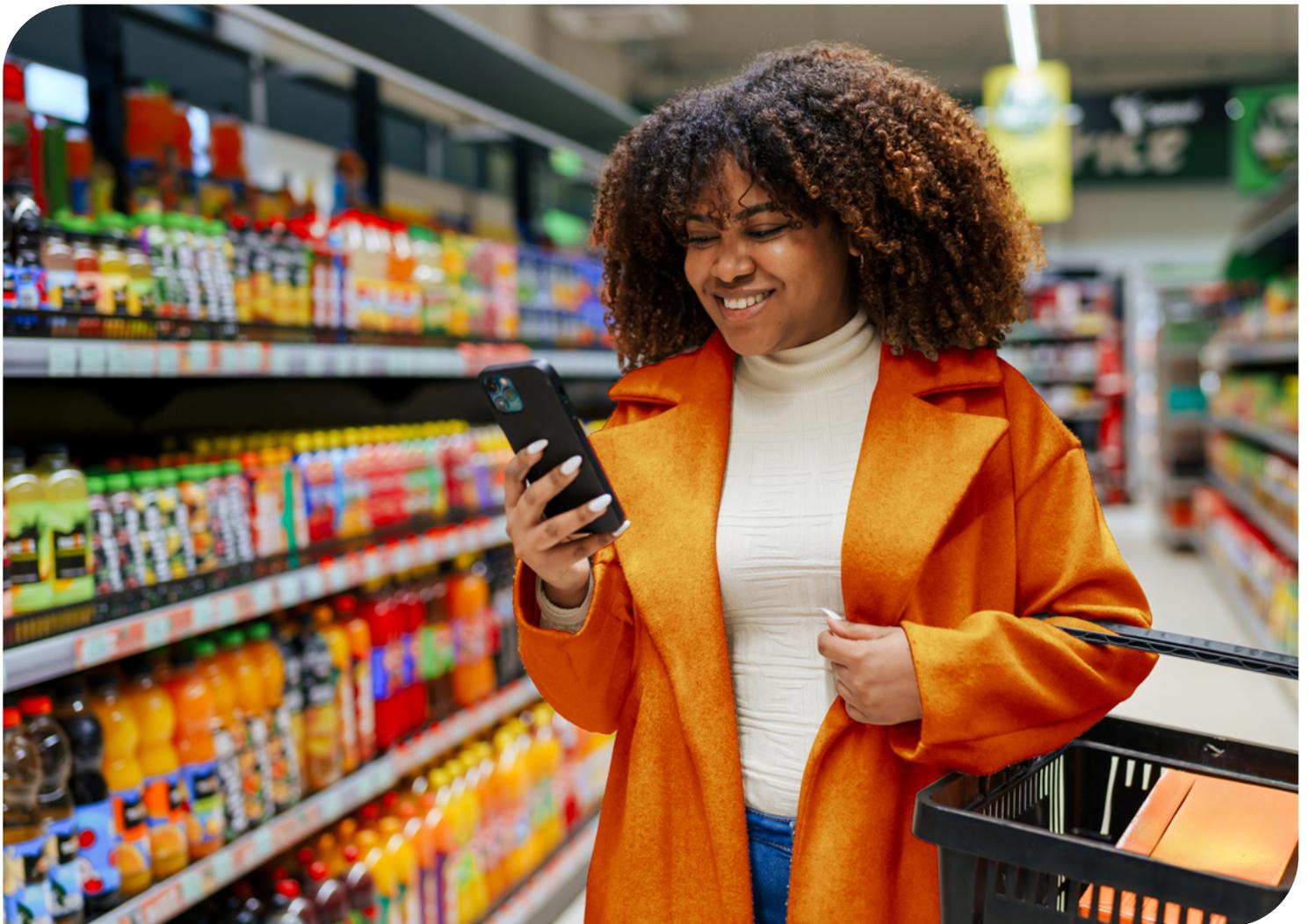# Drive sales and customer loyalty with connected, personalized grocery experiences

With a powerful combination of network modernization and managed services, grocers can use technology to compete and grow.

Spectrum ▶
BUSINESS®

Increase basket size with a modern, fully supported store network.

To prepare stores for new digital experiences, grocers need reliable networks, fast internet connectivity and technical support on demand. Learn how working with a managed services provider helps you deploy new projects faster, minimize upfront costs, simplify operations and create long-term customer relationships.

