



Level Up the Connected Store with 5G

Building the stores of the future will require retailers to establish infrastructure on strong, reliable networks.

Retailers Prioritize Investments in Reliable Networks to Gain Competitive Edge



of retailers/wholesalers say **connectivity programs** (including enterprise network infrastructure, 5G, Wi-Fi, and mobile applications) **will be top priorities to ensure long-term resilience and success.**

Source: IDC Future Enterprise Resiliency & Spending Survey, February 2021, Retailers n = 62



of retailers **plan to begin investing in 5G by 2025.** The remaining 37% will do so by 2030.

Source: IDC 2020 Industry IT & Communications Survey, July 2020, Retail n = 142



of retailers say the **top way 5G networks** will play a role in business will be by **enabling new capabilities for the organization.**

Source: IDC 2020 Industry IT & Communications Survey, July 2020, Retail n = 142

Retailers Increase 5G Investment to Deliver on Consumer Demands

Retailers acknowledge that COVID-19 brought about new customer expectations and demands. The changes in consumer behavior will persist as convenience, speed of service and personalization have become commodities. The global pandemic drove consumers towards digital experiences, resulting in many customers favoring those over analog options. According to IDC data, consumers are shopping 90% more online; 20–40% of shoppers have adopted new technologies (mobile apps, contactless payments, and kiosks); almost half of consumers will only shop at stores that offer flexible fulfillment and returns; and the top two technologies that impact guest satisfaction are self-checkout and real-time inventory information.

This paints a picture for the store of the future and the elements that will drive competitive advantage: intelligent, connected, flexible/agile, as contactless as possible, and fully integrated systems across all digital channels to offer a 360-degree view of the enterprise.

Retailers that have upgraded networks have enjoyed the advancements that have been made with 4G/LTE networks, but the capabilities inherent in the next-level connected store will require the ability to extend network connectivity to even more sensors and devices, distributing more data and information over available network bandwidth, and sensing and responding in real time. With platforms in place to cull disparate data from across the enterprise, many additional use cases can be implemented including customer engagement analytics, curbside pickup (license plate identification), parking lot security, in-store security, in-store inventory management, risk avoidance and tie-ins to customer engagement via responsive digital signage, POS, kiosks, smart shelves, and augmented reality. Retail technology strategies will increasingly feature data and automation to improve productivity and profits.

5G offers immense potential as a foundation to enable improved customer experience, employee productivity, replenishment, and omni-fulfillment by enabling high bandwidth needs with faster speeds, low latency, and high density. This potential is driving investment in 5G products and services with nearly 20% of retailers planning to increase spend more than 20% in 2021. (Source: *COVID-19 Impact on IT Spending Survey*, IDC, December, 2020; $n = 648$, Retail $n = 67$)

Key attributes of the store of the future extend the scope of connectivity throughout aisles and beyond the four walls of the store. New store formats will allow customers to engage with retailers as they wish—from walking the store and scanning digital shelf tags with mobile devices to get more information and dropping a product into a digital cart to using a curbside pickup lane, self-service locker, or pickup counter to receive goods. Retailers will need to enable these avenues to facilitate seamless returns as well, updating inventory reports in real time.

Modernizing with Scalable Platforms to Enable Competitive Use Cases

Many of the capabilities inherent in the “future store” will require a variety of physical technologies, including smart devices such as mobile readers, sensors, kiosks and shelves, and a software-defined environment for collecting data and making use of it. To enable improvement in productivity and increase profitability, retailers must invest in modernization of the networks to reliably deliver on these connected services that will drive throughput and increased sales.

Retailers will require flexible, scalable infrastructure on which to layer evolving and expanding use cases. IDC Retail Insights predicts that by 2025, digital shelves, real-time inventory visibility, robotic fulfillment, and automated checkout will increase investment in connected store edge platforms by 10 times over current forecast levels and accelerate rollout plans by two years.

Edge is an area of focus for more than 90% of retailers and it is a key part of retail digital transformation over the next three to five years for almost 20% of retailers, according to IDC's 2020 *Industry IT & Communications Survey*, July 2020.

As retailers increase the number of IoT devices and analytics, 5G will be beneficial due to its lower latency and higher reliability and speed—especially as more consumers and employees are accessing and utilizing the services. Those same benefits that are driven by 5G can be even better through the edge as 5G increases the speed at which messages, data, and alerts can be communicated through the edge-deployed network.

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