

IDC PERSPECTIVE

The Future of Enterprise Connectivity in Retail — Key Investment Areas to Accelerate Efficiency and Time to Revenue

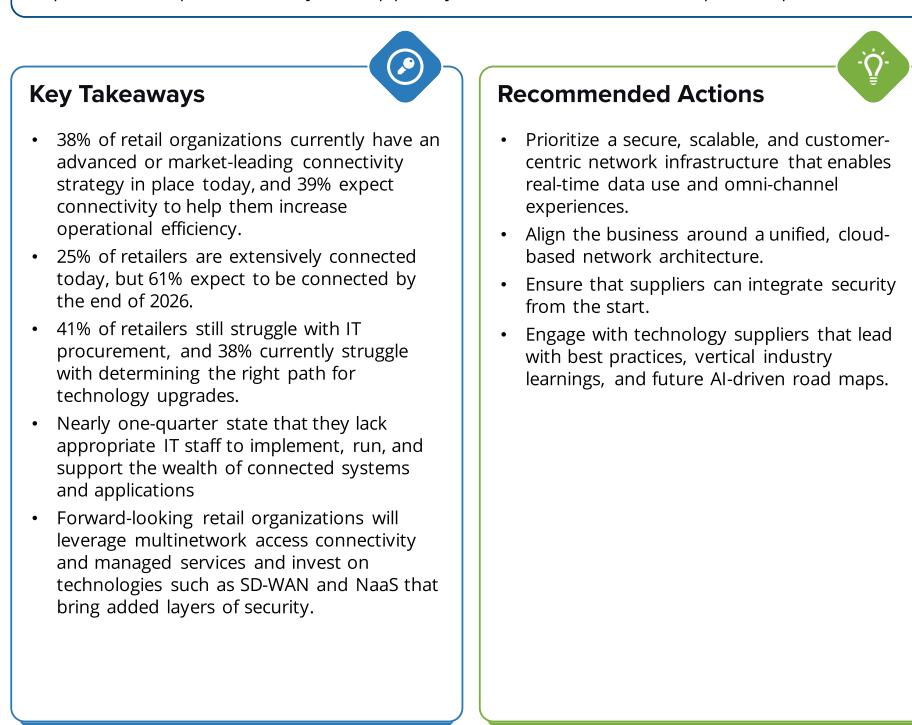
Paul Hughes

EXECUTIVE SNAPSHOT

FIGURE 1

Executive Snapshot: The Impact of Connectivity Transformation on the Retail Industry

With customer loyalty and competitive pressures constantly evolving, retailers need a new level of flexibility when it comes to connectivity infrastructure. Recent economic headwinds from tariffs and a renewed uncertainty of the supply chain put data and data intelligence at the forefront, enabling retailers to pivot quickly in order to address issues in real time. Efficient operations and customer experience have put connectivity as a top priority to ensure that sales and output are optimized.



Source: IDC, 2025

SITUATION OVERVIEW

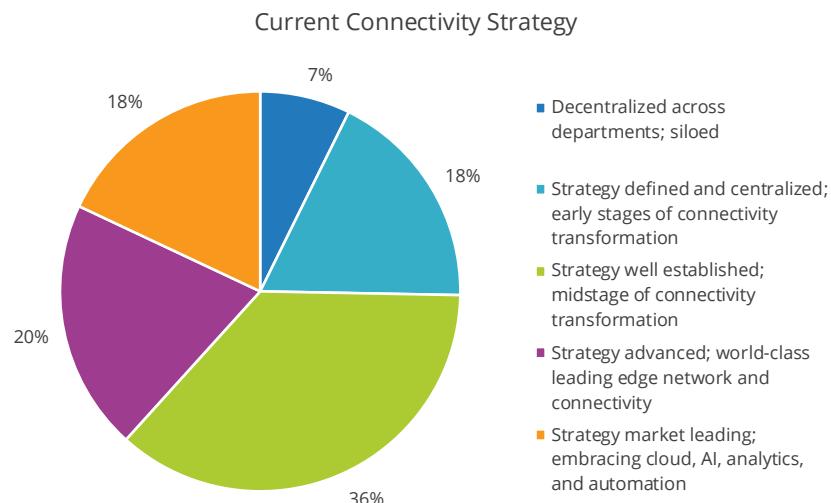
Today's retailers face the never-ending challenge of keeping shelves stocked, products aligned to customer needs, and customers happy in the store and online. Whether brick and mortar, digital, or both, the retail industry relies on connectivity more than ever to ensure the supply chains keep products on the shelves and revenue coming in. Today, retailers need a new level of flexibility when it comes to connectivity infrastructure. The ability to automate critical processes; leverage cloud computing and applications for data analysis, trending, and customer engagement; and use artificial intelligence (AI) to eliminate past data bottlenecks and improve customer satisfaction are top priorities for connectivity-related investment. Recent economic headwinds from tariffs and a renewed uncertainty of the supply chain put data and data intelligence at the forefront, enabling retailers to pivot quickly in order to address issues in real time.