Contents

93%

of shoppers say the relevancy of digital offers influences their purchase decision.[1]

Grocery executives optimistic about generative AI's financial benefits:[2]

2023	**40%**
2024	**80%**

The grocery industry is at a turning point

From inflation and labor shortages to tech-savvy consumers, the grocery and convenience store industry is going through a major transformation. Grocery shoppers are looking for deals like never before, comparing prices in an instant using apps and online searches. AI is automating operational tasks that used to take hours to complete, making stores more efficient. Digital touchpoints are proliferating in brick-and-mortar stores, leading to an IT and networking environment that's increasingly complex. Meanwhile, security risks grow with each new device, sensor or system added, amplifying the pressure on IT teams to keep staff, systems and customers safe.

It's clear to grocery retailers that they must solve technology challenges to remain competitive. Success leads to personalized shopping experiences that differentiate the brand, win customer loyalty and drive revenue. Taking advantage of these opportunities will require a unified approach to network modernization, AI integration, data security and point-of-sale (POS) performance. Across supermarkets, local chains and convenience stores, the grocery industry is looking for scalable, reliable technology strategies, services and solutions to power the next phase of their evolution. Along the way, they'll want to reduce the burden of rising capital expenses and free up internal resources to focus on innovation.

Spectrum
**BUSINESS**®

The key challenges grocers face

Budget constraints

Grocery businesses are under pressure to do more with less. Thin margins, especially for regional and independent chains, have led to constrained budgets and resource scarcity. This is especially true when it comes to IT goals: Internal staff is limited and there is little capital for new initiatives.

POS evolution and interconnected systems

Grocers are turning POS and other customer engagement systems into data powerhouses. A modern POS system can provide insights into consumer behavior, but it must be highly performant, secure and reliable. Grocers are also adding self-checkout options in response to shopper preference and rising labor costs. These connected systems, as well as other smart store technologies, are underscoring the importance of a reliable, high-performance network.

Biggest adopters of self-checkout:[3]

63%
Gen Z

45%
Millennials
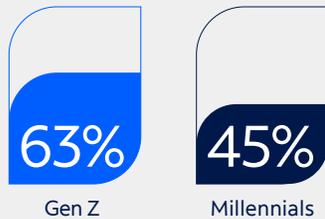
Rising customer expectations

Consumer expectations for convenience are evolving. More than half of grocery store consumers say they value convenience more now than they did in the past.[4] They want extra attention, with personalized offers, faster checkout, omnichannel service and even features like meal planning tools. Consumers also want to pay in new ways, with 28% of consumers using digital wallets for payment in stores in 2024.[5]

43% of shoppers are willing to drive farther to save money on groceries.[6]

Digital and omnichannel growth

The grocery industry saw a 4% rise in digital grocery sales in 2024 alone,[7] and sales of consumer packaged goods purchased online are growing at almost five times the rate of in-store sales.[8]

77.8M

The number of U.S. households that bought groceries online in November 2024, the highest since April 2020.[9]

Younger generations, in particular Gen Z and millennials, expect a seamless experience with digital touchpoints in the store. With the rise of e-commerce, AI-powered analytics and personalization are becoming table stakes as shoppers expect grocery brands to meet them where they are. In an effort to differentiate their brand and promote loyalty, some grocers are even undertaking partnership crossovers that find quick-serve restaurants operating inside brick-and-mortar grocery locations.

AI and data proliferation

AI is fast becoming a major focus for grocery retailers. Grocers are adopting the technology for a wide range of vital applications, including forecasting, personalization, predicting shopper demand, inventory management and minimizing food waste. As it opens up new possibilities across operations and the shopper experience, AI is also creating new levels of complexity. Realizing its benefits requires a network with the low latency, high bandwidth and reliable security AI-powered use cases require.

Security risks

Above all, grocers must ensure that their data is protected amid AI, cloud and Internet of Things (IoT) adoption. Each of these additions broadens the attack surface, creating new vulnerabilities. For example, connected POS systems have become a frequent target for cyberattacks. The increased risk for grocery organizations spotlights the escalating need for perimeter, cloud, device and user-level security integration — as well as multi-layer security protection.

Top technologies helping grocers stay competitive

Grocers are thinking beyond individual systems and designing stores to be connected, intelligent hubs that can also connect to each other, sharing cloud-based data and applications for better coordination and insights. With the combined power of these connected systems and increasing AI investments, grocers are running real-time analytics on purchasing behavior, personalizing digital promotions and gamifying loyalty programs. Shelf-edge technologies, such as electronic shelf labels and digital signage, provide real-time product information, pricing and promotional content to enhance shopping experiences. They also simplify crucial operational demands such as inventory management and loss prevention.

