



Why Cellular Access is Critical for Retailers: Avoiding Costs with Improved Safety and Security

An ongoing challenge for any modern brick-and-mortar retailer is avoiding profit-eroding costs related to safety, security, compliance, and shrinkage. These costs fall into two broad categories – prevention and response. Preventing incidents is usually the most effective way to minimize spending, but, with the rise of customer theft, cybercrime, and workplace violence, retailers must also have response plans in place for a range of scenarios. The costs associated with safety and security issues for retailers are staggering:

Quantifying the Losses

- US retailers lose more than \$13B ¹ and 36% of retail losses to customer theft
- The US Occupational safety and health act (OSHA) requires employees to maintain a safe workplace and OSHA has cited employers for a lack of workplace violence safeguards in the Act's General Duty Clause. ⁶
- The average cost of a worker's comp claim in the US is ~\$40,000+. ²
- A single act of retail violence can cost stores \$2.5M ⁴
- Cybercrime against retailers is on the rise, partially due to less stringent regulation. Fines alone can top 4% of annual sales, with some large retailers experiencing losses of ~\$4M in a single attack ³
- In the US, general retail stores have experienced the biggest increase in occupational injuries and illnesses between 2017 and 2021, according to a 2023 study – up 37%. ⁵
- Loss prevention measures, such as locking inventory, have a negative impact on sales and customer experience – with 73.5% ⁹ of shoppers feeling more secure in well-lit environments with subtle security measures vs. obvious purchase barriers. With 77% of in-store shoppers making impulse purchases at least sometimes, and 40% usually or always, physical barriers could significantly impact revenue beyond planned purchases.

In summary, most retail security and compliance risks stem from:

- Higher risk of cyberattacks – Data breaches, payment fraud, and POS hacking
- Failure to meet PCI compliance – Unstable connections can result in failed secure transactions
- Inability to monitor store security – CCTV, alarms, and remote monitoring systems may be affected
- Compromised access to emergency service
- Limited capability to manage and coordinate incidents, both operational and emergent

Safety and Security Cost Avoidance Through Technology and Connectivity

Societal shifts are changing employee and shopper expectations around safety and security – both physical and virtual - forcing retailers to sustain a vigilant approach to customer, staff, and data security. Complicating their approach is the need to balance measures with employee and customer wishes – such as their desire to use their own device / smartphone in stores and the strong preference for subtle security measures that still make them feel safe.

One strategy that can have a significant impact across the board is to keep everyone and everything connected – to each other, to emergency and routine help, and to systems and data that both prevent incidents and speed response.

A new category of in-building wireless coverage systems that go beyond just providing a signal are providing retailers with a highly secure, highly reliable indoor cellular network to support a range of safety and security measures.

In transforming safety and security through technology, there are several key components:

- Smartphone use – smartphones are the device of choice for store employees and play a part in employee satisfaction and retention, as well as sense of well-being. And smartphones don't work when they are not connected.
- Securing transactions – using cellular vs. Wi-Fi for POS applications eliminates a significant vulnerability, for both the retailer and shoppers.
- IoT implementation – building a scalable, easy on-ramp to new applications – including traditional devices such as cameras and radios, but also including technology to detect leaks (slip-and-fall prevention), maintain food safety, track movement and monitor occupancy, and monitor other aspects of the environment.
- Improving call-and-response abilities – access to 9-1-1, implementation of panic buttons (for emergencies) or call buttons (for routine help), ability to send/receive mass communications, and situational awareness for first responders.

Using the same cellular signal the phones need to connect safety and security communication and monitoring equipment through a single network infrastructure simplifies device management, speeds technology deployment, and drives costs down. Cost savings / cost avoidance is achieved through reduced capital costs, improved compliance, and by implementing processes that avoid unwanted situations and speed response when something does happen, which reduces risk.

Building on the case for connectivity is newly available technology that allows retailers to leverage their indoor cellular coverage infrastructure to also serve as a POS / transaction back-up system and an IoT sensor network – with or without private networking enabled. These modern solutions elevate Distributed Antenna Systems (DAS) from a basic signal booster to a two-way connectivity core capable of supporting high speed store applications, safety initiatives, and secure data transfer.

Justifying an Investment in Cellular Coverage: Safety, Security, and Shrinkage Considerations

Safety, security and shrinkage control encompasses a vast array of activities in the retail sector. Whilst we may first think of security as physical security, this segment covers a broad array of risk prevention activities. For example, preventing accidents like slip-and-falls can result in significant savings. Slip-and-fall injuries come with an average liability claim of \$42,000 (estimated cost for our large grocery retailer 0.5-1%), so the prevention of a single incident results in a positive ROI for the store.