As digital business transformation takes center stage for both brick and mortar and online retailers, the importance of leveraging data and automation for efficient operations and customer experience has put connectivity as a top priority to ensure that sales and output are maximized. Virtually all retailers have relied on wired connectivity for point-of-sale terminals and Wi-Fi for mobile devices; however, the increase in IoT usage inside the store and the need for instant access to inventory management systems and mobile payments directly at the customer location have driven the need for increased reliability and low latency.

IDC data shows that wireless connectivity continues to expand as a critical part of the road map to the agile connected enterprise (RACE), pushing retailers to consider fixed wireless access or related technologies to complement existing wireline connectivity with wireless technologies. This IDC Perspective explores the current connectivity challenges retailers face, expected outcomes from digital business transformation, and key connectivity technologies such as Wi-Fi 7, private 5G, SD-WAN, unified communications, and cloud connectivity — and how they are helping improve and accelerate the retail experience for the customer.

Top Connectivity Trends and Challenges

IDC data shows that the retail industry lags behind other industries in terms of the advanced development of the connectivity strategy, with just 18% retailers stating that their strategy is market leading today (see Figure 2) and 54% still in the process of transforming their connectivity strategy.

FIGURE 2**State of Connectivity Strategy and Top Challenges for Retailers**

Top Connectivity Challenges	Retail Respondents (%)
Network security	32
Incorporating new/emerging access/networking technologies (e.g., 5G, Wi-Fi 6, SD-WAN, Private LTE/5G, cloud)	27
Outdated network management tools	25
Managing and optimizing hybrid networks	20
Transforming networks to be more virtualized, scalable, and agile	20

n = 751

Source: IDC's Future Enterprise Connectivity Survey, September 2024

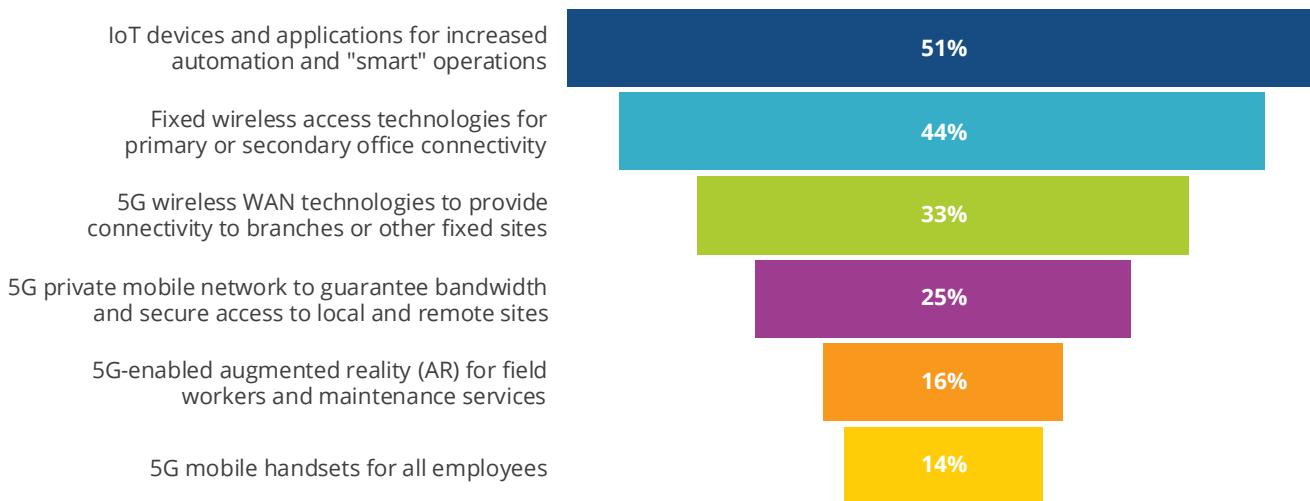
As retailers move down the path to becoming more agile and connected, prioritizing robust and scalable connectivity solutions to support digital initiatives has become an imperative. For large brick-and-mortar stores with physical stores located across a region, continued investment in fiber-optic networks and high-speed broadband has become critical to ensure reliable communication between stores, warehouses, and datacenters. Large retailers such as Walmart have invested in connectivity to support supply chain optimization, including the use of IoT and blockchain for in-store shopping experiences and the use of data analytics to help make smarter decisions in real time. Clothing retailers Lululemon and Uniqlo are using RFID technologies to improve inventory management processes and facilitate the checkout process.