A modernized network helps enable all of these new and emerging applications so grocers can ensure digital experiences are fast, secure and available.

72%
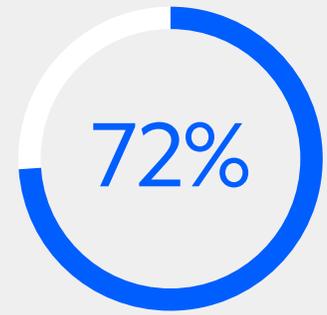
of all grocery sales are digitally influenced, with shoppers interacting with digital touchpoints before making a purchase.[10]

Where retailers plan to invest:[11]

35%	35%	34%	34%
Loyalty programs	Personalized coupons and discounts	Programmatic marketing	Interactive in-store experiences

Enhanced customer experiences

Technology	Grocery store use case	Key benefits
AI-powered personalization	Personalized offers, dynamic promotions, product recommendations and meal planning suggestions based on past purchases, delivered via email, mobile app or POS	Higher conversion, larger basket size and stronger customer loyalty
Electronic shelf labels	Remote and dynamic pricing updates	Increased sales; reduced burden on staff
Digital signage	Dynamic promotions; product information	Higher conversion; increased sales
Cloud-native POS and digital touchpoints	Integration with digital coupons; e-labels; gamified loyalty programs and "scan and go" tools; support for mobile and contactless payments	Centralized data; easy updates; cross-device access
Smart carts	AI checkout; product recommendations; embedded media for ad monetization and guided shopping	Improved customer experience; faster checkout; additional revenue source from ads
Self-checkout kiosks	Cashier-free checkout and payment	Faster checkout; higher customer satisfaction; reduced burden on staff
Scan and go applications	Mobile scanning for cashier-free payment	Higher convenience; reduced burden on staff
Mobile apps	Product discovery; digital promotions; personalized offers; integration with customer loyalty program	Higher customer engagement; larger basket size

Spectrum▶
BUSINESS®

Streamlined operations

Technology	Grocery store use case	Key benefits
High-speed internet connectivity	Connectivity for POS systems, self-checkout, smart carts, digital signage, smart cameras and environmental sensors	Speed and reliability for seamless shopping experiences and optimized store operations
Wireline and wireless failover solutions	Automatic switching to a backup connection if needed	Store resilience; business continuity; minimal downtime
Software-defined wide area network (SD-WAN)	Support for POS systems, cloud apps and AI platforms without downtime or latency	Improved uptime; enhanced network visibility and control; prioritized business traffic
Multi-cloud WAN	Unified network infrastructure to work across all public and private cloud services	Simplified management; faster deployment for new use cases
Unified communications and collaboration tools	Internal collaboration; customer service	Better communication among employees; improved customer service; greater efficiency and productivity
AI-powered inventory and forecasting	Inventory and stocking optimization	Enhanced inventory management and reduced waste
Environmental sensors and smart cameras	Real-time energy-use tracking; temperature and environmental monitoring; inventory level visibility; theft detection; safety monitoring	Less shrinkage; lower electricity costs; improved safety

Spectrum Business offers a broad portfolio of enterprise-grade products and a range of managed network services to help take the burden off the organization's IT team.

Managed Network Edge, delivered with Cisco Meraki, provides comprehensive solutions that combine an SD-WAN, security, routing, firewalls and even environmental sensors on a single platform. **Enterprise Network Edge** offers grocery businesses enhanced security features, edge networking capabilities and seamless integration with legacy WAN environments.

Both platforms are highly configurable, allowing them to support a wide range of industry-specific needs. They are cloud-controlled and feature intuitive interfaces, making it easy for your IT team to manage infrastructure, monitor performance and respond to threats. You gain centralized visibility across all of your locations and devices through a unified portal, simplifying operations and reducing the risk of downtime.

Solving the security puzzle in a hyperconnected store

Not long ago, grocery store security meant little more than loss prevention and physical security. Today, it also includes protecting data and digital systems. With more access points to your data and systems — such as distributed sensors and POS devices, cloud platforms and mobile apps — the traditional perimeter security falls short.

In addition to having more devices and access points to secure, grocers must also deal with the reality that their data has become a high-value target. Grocery data includes payments, personally identifiable information (PII) and loyalty behavior that bad actors will go the extra mile to procure. Data protection is critical to maintaining brand reputation, complying with data privacy regulations and keeping stores up and running.

