

For retailers, the ability to understand what is happening across stores and warehouses in real time and leverage intelligent data insights is essential to staying competitive amid today's market disruptions and volatility.

Smarter Retail: Multiplying ROI with Connected Intelligence

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Introduction

Retailers face a fast-changing, volatile market landscape with escalating margin pressures and shrinkage, macroeconomic uncertainty, and quickly evolving customer expectations that demand a new type of retailing — one that is intelligent and agile enough to respond to changing conditions quickly, increase efficiency, and better mitigate risks.

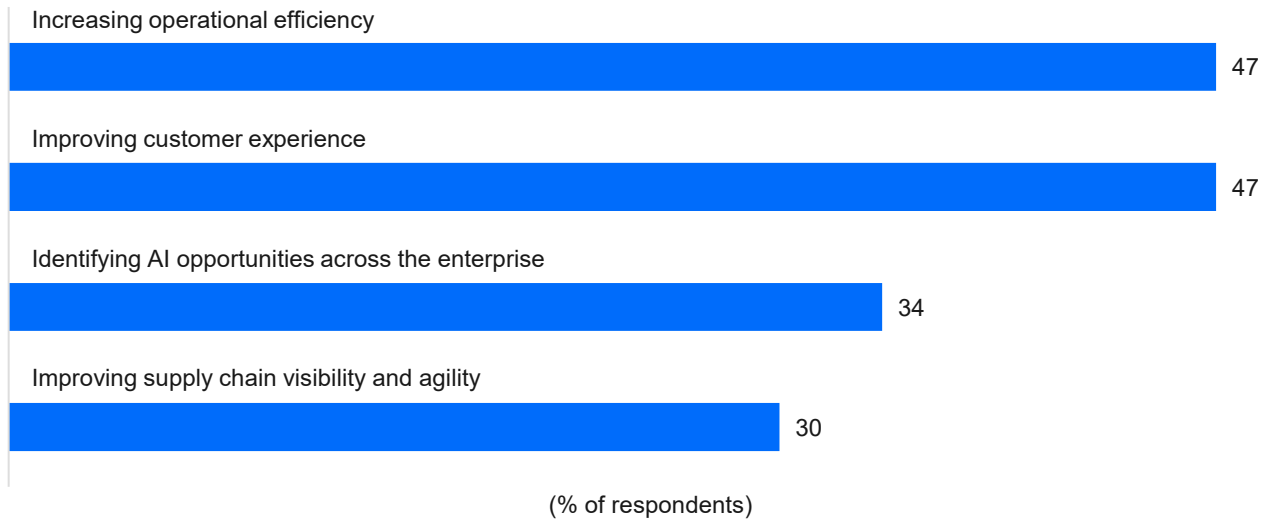
To remain competitive in this new environment, retailers can no longer rely on the fragmented, siloed systems of the past. Unified, integrated, connected data and digital technology are needed to fuel intelligence and drive success at the new pace of retail.

AT A GLANCE

KEY TAKEAWAYS

- Today's fast-moving, omni-channel retail requires new levels of insight and agility. Retailers need to transform operations into connected intelligent spaces to remain competitive.
- Connected intelligent network solutions that combine video/vision, audio, and IoT with AI analytics enables retailers to respond to events in real time and build valuable insights to improve performance over time.

Figure 1

Retailers' top priorities for digital transformation

Source: IDC's *Retail Technologies and Business Process Trends Survey*, March 2026 (n = 980)

