

Safe and Sound: How Automation Reduces Slips, Trips, and Falls in Retail

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Retail has always been about people — associates serving customers with precision, care, and speed. But the fast-paced, high-traffic retail environment introduces constant safety challenges for employees and customers alike.

Wet floors, misplaced rugs, and spilled product are recipes for slips, trips, and falls that can be costly and disruptive to businesses. In addition to potentially causing serious injury for employees and customers, they can reduce productivity, increase insurance premiums, and erode shopper confidence.

This report examines how advancements in automation and real-time visibility are transforming hazard detection from a reactive necessity into a proactive advantage to help leading retailers address one of the industry's most persistent risks.

The Scale of the Risk

Slips, trips, and falls consistently rank among the top causes of injuries for shoppers and retail employees. The [Bureau of Labor Statistics](#) reports that slips, trips, and falls are the fourth-most common non-fatal work injury across all industries.

For every incident, the financial implications extend far beyond the initial claim. The [National Safety Council](#) estimates the average direct cost of a lost-time workers' compensation claim resulting from a slip or fall at more than \$51,000. When indirect costs such as temporary staffing, overtime, and lost productivity are included, the total often doubles.

For many organizations, safety costs are distributed across departments, operations, HR, finance, and legal, making the total impact difficult to track. Each incident triggers a chain reaction of secondary effects:



Staffing disruptions when injured associates miss work



Operational delays as cleanup and reporting take time away from sales and service



Increased legal exposure and rising insurance premiums

When multiplied across hundreds or thousands of locations, the result is a challenge measured not in individual events but in billions of dollars each year. The [Liberty Mutual Workplace Safety Index](#) ranks falls on the same level (like those that result from slips and trips) as the second most expensive workplace injury category in the United States, with a financial impact of \$10.5B per year.

For retailers, that translates into cost pressure that peaks during high-traffic periods — when associates are busiest, customers are distracted, and incidents are most likely to occur. Even when it's business as usual, the financial and reputational risk of an accident is too big to leave to chance.



\$10.5B

Financial impact of slips and trips on U.S. workplaces each year

Source: Liberty Mutual Workplace Safety Index

Keeping Shoppers Safe

Consider that customers are also at risk of accidents. According to [QBE North America](#), third-party slips, trips, and fall injuries make up almost one third of losses incurred by consumer goods retailers. Even if it doesn't result in an injury, one of these incidents — or simply the threat of one — can leave customers with the impression that the retailer is careless at best and negligent at worst.

31%
of loss incurred by consumer goods retailers is caused by third-party slips, trips, and falls 2019-2022

Source: QBE North America



Consumer Goods Retailers

Incurring Losses by Cause of Loss (%)

- Slips, Trips, Falls (31%)
- All Other (26%)
- Motor Vehicle Accidents (21%)
- Strains (9%)
- Fire (8%)
- Exterior Flood (5%)

Keeping aisles safe and clear of hazards increases customer trust and reduces frustration. Just one near-miss from a wet floor or spilled product could drive customers away, as [PwC](#) found that one in three consumers (32%) will walk away from a brand they love after a single bad experience.

When customers know they can expect a clean, enjoyable shopping experience, they associate your brand with that positive feeling and are more likely to become loyal patrons. According to [Deloitte](#) research, 88% of customers who trust a brand will buy again. Designing store safety monitoring to protect shoppers in addition to employees is critical for ensuring a strong, customer-centric brand reputation.

Where Traditional Safety Programs Fall Short

Most retailers depend on manual patrols, signage, and associate awareness training to manage hazards. These methods are essential but limited by workforce capacity and physical space.

Spills and debris can appear suddenly, between inspections, during restocking, or as shopper behavior introduces new risks. Even the most vigilant team cannot maintain constant visibility through manual safety methods.

Traditional safety programs rely on periodic checks and training refreshers — but modern retail operations require continuous awareness and immediate response. Beyond creating a safer work environment for employees, this constant monitoring also makes shopping safer for customers.

Automation: The New Standard for Consistency

Automation is redefining how safety gets done. Advanced systems like autonomous mobile robots now enable continuous monitoring of store aisles to identify spills, debris, and obstructions in near-real time. When a hazard is detected, the system notifies associates, enabling prompt and precise cleanup before an employee or customer has the chance to slip, trip, or fall.