The adoption of wireless technologies is also enhancing in-store experiences, where customer interactions, purchases, and payments now take place anywhere within the store. Figure 3 shows that more than half of retail organizations are using IoT devices and applications to improve in-store automation and increase operational efficiency.

FIGURE 3

Adoption of 5G Wireless Technologies Across the Retail Sector

Q. Which of the following 5G wireless technologies are helping your organization's employees stay connected with each other, customers, and partners?



n = 751

Source: IDC's *Future Enterprise Connectivity Survey*, September 2024

Addressing Operational Efficiency, Revenue Growth, Innovation, and Customer Experience

In IDC's 2024 *Future Enterprise Connectivity Survey*, IDC asked retailers to identify the top 3 important business outcomes that their organizations are trying to achieve from new and ongoing connectivity initiatives over the past 12 months:

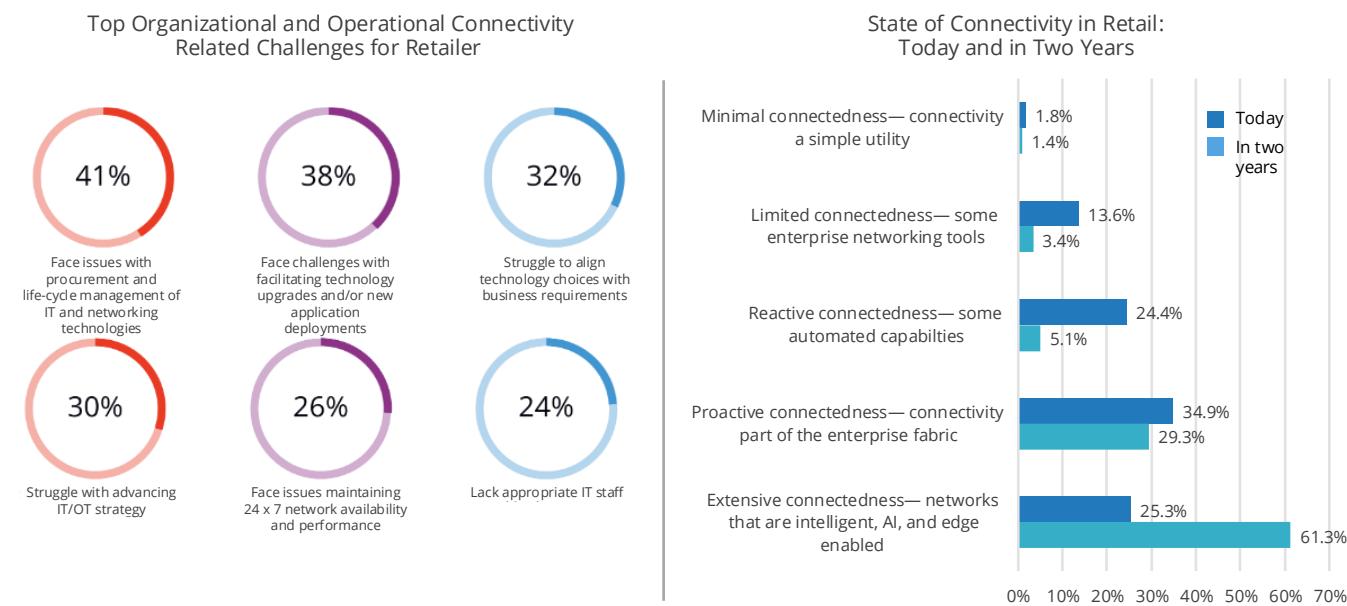
- **39%** stated that they were expecting to increase operational efficiency
- **26%** stated that they were expecting to increase revenues
- **24%** were expecting to innovate their business faster
- **22%** expected to improve customer satisfaction

