

The Future of Retail, Powered by 5G

Here's how retailers can
tap 5G technology to meet
customer expectations



verizon^v

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Savvy shoppers expect digital tools to enhance their retail experience, deliver customized product recommendations and facilitate buy online/pickup in-store options. For today's shopper, the retail “front door” is often opened on their mobile device or home computer, with 73% of all store visits beginning online, according to Incisiv's 2022 Connected Retail Experience Study¹. Retailers need the right infrastructure in place to handle the network bandwidth these technologies demand.

The Incisiv study found that 93% of respondents expect shoppers to increase their in-store use of mobile devices over the next three years, and 83% think the amount of in-store tech offered in their stores will increase. The paradox for retailers is that the increase in technology will create additional strains on networks that are already having difficulty with current bandwidth demands.

In fact, the Incisiv study revealed that only 26% of retail executives are satisfied with their ability to manage peak network traffic and 28% are satisfied with application response time. “Retailers are not very satisfied with their current network performance, which will continue to be stressed as they add more in-store technology,” said David Naumann, marketing strategy lead for retail, travel and distribution at Verizon, referring to the survey results.

The answer to these technology and bandwidth constraints may be 5G and mobile edge computing (MEC). The adoption of 5G is anticipated to accelerate quickly, as indicated by the Ericsson Mobility Report² that predicts 5G mobile subscriptions will exceed 1 billion in 2022. The two significant challenges facing retailers as they evaluate an upgrade to 5G are understanding the use cases beyond faster connectivity and ensuring its cost-effective delivery.

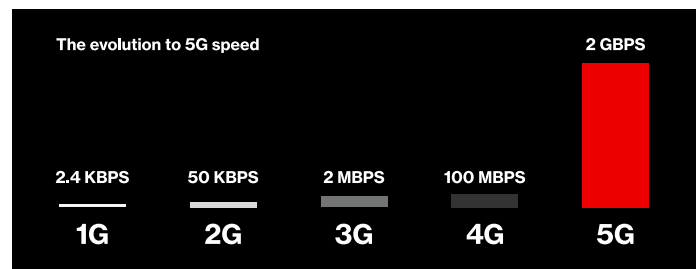
A closer look at 5G

5G is the latest generation of wireless technology, and can offer stronger performance than previous wireless networks in virtually every aspect of digital usage – including downloading and processing, video play, data transfer, real-time communication and connected device functionality.

5G not only offers faster speeds, it offers a strong foundation for future innovations and capabilities. Retailers need a flexible foundation that allows them to collect and analyze data at the edge

and respond rapidly to customer behaviors and business activity. It's these innovations that can enable retailers to enhance customer experiences, increase operations efficiency and improve supply chain agility.

The adoption of 5G could change the world of retail. “We are seeing interest in adopting 5G as a communications platform,” says Jerri Traflet, Verizon's managing partner, global solutions. “With the performance 5G can provide, software updates for applications could eventually be made in the middle of day without significantly slowing down operations, and we should see an improvement in the speed of cloud-based point of sale (POS) and other mobile applications used by store associates and customers.”



Enhanced retail customer experience use cases

Many new innovations for retail are coming to fruition, and many of these technologies can benefit from the speed and power that 5G can provide. These bandwidth heavy technology use cases can enable retailers to enhance customer experiences:

- **Augmented reality (AR) and virtual reality (VR):** AR and VR enable brands to engage with customers by giving them further insights into products, such as how an object would look in their home or how styles and colors of apparel would look on their body. These immersive digital experiences can help build a relationship between brands and customers with personalized

interactions on in-store kiosks and mobile devices. AR and VR give stores a way to garner instant feedback and interaction with customers. With massive bandwidth and low latency, 5G Ultra Wideband can support the fast response rates needed for seamless AR/VR collaboration.

- **Autonomous checkout:** Customers who opt into autonomous checkout technology can walk into a store, select merchandise and simply walk out. This is made possible through use of shelf sensors or computer vision cameras that track customers' purchases and automatically charge the payment card on their account. Enabling customers to shop without the need to stand in a checkout line enhances customer convenience.

"Autonomous checkout and consumer scan-and-go technologies should increase dramatically based on two key factors. First, with the expanding availability of 5G and the cost of autonomous checkout technology decreasing, it is becoming much more cost effective. In addition, with high labor costs and shortages of workers, reducing the need for employees to process transactions will help alleviate staffing issues," Naumann said.

