics.com/