In an optimally designed retail environment, automation is becoming integral to accelerating time to sale and improving efficiency. From smart warehouses to the implementation of robotics, AI-driven inventory management and automated sorting systems enhance supply chain efficiency and connectivity has become a requirement to ensure operations are nimble and efficient. IoT and RFID at the inventory level, connected self-checkout kiosks, electronic shelf labels, and automated returns all play a role in reducing operational costs and enhancing customer satisfaction.

The path to operational optimization is underway, but 41% of retailers still struggle with IT procurement, 38% currently struggle with determining the right path for technology upgrades, and nearly one quarter state that they lack appropriate IT staff to implement, run, and support the wealth of connected systems and applications (see Figure 4). Manufacturing organizations have also indicated that their timelines to address these issues are short. As shown in Figure 4, while one fourth of retailers are extensively connected today, 61% expect to be so by the end of 2026.

FIGURE 4

State of Connectivity Strategy and Top Challenges for Retail Organizations



n = 751

Source: IDC's *Future Enterprise Connectivity Survey*, September 2024

From an operational perspective, advancements in connectivity give retailers the ability to digitize their business processes and make sales interactions faster and more efficient, including:

- Smarter digital processes enable AI-driven inventory management, and automated sorting systems enhance supply chain efficiency.
- Increased mobility and IoT embedded in the sales processes, self-checkout kiosks, electronic shelf labels, and automated returns allow shoppers to "feel in control" of much of the retail process, which helps reduce operational costs and enhance customer satisfaction both at physical and digital/online locations.

- Easier access to cloud applications that centralize control of various applications, facilitate real-time data access, power AI-driven analytics help retailers understand customer preferences. This in turn facilitates personalized marketing and product recommendations in real time at the store and online, which helps ensure streamlined operations.
- IDC expects that digitally driven retail organizations will focus on integrating advanced technologies such as AI, IoT, and cloud computing to drive innovation and efficiency, but they will also invest in its employees. Through technology supplier training programs, the most efficient retailers will equip employees with the skills required to operate new technologies effectively.

Advancing Network Infrastructure — Top Areas for Investment

Retailers are already aligning their future connectivity plans to ensure the business can adapt to the changing demands of the supply chain and the customer. Customer loyalty has become critically important at a time when price sensitivity, digital/online "shop from home" retail options, political motivations, and the ever-changing economic impact of tariffs create uncertainty. For any retailer, a multinet access connectivity strategy is already a requirement and investment in key technology areas is already planned.