Cybersecurity in the grocery store environment should be comprehensive. Spectrum Business, recently named Cisco's Service Provider Partner of the Year for the Americas, provides a suite of security products and managed security services to keep your stores and customers safe. **Secure Access with Cisco Duo** protects your organization from unauthorized access to sensitive systems, data loss, regulatory violations and business disruptions. This fully managed solution lets your IT teams set access policies by user and device, no matter where they are located. **Cloud Security with Cisco+ Secure Connect** provides multi-factor authentication (MFA) and zero-trust access control, securing devices, users and remote locations. These cloud-managed tools help businesses implement a secure access service edge (SASE) framework, which combines networking and security into a unified, scalable architecture.

> Data protection is critical to maintaining brand reputation, complying with data privacy regulations and keeping stores up and running.

ıılıılı
CISCO
Partner
Gold Provider

Spectrum ▶
BUSINESS®

Spectrum Business security solutions

SD-WAN with layered security	The managed SD-WAN technologies from Spectrum Business deliver a complete, virtualized WAN service that streamlines implementation and operation. This service provides complete network visibility and control with advanced security features.
Integrated firewall and unified threat management (UTM)	Spectrum Business offers managed services for firewall and UTM. By monitoring network traffic and blocking potentially dangerous packets, an integrated firewall solution can mitigate threats from cybercriminals and malware, while also protecting against malicious insiders and data leaks.
SASE and cloud access security broker (CASB) solutions	SASE technology from Spectrum Business combines SD-WAN with proven security technologies delivered as cloud-based services. A SASE network enables secure, anytime access from any device. As a component of SASE, a CASB provides security capabilities like data loss prevention, threat prevention, malware detection, data encryption, credential mapping and device profiling.
Distributed denial of service (DDoS) safeguards	DDoS attacks are designed to halt network operations and cause downtime. **DDoS Protection** from Spectrum Business is a subscription-based service designed to detect and mitigate these attacks and help keep your network up and running.
Zero trust network access (ZTNA)	Spectrum Business helps grocers adopt ZTNA, a technique in which users, devices and applications are considered to be potential threats and are not granted access until they have been authenticated.
Smart cameras and environmental sensors	Smart cameras from Spectrum Business provide a comprehensive view of your store, delivering insights about customer behavior while protecting employees, customers and vulnerable areas. Sensors monitor the property, alerting staff about potential environmental events before it is too late.

Additional resources include managed WiFi and router services offered with our Managed Network Edge and Enterprise Network Edge platforms. The WiFi solution helps you meet customer demand for reliable connections to the internet with ubiquitous coverage across your store and protection from the hacking of IoT sensors. In addition, you can extend your network with fast, secure and dependable private connections to cloud service providers with our **Cloud Connect** service. All of our fully or co-managed services help overtaxed internal teams stay ahead of threats. As your partner, we also help you consolidate vendors and tools, further reducing risk and operational complexity.

$14K

The average cost per minute of an unplanned IT outage.[12]

Investment trends: from capex to opex

Grocery stores survive on thin margins. Compared to supercenters, regional and smaller chains struggle to invest in new technology that will help them modernize and compete. To level the playing field, grocers are shifting from capex-heavy investments to opex-based services and strategic outsourcing. An opex model can offer predictable costs with clear visibility into ROI.

By offloading network design, monitoring, patching and vendor management to a managed service provider, grocers get the assurance of expertise, uptime and continuity. With more of their budget freed up from large capital expenses, grocers can invest in AI, automation, apps, loyalty programs or other customer experience initiatives. They also no longer have to worry about maintenance or having the in-house expertise to deal with the challenges that come with network modernization. This can help manage overhead and reduce employee burnout.

Benefits of an opex system

- Budgets that can be redirected to innovation
- Internal IT resources focused on growth, not maintenance
- Improved network performance for evolving technologies, such as AI and IoT
- Scale, expertise and continuity from a managed services provider

65%

of grocery executives say they're increasing investments in generative AI.[13]
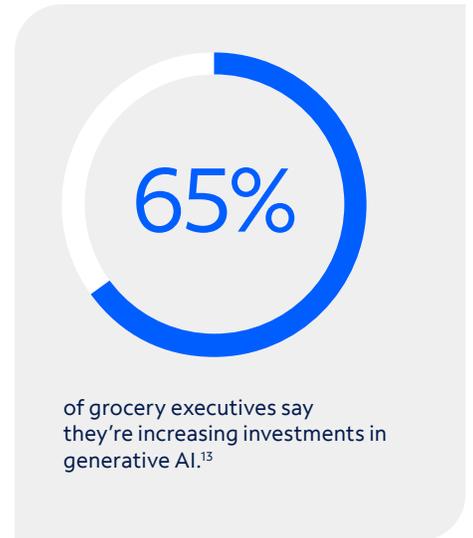
The advantages of working with a single managed services provider

Managed services and "as a service" models have lower upfront costs, offer budget flexibility and may deliver a lower total cost of ownership (TCO). A managed services provider can provide bundled hardware, software and support with a predictable monthly cost. The right partner can also help solve poor network performance to enable AI-powered applications, POS systems and more. Managed services can scale based on your needs, making it easier to add capabilities.