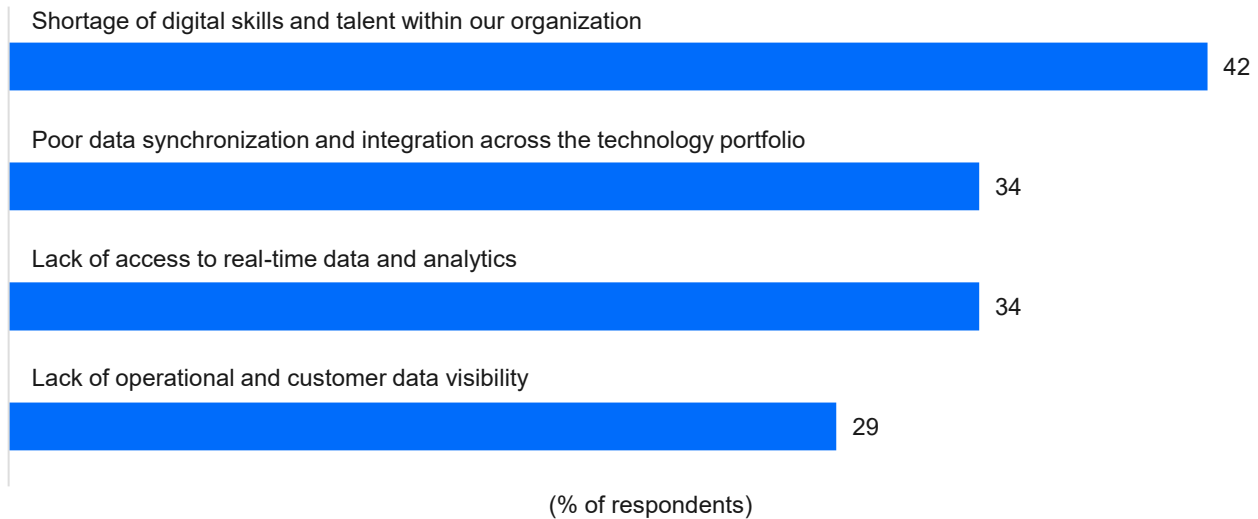
Connected intelligent retailing

Margin pressures, macroeconomic uncertainty, market fluctuations, and heightened customer expectations mean success now depends on retailers' ability to understand what is happening across stores and warehouses in real time, and to leverage data insights to respond intelligently while gaining new insights for future process improvements.

Retailers are embracing the power of data and AI to improve customer experience and drive more efficient, agile operations. AI is the top tech area for increased spending in 2026, with 66% of retailers planning to boost spending. However, 70% of retailers struggle with gaining the value from AI investments, saying business objectives were only partially met or completely unmet.

Retailers sit on a gold mine of data, but in many cases, the data is not connected or intelligent. This means retailers cannot leverage the true value of their data and AI to optimize their operations. Retailers strive to leverage digital transformation to achieve their priorities of improving operational efficiency and customer experience, as well as leveraging AI opportunities to improve business outcomes, but they recognize that they face significant challenges due to a lack of real-time integrated data.

Figure 2

Top challenges to executing a successful AI strategy

Source: IDC's *Retail Technologies and Business Process Trends Survey*, March 2026 (n = 980)

Since the challenges of today's omni-channel retailing require new levels of insight and agility, retailers that transform stores and warehouses into connected, intelligent, responsive spaces will gain essential opportunities to drive business success. Connected intelligent network solutions that leverage the power of AI-driven analytics and integrated, connected data can multiply gains in terms of operations, safety, and customer experience, thereby driving new business value from IT investments.

Benefits of Connected Intelligent Stores/Warehouses

Connected intelligent solutions represent a fundamental shift from the isolated, single-purpose systems of old to integrated, intelligent platforms that generate continuous, actionable insights. Combining video or computer vision, audio, AI analytics, and IoT sensors with a unified, intelligent data platform can give retailers a real-time view of what is happening and enable intelligent decision-making for real-time event response while building valuable insights to improve performance over time.

With connected intelligent network platforms leveraging AI-driven analytics, retailers maximize the value of surveillance cameras not only by enabling strong security and safety monitoring, but also by gaining new insights across stores and warehouses (e.g., shopper traffic and shelf intelligence) to optimize their business in multiple ways with a single system.

Retailers can see measurable value from investing in connected intelligence solutions, including improved revenue thanks to reduced fraud and loss, greater customer retention and loyalty, optimized stores, more efficient operations, and smaller revenue loss thanks to better monitoring of safety incidents. Examples include the following:

- » **Real-time data insights for better, more profitable operations**, including leveraging connected data insights for shelf intelligence to reduce stockouts, and intelligent store traffic insights to improve store layout to maximize profitability

- » **Enhanced customer experience for improved customer retention, loyalty, and sales**, including shelf intelligence to ensure the products customers want are on the shelf and traffic analytics to improve waiting times and increase customer service levels
- » **Proactive and improved safety and loss prevention to reduce costs**, including real-time loss prevention and safety/security monitoring and alerting in stores or warehouses, as well as intelligent data insights to reduce retail crime and loss proactively
- » **Improved operational efficiency for reduced costs**, including increased energy efficiency from intelligent sensing analytics and improved staff efficiency by leveraging automated access control