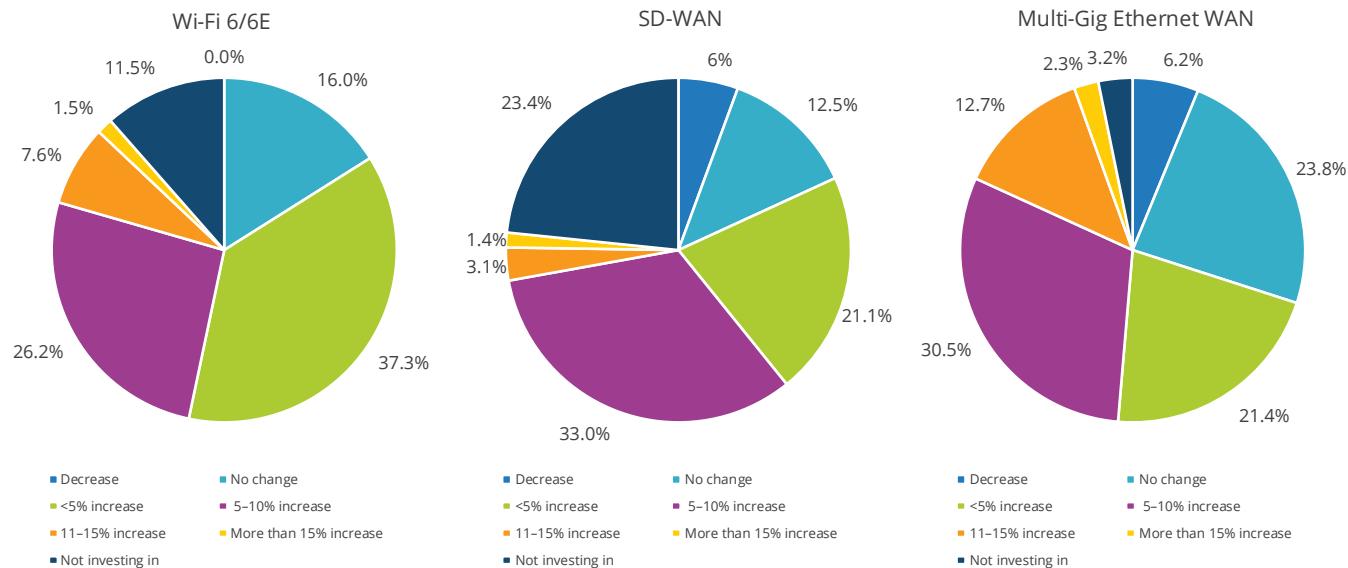
Enterprise Network-Centric Solutions and Services

Figures 5 and 6 show investment expectations and growth for key enterprise connectivity segments for the retail sector.

FIGURE 5

Retail Sector Investment in Enterprise Networking Infrastructure

Q. *How much will your organization's use and investments in these connectivity-related products and services change over the next 12 months?*



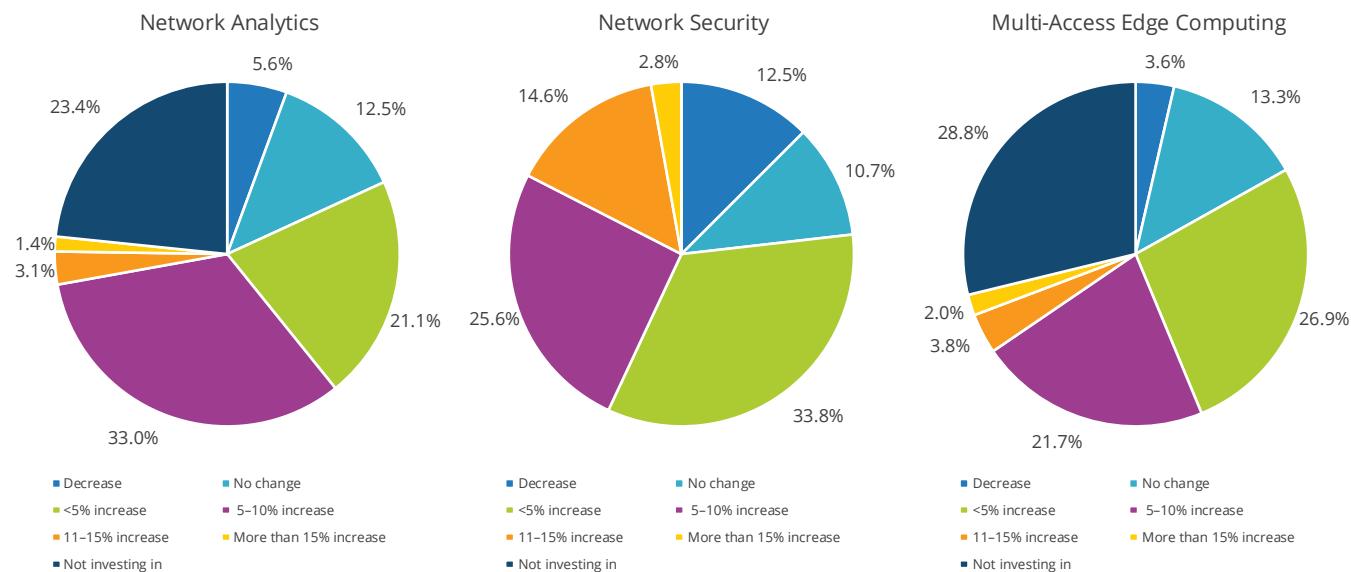
n = 751

Source: IDC's Future Enterprise Connectivity Survey, September 2024

FIGURE 6

Retail Sector Investment in Enterprise Networking Solutions/Tools

Q. How much will your organization's use and investments in these connectivity-related products and services change over the next 12 months?