Having a single managed services provider simplifies your IT environment. Fragmented technology creates complexity in vendor management, higher costs and no clear accountability. With multiple technology vendors, systems may or may not be interoperable, and when something goes wrong, lack of clear roles can lead to delays and downtime. Tasked with seemingly endless troubleshooting, your internal teams can end up feeling overwhelmed. A single provider offers one point of contact for managing these issues.

A managed services provider for networking can work as your partner, taking a unified, end-to-end approach. This gives you a single source for the design, implementation, support and optimization of all your networking technologies. Instead of risking downtime, you'll get fast troubleshooting and service-level agreement (SLA) guarantees across connectivity, security and applications. Streamlined support processes won't leave you guessing who to call on for assistance.

What to look for in a managed services provider

- Nationwide fiber coverage and scalable solutions for multi-site operations
- Proven expertise in the integration of cloud, AI, IoT and security technologies
- Flexible offerings with bundled opex pricing to maximize value
- Exceptional support with local technicians

81%

of business leaders expect enterprise-wide deployment of managed services to offer competitive advantages and long-term value.[14]

Managed services provider	Fragmented vendor management
Predictable monthly or annual costs	Large upfront capital expenses
Fast, streamlined integrations and deployments	Longer deployments and interoperability challenges
Proactive monitoring and maintenance	Strain on internal IT resources to respond to incidents
Specialized expertise in networking architecture, security protocols and cloud	Need to hire and retain networking specialists
Enhanced network security with threat monitoring and data protection	Cybersecurity risks with potential gaps in network protection
Centralized management and reporting	Lack of visibility into network health, compliance and bandwidth usage
Improved employee optimization and project prioritization	Greater administrative burden, redundant tasks, conflicting information

Spectrum BUSINESS®

Seizing the digital opportunity with Spectrum Business

It's undeniable that grocers will continue to face unique challenges in the years to come, from more shopper scrutiny to more complex technological demands. But with these challenges come unprecedented opportunities. Network modernization is no longer a luxury — it's a strategy for survival and growth as you create experiences that distinguish you from the competition and keep your customers coming back.

The right technologies, delivered by a trusted and capable managed services partner, unlock your competitive advantages and empower you to get to market fast with new experiences. Spectrum Business offers products, services and expertise to help ensure your network is ready for the future. Through it all, we have your back with industry-leading SLAs and 100% U.S.-based support, available 24/7. Learn how Spectrum Business can customize solutions for your grocery business's unique needs.

Learn more

1. Timothy Inklebarger, "Shoppers to Grocers: Make Digital Ads Relevant," Supermarket News, February 12, 2024.
2. "Deloitte: Grocery Shoppers Crave Convenience and Fresh," Deloitte, September 10, 2024.
3. "77% of Shoppers Choose Self-Checkout for Faster Service, According to New Consumer Survey from NCR Voyix," NCR Voyix, January 10, 2025.
4. "Deloitte: Grocery Shoppers Crave Convenience and Fresh."
5. Roshan Varadarajan, Felicia Tan, Abhinav Sah et. al, "State of Consumer Digital Payments in 2024," McKinsey & Company, October 25, 2024.
6. "The RRD CPG + Grocery Consumer Report: Q4 2024," RRD, 2024.
7. Neha Ghai, "How 7 Key Trends in 2024 Drove a 4% Uptick in Digital Grocery Sales," Grocery Doppio, December 11, 2024.
8. "Key Grocery Trends for 2025," NielsenIQ, January 9, 2025.
9. "US eGrocery Sales Trends with Brick Meets Click – November 2024 Insights," Mercatus, 2024.
10. "State of Digital Grocery Performance Scorecard: Q3 2024," Grocery Doppio, October 16, 2024.
11. "The RRD CPG + Grocery Consumer Report."
12. "IT Outages: 2024 Costs and Containment," BigPanda and Enterprise Management Associates, April 2024.
13. "Deloitte: Grocery Shoppers Crave Convenience and Fresh."
14. "Modern Managed Services: Going Beyond 'Business as Usual'," KPMG, 2025.

Spectrum
BUSINESS®