Key considerations for successful connected intelligence

The benefits of connected intelligence solutions are maximized by the flexibility to process data both locally, leveraging on-prem edge computing, and centrally, leveraging cloud. Retailers can determine the best balance for their needs of real-time intelligence and longer-term business insights, taking into consideration the higher bandwidth costs for cloud data processing. Open standard platforms are better to allow retailers flexibility to adapt and scale the solutions as operations change and grow, as well as facilitating integrations with new applications and partners.

Addressing Key Retail Challenges with Connected Network Intelligence

The value of connected intelligence platforms that leverage video/computer vision, audio, and IoT data through connected analytics can be seen across a wide variety of real-world use cases. Retailers deploy the solution to address some of the biggest challenges in today's fast-changing environment.

Challenge: Retail crime, shrinkage, and safety

Increasing incidence of retail crime and fraud, as well as escalating safety issues, which can significantly impact retailers' brand and bottom line

Case studies

A U.S.-based home furnishings retailer was battling significant losses from theft and vandalism in distribution centers.

The retailer prioritizes its commitment to reliable, fast customer delivery; therefore, it keeps millions of dollars of inventory readily available in its distribution centers. However, it needed to leverage private security services to protect distribution centers in higher-crime areas, in addition to surveillance systems.

- » **Solution:** The retailer deployed an intelligent video and audio perimeter security system with heat sensors and analytics designed to detect loitering and unidentified vehicles. Once detected, connected audio speakers are triggered to blare out loud warning messages to discourage potential criminal activity.
- » **Benefits:** The retailer saw theft and vandalism costs drop significantly to near zero; it further reduced costs by eliminating the need for private security services. Additionally, the retailer observed a positive impact on customer satisfaction, as delivery delays due to theft and vandalism were greatly reduced.

A Chile-based home improvement retailer faced shrinkage problems in its large-format stores and needed to enhance its existing surveillance system. The construction materials retailer sought solutions to strengthen its loss prevention efforts and empower security personnel to monitor and respond to incidents in real time.

- » **Solution:** The retailer added a real-time communications and audio system, including microphone paging consoles, speakers, and an audio management server integrated with its video surveillance system. The integrated system enables control center security staff to broadcast messages instantly to single or multiple locations to alert intruders and deter potential crime.
- » **Benefits:** The retailer significantly reduced losses within the first year with the integrated audio and video solution, with the retailer noting that the system "completely transformed our ability to respond to risk situations" while improving security across stores and distribution centers.

Challenge: Heightened customer expectations and reduced shopper loyalty

Consumers have higher expectations for shopping experiences and are increasingly abandoning carts or walking away from even their favorite brands if a store does not meet these expectations.

Case studies

Recognizing the impact of out-of-stock items on customer experience, a U.K.-based grocery chain needed a solution to enhance and maintain on-shelf availability. The retailer sought to retain customer loyalty and avoid lost sales from lack of shelf availability.

- » **Solution:** The grocer implemented an on-shelf availability solution that integrates real-time video data from its stores for intelligent insights on stock movement, supporting decisions that ensure the right items are on the shelves when shoppers want them. The software solution incorporates network cameras with integrated AI/analytics capabilities, together with intelligent cloud-based software, enabling real-time alerts to staff when items need to be restocked.
- » **Benefits:** The retailer found significant benefits from the integrated system, including greatly improved on-shelf availability and reduced manual workload for store associates by eliminating the need to monitor shelves constantly. The integrated data and analytics has also enabled the retailer to make intelligent decisions on inventory and forecasting, as well as optimizing product positioning in stores.

A Canada-based upscale autonomous market needed a solution to enable store security while maintaining good customer experience. Since the urban grocery stores do not have cashiers, the retailer prioritized the safety of its shoppers without introducing excessive friction that would diminish sales.