n = 751

Source: IDC's Future Enterprise Connectivity Survey, September 2024

IDC data shows that in some other key areas of connectivity for retailers:

- 42% are using *SD-WAN* as part of their enterprise architecture, with 12% planning to migrate by the end of 2025.
- Two-thirds of retailers are increasing investment in *smart IoT solutions* as the technology becomes critical for employee productivity and customer satisfaction.
- 52% are increasing investment in the use of *network as a service*, though only 5.5% are increasing investment by more than 10% at this point of time.
- 61% are increasing investment in *managed network services* to allow the organization to focus on the business; 17% are increasing investment by more than 10%.
- 77% are increasing investment in *cloud-based unified communications and collaboration applications (UCaaS)*, with 21% increasing investment by more than 10%.

AI Investment in Networking and Operations

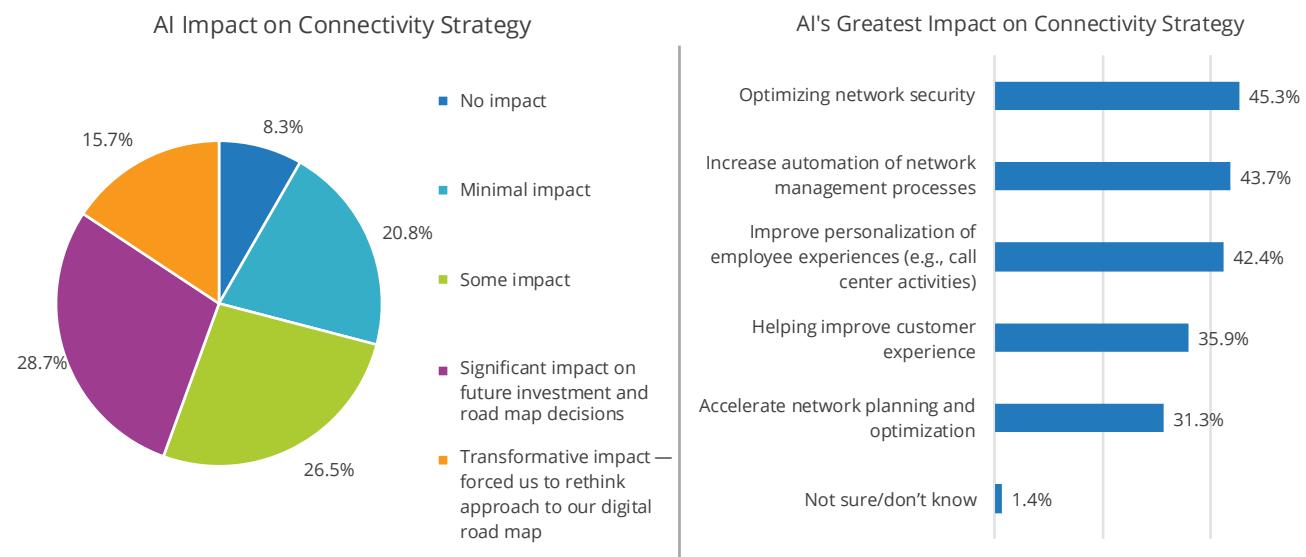
Retailers, while in the middle of the pack in terms of connectivity strategy compared with other verticals, are following a similar pattern to other industries, with an expectation that AI will be used as a tool to improve network security and automate key network management functions. AI's uncertainty and promise drive rising expectations for network systems and services, staff skills and responsibilities, technology solutions and suppliers, external service providers, and internal cost controls. While many expect an accelerated path forward in AI's use and impact, it also creates a new set of challenges as to how and where it will impact the business the most.

Figure 7 shows that today, 44% of retailers expect that AI will have a significant or transformative impact on their connectivity strategy and road map and the top areas of impact on connectivity revolve around improving network security and increasing automation of network management processes.