- **Wayfinding apps:** A customer can access wayfinding guidance right on their phone, helping them locate items by aisle or by giving them a step-by-step route to the merchandise they're looking for. In addition, retailers can send notifications to customers opting to receive alerts of special offers and promotions when they are near an item or product category in the store.

"Wayfinding, integrated with marketing promotions and analytics, can enable retailers to make consenting customers aware of offers and promotions that are customized based on their unique preferences and shopping history," explains Traflet. "The retailer can also benefit from an understanding of how such customers shop the store,

what is the path to purchase, where do they dwell, and are goods properly positioned based on traffic flow, which can help optimize merchandise planogram strategies."

Efficient operations use cases

5G can offer a variety of efficiencies that help improve operations and boost a retailer's bottom line:

- **Associate mobile tools** – With labor shortages and elevated customer expectations, mobile tools can enhance associate productivity and customer service. With mobile POS, associates can ring up sales anywhere in the store to allow customers to conveniently check out and avoid long lines. Mobile customer relationship management (CRM) tools enable associates to provide customers personalized recommendations. Leveraging videoconferencing tools can enable associates to complete training or attend team calls remotely, and AR and wayfinding tools help them stock shelves or find products in the store.
- **Digital shelf labels** – Printing new price labels and attaching them to shelves is a cumbersome, labor-intensive task. With digital labels, price changes can be made remotely and instantly from the corporate office. Digital labels can also provide customers additional product information and add value for retailers by displaying advertising and promotions.
- **Cold chain monitoring** – Instead of requiring associates to monitor and record the temperature of frozen and refrigerated goods, retailers can have Internet of Things (IoT) sensors do the work, providing virtually error-free, time-stamped information for auditors. If an equipment malfunction is detected, a cloud-based app could automatically notify a service technician, potentially before it even causes a problem.



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Seamless supply chain use cases

As the US struggles to manage the fallout of supply chain bottlenecks, the need for efficiency is more pronounced than ever.

The right tech can go a long way toward easing the strain on supply chains. 5G could enable a myriad of enhancements for supply chain coordination, such as:

- **Real-time inventory tracking** – With radio-frequency identification (RFID) tagging or IoT sensors, retailers can track inventory in real time across the enterprise and throughout the supply chain. Inventory information can be integrated with an artificial intelligence (AI)-driven ordering system that can replenish goods automatically as inventory levels reach predefined thresholds, to help prevent overstocks and out of stocks. Inventory visibility can also be accessed on consumer apps, informing shoppers which stores have products in stock.
- **Automated warehouses** – Warehouses can leverage robots in backrooms or distribution centers to load or unload trucks, move merchandise and pick merchandise and assemble customer orders. Robots are often more efficient than employees, and using them can help reduce potential staff injuries. According to a [McKinsey report](#), “automation capabilities will play an influential role in the future size and scale of omnichannel networks.”

Conclusion: The future of retail is here

The new era of retail is here, and those who embrace technological advances will enhance customer experiences, improve operational efficiency and supply chain agility. Today’s shopper is looking for a tech-enhanced retail experience, and labor and supply chain challenges are driving retailers to deploy innovative technology to solve these issues. To meet this demand, a retail business needs network speed, low latency and bandwidth to build a strong foundation – all of which can be achieved by stepping into the future with 5G’s core capabilities.

Now is a perfect time to take action to future-ready your network, even if 5G is not available for all your store locations. Verizon has network solutions that provide the ability to scale, adopt the latest technology and remain agile to meet ever-changing customer demands. With these new solutions, enterprises can leverage Verizon’s 4G LTE fixed wireless access (FWA) today and easily upgrade to 5G when it is available in more locations.

Verizon also offers a Network as a Service (NaaS) platform that can provide enterprises with a cloud-based, flexible, resilient and agile infrastructure. Paying for what you use enables you to scale up or down as required without having to make or waste capital investment. NaaS can future-proof your network by helping it to be flexible, scalable, resilient and secure, and in doing so, turn it into a platform for business growth.



Learn more about how 5G can enhance retail experiences, including delivering a top-notch customer experience, [here](#).

References

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