- » **Solution:** The retailer implemented a solution that integrates a mix of surveillance cameras, intercoms, and mini speakers, along with a cloud video management system to analyze data from various systems. Shoppers use an app to gain access to the store; for street-level stores, the retailer uses a dual interlocking door system to ensure only the shopper is let in. The solution uses connected intercom to make security seamless for shoppers, allowing them to pop in and out of the store seamlessly.
- » **Benefits:** The autonomous market experienced the benefits of good customer experience, security, and frictionless shopping, but it also found the integrated data and analytics from the network solution gives franchise owners strategic business insights that help them reduce shrinkage, analyze sales to adjust product mix, and enhance merchandising.

Challenge: Increasing operational efficiency and sustainable operations

Amid margin pressures, market volatility, and labor shortages, retailers are seeking solutions to increase efficiency and reduce costs.

Case study

A fast-growing Europe-based logistics center needed an intelligent network solution that strengthened security and safety while enabling the company to meet sustainability goals.

- » **Solution:** The logistics center implemented a unified network system that integrated energy-efficient multi-sensor cameras for full interior and exterior coverage. The solution also features network intercom solutions and advanced video compression technology to reduce storage and bandwidth requirements significantly.
- » **Benefits:** The connected network system has enabled better security and safety, with real-time detection of and alerting on security issues and occupational safety violations, as well as more sustainable operations with greater energy efficiency. Advanced analytics capabilities allow the company to analyze package routing and detect a variety of events.

Vendor Profile

Axis Communications, an intelligent network solutions vendor founded in 1984, provides solutions to improve safety, security, operational efficiency, and business intelligence. Axis offers connected network solutions that unify video, audio, access control, and other IoT sensors to create intelligent ecosystems for stores and warehouses. It has around 5,000 dedicated employees in over 50 countries.

Axis offerings enable a shared data foundation across systems for a unified view of operations while leveraging AI analytics to support intelligent decision-making, thereby improving business outcomes. Integrated systems include the following:

- » **Cameras/computer vision intelligence:** Network cameras combined with advanced AI analytics enable real-time event detection, as well as historical and proactive insight into operational trends and patterns.
- » **Audio solutions:** Network audio enables real-time communication, guidance, and real-time interventions as needed across the retail environment.
- » **IoT sensors:** IoT sensors monitor conditions such as temperature, movement, and air quality in real time and longer-term to support proactive strategies for improved efficiency.
- » **Access control:** Access control systems manage doors and restricted areas and generate data to support smarter operational planning and compliance.

Axis builds its systems on open standards to ensure easy integration and scalability as a retailer expands and grows. Designed to be "future-proof", the platform offers the flexibility to adapt to new use cases and technologies. Its secure-by-design approach ensures all systems meet rigorous privacy and local regulatory compliance requirements.

By leveraging AI-driven analytics, its intelligent connected network solutions can help retailers address a variety of challenges, including reducing theft and fraud, improving customer experience, optimizing store layouts, increasing

efficiency, and ensuring safety and security across stores and warehouses for multiplied value. Axis customers have implemented the vendor's offerings in a variety of use cases, including the following:

- » Eliminating long wait times by leveraging in-store audio to automatically trigger extra staff support, ensuring a seamless checkout experience
- » Gaining intelligent insights into shopper traffic to devise more effective store layouts to increase sales
- » Implementing intelligent entrance and exit surveillance to detect and deter unwanted behavior with automated audio or light alerts to reduce crime/theft
- » Ensuring safety and security at storage and loading docks with access control, license plate recognition and other automated processes and leverage video to verify and track deliveries
- » Improving energy efficiency by using real-time occupancy insights to optimize the operation of lighting and heating, ventilating, and air conditioning (HVAC) systems, or monitoring and alerting for open cooler doors/exterior doors

Axis has nurtured an extensive network of partners to extend the benefits of its systems. Access to trusted partner solutions helps retailers implement integrated network systems that address their specific needs. Axis prioritizes energy efficiency, designing cameras to use less power for greater efficiency and cost savings, and camera resiliency, which reduces the need for technician service calls.