Wet and slippery floors are often the cause of slip-and-fall accidents, and these can usually be prevented. One source of water on floors is leaks from refrigerators. The placement of wireless leak detection devices on refrigerators can detect such leaks quickly and allow for preventative action to be taken. In fact, detecting leaks may also be a sign that a refrigerator needs preventative maintenance, which can lead to additional savings.

Retailers can reduce personal injury and liability costs, the industry estimates, by between 20-50% through better safety measures, technology, and risk management. Table 2 looks at the estimated cost benefit from the perspective of secure, reliable and seamless connectivity enabling improved risk management through technology, data and immediate access to emergency services for employees, vendors, and shoppers.



The Economics of Shrinkage, Safety, and Security

Losses of approximately 2% from shrinkage, safety, and security issues are widely reported for retailers - pharmacies, grocery stores and mass merchandisers often experience even higher losses on average.⁷ Sales in the U.S. total almost \$6T, with worldwide physical sales revenue nearing \$25T, cutting even small percentages of costs and risk adds up to big savings.



U.S. Retail Sales:

\$6 Trillion

Global Physical Retail Sales:

\$25 Trillion

A 2% loss Globally:

\$500B/year

Expected Cost Reduction from Secure, Reliable, Seamless, and Integrated Connectivity: Safety and Security

For the purposes of demonstrating the strong ROI, we have used general data provided by customers and industry bodies, along with available surveys. Additionally, we use reasonable averages and assumptions for attributes such as store size, revenue per store, cost and efficiency to create our example grocery retailer 'Standard Store'. Base data as follows:

- Example based on a grocery store
- Store size – c. 100,000sft (9,290sm²)
- Revenue per store c. US \$50m²
- In-store free Wi-Fi connect rates (customer data)
- All other data from industry reports



Improved Safety, Security, and Risk Management

% of revenue/day cost for employee injuries 0.3%–2%	0.3%
dollar/day cost for employee injuries	\$414.61
% of revenue/day cost for customer injuries 0.2%–2%	0.2%
dollar/day cost for customer injuries	\$276.41
% of revenue/day cost life and catastrophic inj. 0.1%–1%	0.1%
dollar/day cost life and catastrophic inj.	\$138.20
% of revenue/day cost legal settlement 0.2%–1%	0.2%
dollar/day cost legal settlement	\$276.41
% of revenue/day cost total 0.8%–5%	0.8%

Assumptions

Number of checkout transactions per day	\$1,800
Average transaction value	\$76.78
Total daily revenue	\$138,204.00

Total Annual Estimated Cost Reduction

Note: Based on 6 days/week for 52 weeks, Less 6 days public holidays

Total 306 days	\$67,664.68
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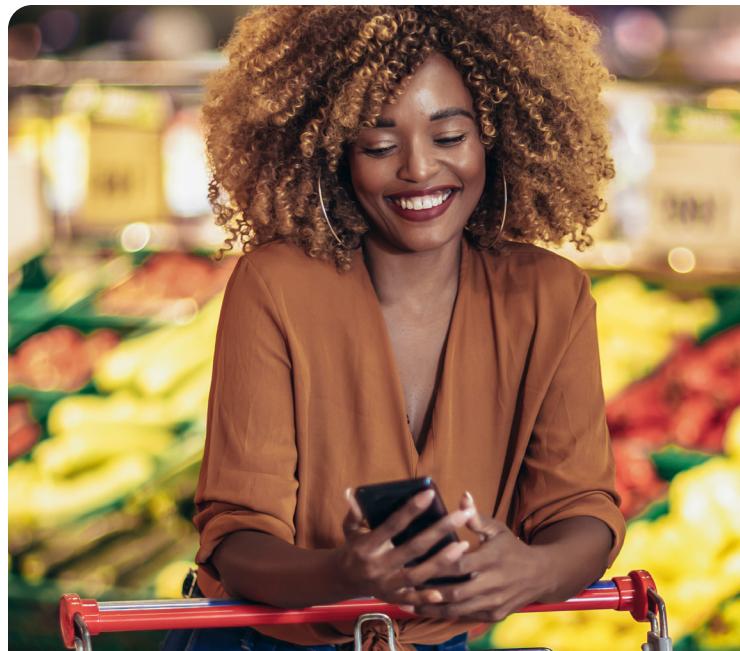
dollar/day cost safety and security	\$1,105.63
% reduction in liability 20%–50%	20%
Potential/day cost reduction	\$221.13

The Solution: Bringing Cellular Service Into the Store

Nextivity brings reliable cellular signals from all network operators to every part of a building. From convenience stores, fuel stations, and quick-serve restaurants to the largest warehouses and distribution centers, we deliver hassle-free coverage solutions that drive in-store sales, speed transactions, and support operations.