FIGURE 7

AI and Connectivity and Their Impact on the Retail Sector

Q. *How is generative AI impacting your connectivity strategy and road map today? Where do you see generative AI impacting your network and connectivity strategy the most?*



n = 887

Source: IDC's Future Enterprise Resiliency and Spending Survey, Wave 6, June 2024

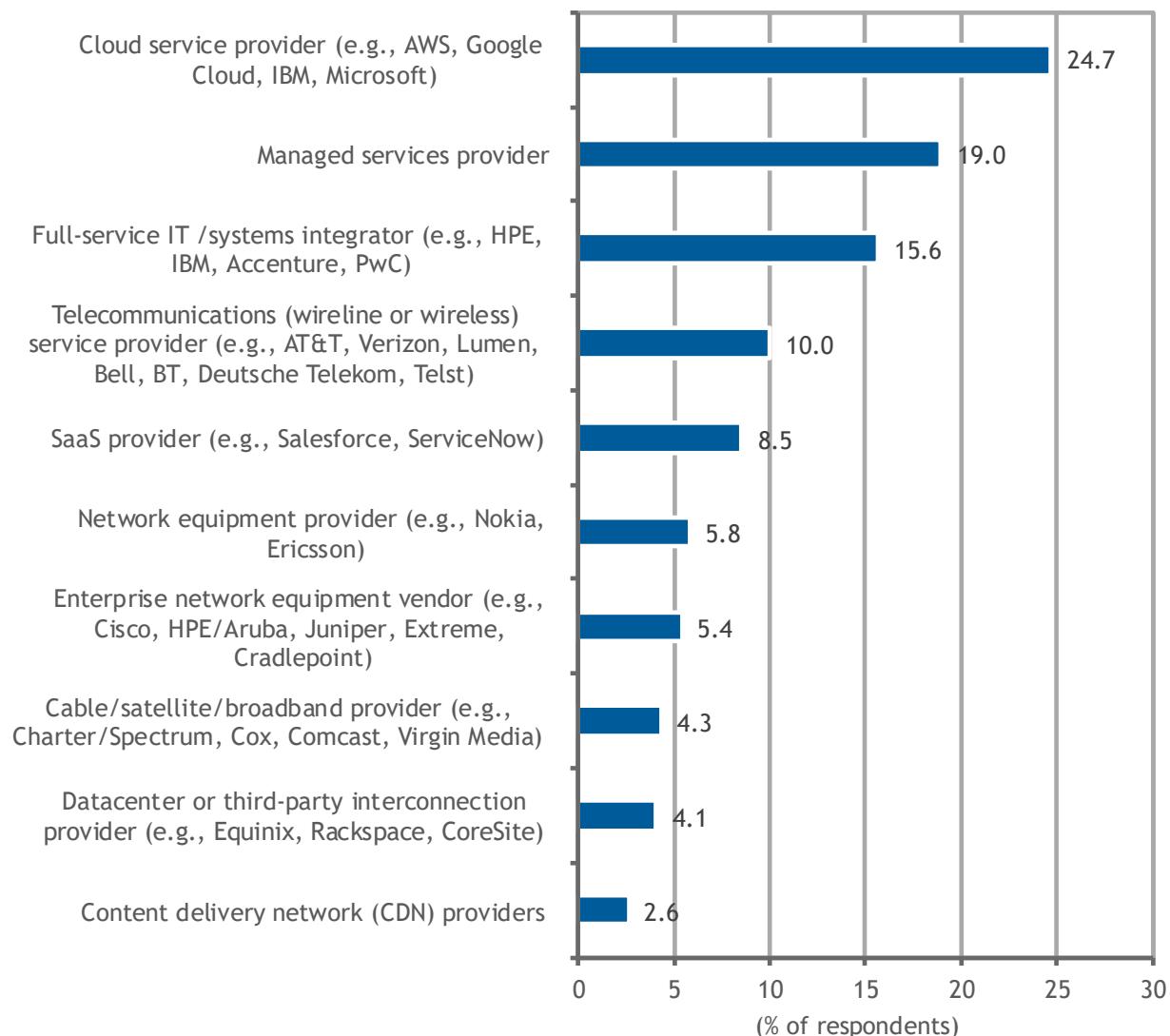
Figure 8 shows that for AI and strategy, connectivity-related players are not currently in a leadership position in terms of strategy and road map. While one-fourth of retailers turn to their cloud provider for guidance, just 10% turn to their telco and 4% turn to

their cable/broadband provider for support. This highlights the fact that cloud service provider partnership and cloud service integration have never been more valuable in the networking ecosystem and are more essential than ever for the connectivity providers to leverage in the short term. For connectivity providers, a platform approach, partner ecosystem, and proven solutions and practices will be keys to success as they look to bolster perceptions and presence over the coming years.