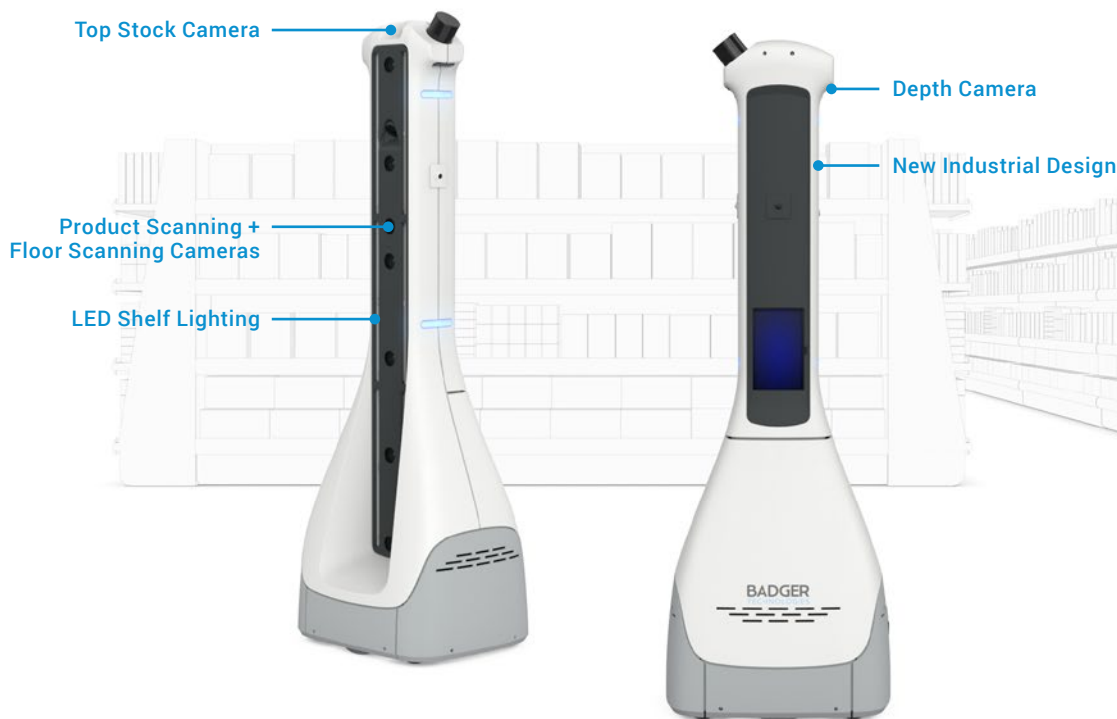
Because these technologies operate autonomously and consistently, they help close the visibility gaps created by manual monitoring. Each event can be documented with time, location, and condition data, creating a transparent record of safety performance and compliance.

According to a 2024 report from the [National Safety Council](#), 58% of employers are considering implementing robots as a safety technology. Autonomous mobile robots can create a

range of operational advantages at the enterprise level, like:

- Continuous hazard monitoring across every aisle and shift
- Real-time alerts and response tracking
- Visibility across retail locations
- Predictive insights into high-risk areas and timeframes
- Documented proof of compliance and corrective action with time and date stamps
- Associates freed to focus on customers instead of constant safety monitoring

Automation supports store safety programs and enhances human oversight, helping customers and associates feel safer from hazards while leadership gains assurance that safety standards are more consistently met.



HOW AUTONOMOUS MOBILE ROBOTS “SEE” HAZARDS



Why Safety Makes Cents

Safety should always be a business's top priority for the wellbeing of customers and associates. But implementing a continuous safety monitoring system to reduce the frequency of slips, trips, and falls also delivers benefits to the bottom line.

SAFETY-FIRST BENEFITS BUSINESS

FASTER

identification and addressing of hazards, preventing additional incidents

STRONGER

data and analytics for compliance and documentation

FEWER

operational disruptions and more stable scheduling

LOWER

insurance and workers' compensation costs

QUANTIFIABLE

ROI through reduced downtime

GREATER

shopper confidence and loyalty

Recall that a worker's compensation claim from a slip or fall costs more than \$51,000 on *average*; a single avoided injury can offset the annual cost of an automated hazard detection system. Reduced claims, improved documentation, and higher uptime also help deliver measurable financial and operational returns on an automation investment.

Safety also has a deep connection to brand reputation and store performance. Clean, well-organized aisles signal care, discipline, and reliability, qualities that strengthen customer trust and drive repeat visits. Visible cleanliness and quick disposal of safety hazards are among the most immediate ways to improve shoppers' perception of the store and foot traffic.

In many cases, the same systems that can detect hazards also perform operational audits such as planogram verification, price accuracy, and on-shelf availability. This multi-function capability makes safety part of a broader productivity engine. Automation can help create safer, more efficient retail environments without adding extra work for associates.



From Reaction to Prevention

Accidents happen, but operating with a safety-first mindset can minimize the impact of slips, trips, and falls on businesses and shoppers.

By combining human knowledge of potential hazards with automated visibility, retailers can shift from reacting to incidents to preventing them altogether. Continuous monitoring keeps aisles safer, teams focused, and operations consistent.

Making safety part of operational excellence yields simple but significant results: fewer accidents, lower costs, and stronger customer trust.

5 Things to Know About Retail Safety

- 1 | The National Safety Council reports that the average direct cost of a slip or fall workers' compensation claim exceeds \$51,000.
- 2 | According to QBR, nearly one third of loss incurred by consumer goods retailers is caused by third-party slips, trips, and falls.
- 3 | Insurance provider CNA found that 50% of commercial workplaces had floors that did not produce a dynamic coefficient of friction (DCOF) level above the minimum threshold set by the American National Standards Institute (ANSI) — meaning they have the potential to cause slips and falls for customers or employees.
- 4 | A single slip, trip, or fall incident can disrupt schedules, delay restocking, and diminish shopper confidence.
- 5 | Continuous hazard detection helps retailers reduce risk, strengthen compliance, and improve brand trust.

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Our Next-Generation Digital Teammates

Badger Technologies offers flexible purchasing and deployment options that help retailers integrate automation efficiently. Contact us to learn more about how we can align with your operational and budget priorities.

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