Our CEL-FI GO G43, which covers smaller spaces, and can be installed in a day with minimal disruption to your business. For larger spaces, and for retailers looking for scalable coverage solutions that can support private networking and IoT sensor integration, the CEL-FI QUATRA 4000 product line offers maximum flexibility and functionality. All our systems are managed remotely for easy maintenance and optimization - with no drain on internal IT teams.

Unique to Nextivity is our ability to execute large-scale projects for geographically diverse entities, including multinationals. Whether you have one location or thousands, our extensive network of expert installers are ready to fix your cellular issues and deliver a network infrastructure that allows you to Do More with DAS.

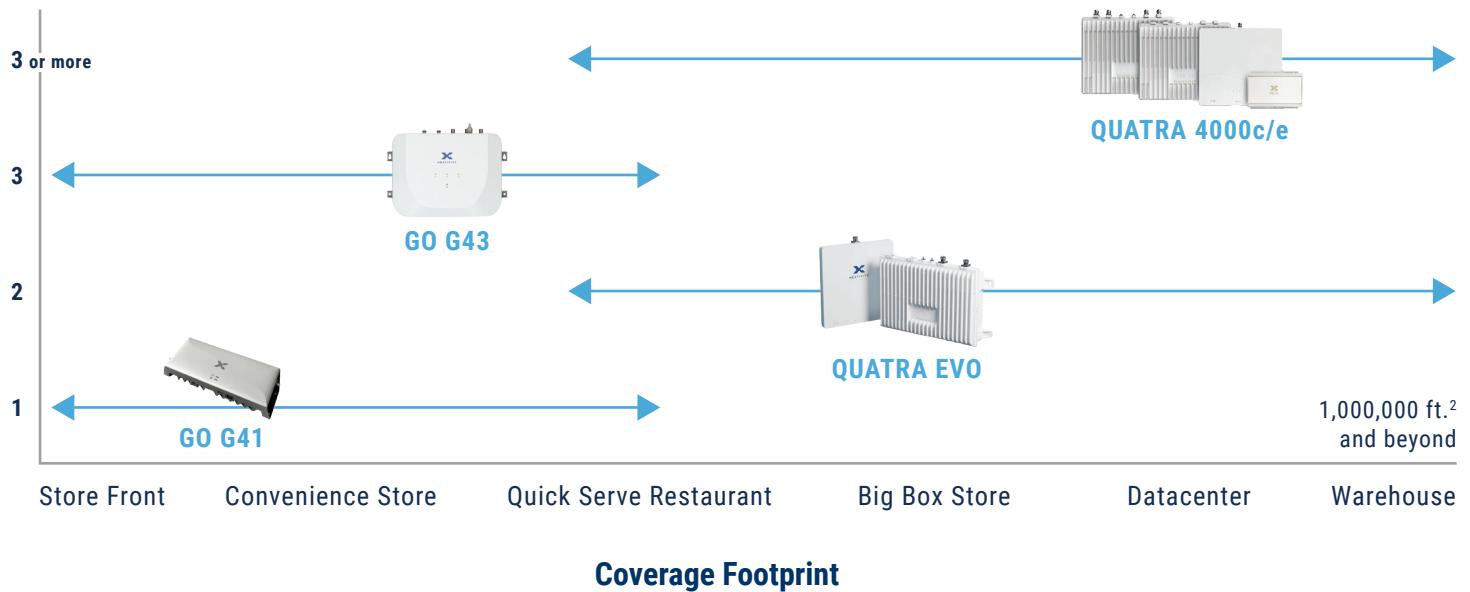


Connectivity for People and System

CEL-FI In-Building Cellular Coverage Portfolio

Solutions for Every Building – All Operators. Any Size

No. Operators



Do More with DAS

Nextivity has patented, pioneering technology built into our solutions that support private 5G and IoT sensor networks. This enables you to justify the investment in coverage by increasing the utility of the system.