FIGURE 8

Top Partner for Strategic Guidance for AI and Connectivity

Q. *Who do you see as your top partner for providing strategic guidance and input for your road map around generative AI and your connectivity initiatives?*



n = 887

Source: IDC's Future Enterprise Resiliency and Spending Survey, Wave 6, June 2024

Note: All numbers in this document may not be exact due to rounding.

ADVICE FOR THE TECHNOLOGY BUYER

Connectivity within the retail industry is now more essential than ever, and as seen in this document, the time frame to reach the point of extensive connectivity is extremely short. Future-looking retailers should be looking to create a connected infrastructure footprint that combines connectivity resiliency and flexibility together to improve efficiency and improve the customer experience. As AI data integration becomes increasingly important to better manage the supply chain and accelerate smarter transactional processes in the store and online, IDC expects retailers will embrace more managed connectivity services and network as a service that allow them to create consistent, centralized, and cost-controlled processes across fixed, pop-up, and online locations.

As retailers move down the path to becoming agile and connected, IDC offers the following advice:

- **Prioritize a secure, scalable, and customer-centric network infrastructure that enables real-time data use and omni-channel experiences.** Retail customers expect consistent experience across online, mobile, and in-store platforms. Evaluate the role of each connectivity technology, and align it to business, employee, or customer outcomes.
- **Align the business around a unified, cloud-based network architecture.** Flexibility and adaptability are the name of the game here ... building a centralized network that leverages XaaS (e.g., SD-WAN with cloud-based management, NaaS) will reduce complexity and enable fast scaling across store locations.
- **Ensure that suppliers can integrate security from the start.** As with any vertical industry that scales locations, the footprint of connected devices and locations expands the attack plane, making embedded network security an essential requirement from day 0.
- **Engage with technology suppliers that lead with best practices, vertical industry learnings, and future AI-driven road maps.** As AI adds another layer of complexity to networking, IT, and business operations, partnerships with connectivity providers and cloud service providers become even more essential and integration has never been more valuable in the networking ecosystem.

LEARN MORE

Related Research

- *The Future of AI in Networking and Network Management, 2025: Part 2 — Expectations for Enterprise Adoption Across WAN, LAN, and Cloud* (IDC #US53232325, March 2025)
- *The Future of AI in Networking and Network Management, 2025: Part 1 — Expectations for Enterprise AI Adoption Across Private Wireless and the Network Edge* (IDC #US53230825, March 2025)
- *Enterprise Adoption of AI for Private 5G Network Management and Operations: A Regional Perspective* (IDC #US53192725, February 2025)
- *Top Trends in Enterprise Connectivity for 2025* (IDC #US53145525, February 2025)
- *Verizon Business Innovation Session in Los Angeles Highlights Enterprise Private Wireless Network Adoption and Importance of Ericsson Partnership* (IDC #US52893324, December 2024)

Synopsis

This IDC Perspective takes a look at top connectivity challenges, timelines for connectivity transformation, top areas for investment growth, and the impact of AI. Retailers face the onslaught of internal and external pressures to deliver a high-value experience to customers in physical stores and online. Higher levels of automation and increased importance of data intelligence had accelerated the timelines for retailers to adopt faster, more reliable, and secure connectivity technologies. As AI-driven transformation takes center stage, the massive increase in data and automation puts connectivity as a top priority to keep customers loyal and employees productive.

"61% of retailers expect to be extensively connected across their physical and digital footprints by the end of 2026, a significant jump from 2024," commented Paul Hughes, research director, Future Enterprise Connectivity Strategies at IDC. "Retail organizations are expected to invest significantly in new AI-driven connectivity platforms and tools and are following a similar pattern to other industries with AI, and while the cloud providers are their top partners for AI strategy, we expect many will look to managed connectivity services and providers as the way to stay ahead of the curve from a network perspective and allow key employees to stay focused on the business."

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