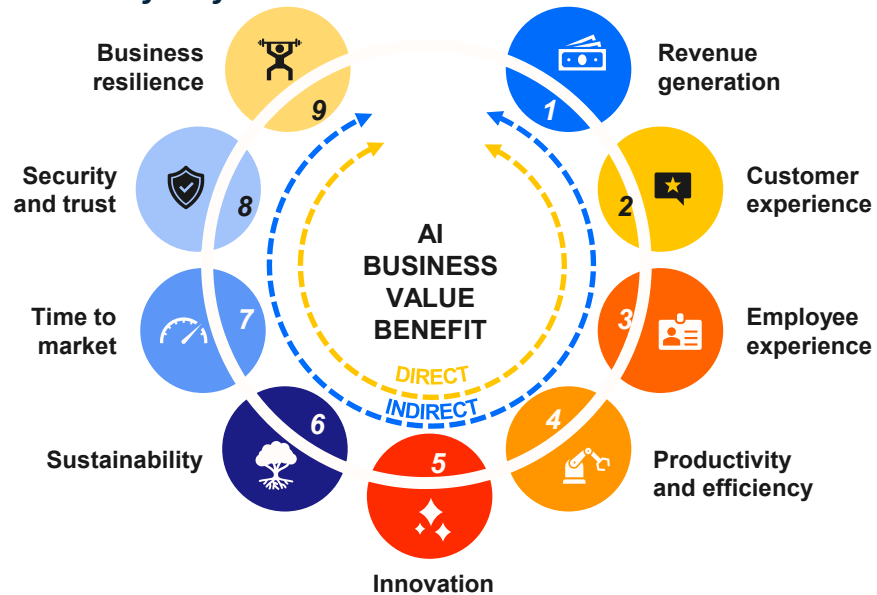
Challenges

Today, IT investment to enable unified, integrated operations across channels and functional areas is imperative in retail to close gaps that erode profitability and customer experience. With retailers struggling to realize returns on AI initiatives, they are prioritizing digital investments that demonstrate improved outcomes. IDC sees expanded business value from AI-driven initiatives, including additional parameters such as customer experience, security and trust, productivity, employee experience, and business resilience, contributing to measures of value. Intelligent network solutions do require upfront costs and investments, which may be prohibitive for some retailers wanting to implement new or upgraded systems. However, many retailers who have made the investment have seen ROI within a short period of time, with system benefits such as reduced shrinkage, reduced energy costs, and improved profitability from store optimization.

Figure 3

The expanded "business value benefit" of AI

IDC's AI Business Value Benefit Framework encapsulates key parameters needed when measuring ROI potential for AI use cases and projects. It involves nine categories — a mix of direct and indirect indicators.



Source: IDC Directions: Reimagining ROI in an AI World, May 2025

VI. Conclusion

- » IDC believes that connected intelligent solutions enabling real-time view and intelligent insights across stores and warehouses are essential for success in today's fast-changing environment.
- » Retailers that build real-time connected intelligent data layers leveraging solutions from vendors such as Axis Communications will gain real, strategic value to drive better business outcomes and stay ahead of the competition.

"Connected intelligent solutions enabling real-time intelligent insights across operations are essential for success in today's fast-changing retail environment."

About the Analyst



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Margot Juros is a Research Director for IDC Retail Insights and is responsible for the Worldwide Retail Platforms & Technologies research program. Ms. Juros's core research focuses on examining best practices, discerning emerging trends/critical business concerns, and evaluating market conditions and vendor offerings to provide authoritative advice on IT investment strategies and the optimal use of technologies for modern retail IT infrastructure. Her research covers key technologies for retail transformation, including cloud/edge, AI/GenAI/agents, cybersecurity/security, data management, payments, unified platforms, mobile, and networking/5G/Wi-Fi.

MESSAGE FROM THE SPONSOR

Driving operational excellence through integrated network intelligence

Modern retail success depends on the transition from siloed security systems to integrated, data-driven ecosystems. By unifying network video, audio, access control, and IoT sensors, retailers can establish a shared data foundation that extends beyond traditional loss prevention to enhance overall operational efficiency.

When these connected technologies are paired with AI-driven analytics, stores and warehouses gain the agility to respond to real-time events (e.g., optimizing staff deployment based on queue lengths or automating energy usage through occupancy insights). This integrated approach ensures that technology investments contribute directly to business outcomes, improved safety, and long-term profitability.

Integrated solutions: Unifying video, audio, and sensors for a comprehensive view of operations

Actionable insights: Leveraging AI to transform raw data into informed decision-making

Scalable architecture: Utilizing open standards to ensure systems evolve with changing retail needs

To learn more about optimizing your store operations, visit <https://www.axis.com/solutions/retail/store-optimization>

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