You can use a private cellular network to increase data security, run automated systems in warehouses, connect terminals and kiosks, and offload critical transactions to increase reliability.

With an IoT network, you can attach panic buttons to improve worker safety, set up environmental monitoring, increase food safety, and reduce shrinkage from all sources. Our experts will help you integrate sensors into your existing alarm and notification systems for a seamless transition.

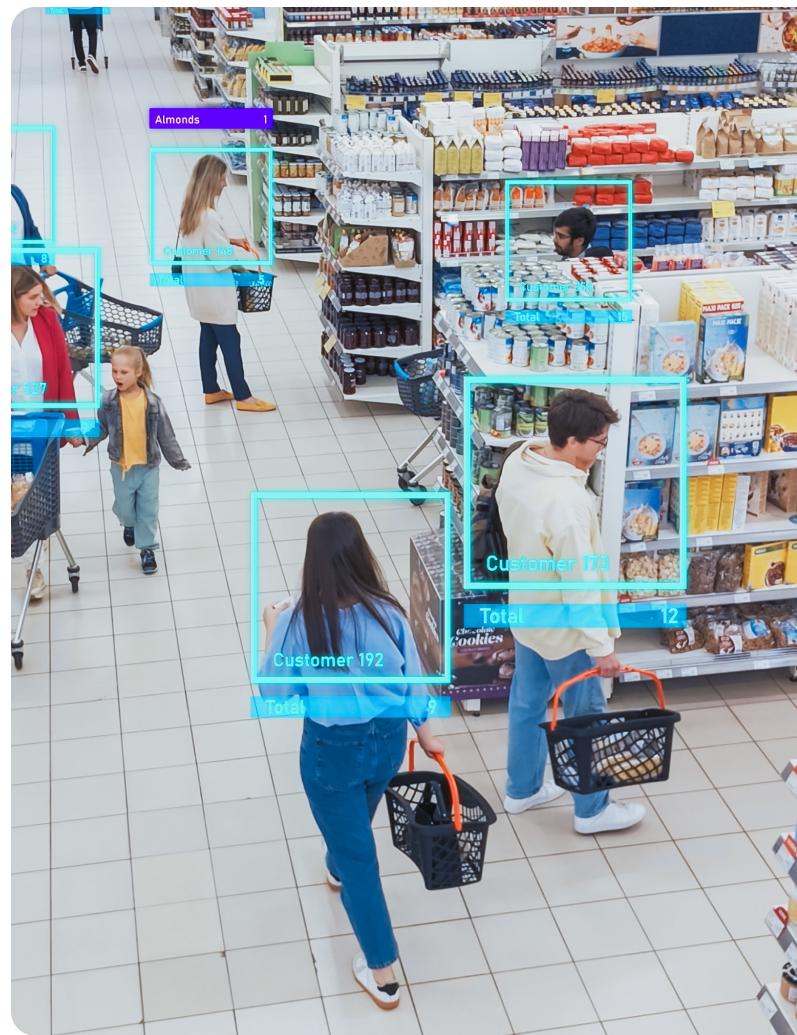
Successful Retailers Have a Wireless Strategy

Nextivity has been providing in-building cellular DAS to enterprise customers since 2010. As smartphone use has exploded, people (employees, shoppers, vendors) are expecting seamless connectivity wherever they go. In terms of safety and security, the ability to make a call, ask for help, and access information is highly associated with a sense of safety. Cellular connectivity that supports IoT sensors, security operations, and personal handset use is a subtle, unintrusive step in reducing risk and speeding response in case of emergency. Successful modern retailers understand that a highly reliable network that serves both people and operations leads to both a better experience for shoppers and cost avoidance through reduced risk of incidents.

Nextivity has installed tens of thousands of systems in retail locations around the world. We are proud to serve the connectivity needs of our customers. Our systems are improving retail operations for:

- Many of the 10 largest retailers in the world
- Two of the largest global apparel/footwear specialty retailers
- Dominant regional supermarket chains across North America, Europe and Oceania
- Global and regional customers in home improvement and electronics
- The showrooms of global luxury and sportscar brands
- Well-known, highly regarded brands in fashion, beauty and high-end furnishings

Our customers include connectivity in their strategic plans and consider it a competitive advantage. We welcome the opportunity to demonstrate how Nextivity can support your growth plans with affordable, hassle-free Intelligent DAS and IoT sensor networks.



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