

Enhancing experiences for customers in a contactless world

Online and in-store, shoppers' evolving expectations offer both opportunities and challenges for retail technology.



Customers expect a personalized, seamless shopping experience. However, amid contactless payments and in-store pickup for online transactions, traditional ways of engaging customers must evolve to enhance their experience.

Winning customers — and keeping them — demands that you deliver a positive experience across multiple channels, no matter where shoppers start their buying journey. For IT, that means increasingly complex cloud architectures and more advanced strategies for managing networks. Investments in these areas can support the accelerated adoption of new payment methods, artificial intelligence (AI), in-store Internet of Things (IoT) devices and other technologies to create a competitive advantage. Combining in-store and online customer data can also reduce delivery delays and create more efficient supply chains.

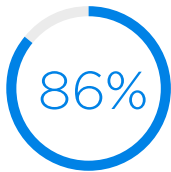
In-store IoT devices, such as cameras and sensors, can provide insights into foot traffic patterns, dwell time and other important customer behaviors — providing more data to better inform retailers' decision-making.

Remaining competitive requires resilience in an industry where disruptions can be costly. Cybersecurity threats consistently grow more frequent and sophisticated. Keeping transactions, networks and data secure continues to be crucial to any retailer's network modernization and can enable supply chain optimization and in-store connectivity and support omnichannel customer experiences.

Leverage data for a personalized experience

Developments in retail technology offer tremendous opportunities, but you've got to make the proper investments to capture them. Worldwide IT spending is projected to total \$212 billion in 2025, an increase of 15.1% from 2024.¹ For many retailers, this spending is funneled into new solutions with massive impacts for understanding and improving the customer experience.

Knowing how you can make every interaction a positive experience depends on data. You already collect crucial information from in-store sales and e-commerce platforms. By using this data, you can create unique offers, products and upsell opportunities and provide better post-sale, personalized support. Advances in AI can offer analytics with deeper insights into customer behaviors and your overall operations, simplifying logistics. These advances can also help you reduce costs by improving inventory management, more accurately forecasting demand and optimizing your supply chain.



of enterprises across industries in one survey were in some stage of SD-WAN adoption.²

Build a more powerful, flexible network

Realizing these benefits — and managing the influx of data behind them — can require a shift to the cloud, with its near-unlimited scalability and resources to host e-commerce applications. Connectivity services that offer a fast and private connection directly to cloud service providers are essential. Large organizations are also integrating resources from their cloud and on-premises data centers to create hybrid networks. Dedicated connectivity within this architecture offers bandwidth that is more reliable and secure than shared internet connections. Such connectivity allows for greater flexibility in workload management between clouds and data centers, especially as customer traffic fluctuates.

Eliminate friction for customers and your locations

Consumers want a frictionless experience online and in-store. That expectation also holds true with hybrid transactions, such as buy online, pick up in-store (BOPIS); buy online, return in-store (BORIS) and buy online, pick up at curbside (BOPAC). As the line between online and brick-and-mortar commerce blurs, IT is challenged to create high-performance networks to coordinate traffic among stores, headquarters, data centers and cloud-based e-commerce platforms.

Software-defined wide area networks (SD-WANs) are ideal for complex organizations like large retailers. In fact, 86% of enterprises across industries in one survey were in some stage of SD-WAN adoption.³ The advantages of SD-WAN include:

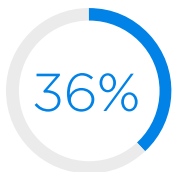
- **Lower-cost connectivity** for point-of-sale systems and connections between locations via fiber internet, broadband or Ethernet, compared to multi-protocol label switching (MPLS).
- **Bandwidth flexibility** during seasonal peaks in traffic, as fiber internet services can easily be ramped up or down.
- **Agile, real-time traffic management** to optimize resources.
- **No dedicated circuits at physical locations**, which makes it easy to add or remove stores from the network.
- **Secure and reliable operations**, with visibility into network topology and performance.

With the cloud-based architecture of an SD-WAN, you can quickly adapt to changing business needs and IT requirements, such as coordinating the transfer of customer data among retail locations, for a smooth experience.

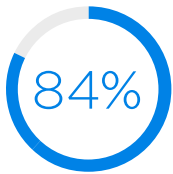
Protect your organization

Building a better network to improve customer experience is only effective if your network is secure.

One survey found the mean cost for retail organizations to recover from a ransomware attack was \$2.73M in 2024, an increase from the \$1.85M reported in 2023.⁵



of retailers say their existing technology is not up to the challenge of today's tech-savvy customers and employees.⁴



of organizations lost business and revenue last year due to ransomware attacks.⁶

Just as damaging, retailers that expose shoppers' data can breach the trust of customers and damage their reputation, which can have an impact more lasting than the attack itself.

Any network solution used for credit card transactions must meet the Payment Card Industry Data Security Standard to prevent fraud. In-store WiFi networks also must protect customers from bad actors. And remote employees or those using personal devices need reliable ways to access network resources without exposing them to cyberthreats.

In addition to data in transit, retailers must also protect personal and financial information stored in data centers, clouds and retail locations. Updates to firewalls and other security solutions need to keep pace with constantly evolving threats like malware and ransomware. Retailers should explore managed services that continually monitor threats and apply updates automatically. An added benefit to this approach: more time for IT teams to spend on initiatives that improve the customer experience.

Finding the right partner

Retailers face unique challenges in offering experiences that meet evolving consumer expectations while protecting the sensitive customer data that can make those experiences possible. That's why it's critical to select an experienced partner for your investment in network infrastructure. Spectrum Enterprise® works with retailers nationwide to help secure their networks and help make them faster, more reliable and easier to manage. Our nationwide reach, advanced technology and deep expertise enable us to tailor solutions for your connectivity, data handling and security needs so you can focus on delighting your customers.

Learn more about securing your customers' data and delivering great consumer experiences by visiting enterprise.spectrum.com/retail.

1. ["Gartner Forecasts Global Information Security Spending to Grow 15% in 2025,"](#) Gartner, August 28, 2024.
2. Mei Harrison, ["SD-WAN Trends: 2020 vs. 2022,"](#) TeleGeography Blog, March 22, 2023.
3. Ibid.
4. ["Research: Nearly 75 Percent of Consumers Say the Way They Shop Stores Has Changed Significantly, Retail Tech Failing to Keep Pace,"](#) Jumpmind, June 18, 2024.
5. ["The State of Ransomware 2023,"](#) Sophos, 2023.
6. Ibid.

About Spectrum Enterprise

Spectrum Enterprise, a part of Charter Communications, Inc., is a national provider of scalable, fiber technology solutions serving many of America's largest businesses and communications service providers. The broad Spectrum Enterprise portfolio includes [networking and managed services solutions: Internet access, Ethernet access and networks, Voice and TV solutions](#). The Spectrum Enterprise team of experts works closely with clients to achieve greater business success by providing solutions designed to meet their evolving needs. For more information, visit enterprise.spectrum.com.