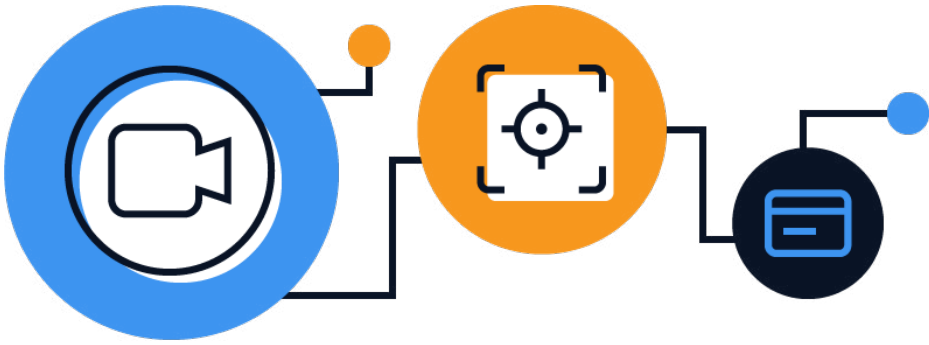


Guide

Return on Experience (ROX) in the Connected Store





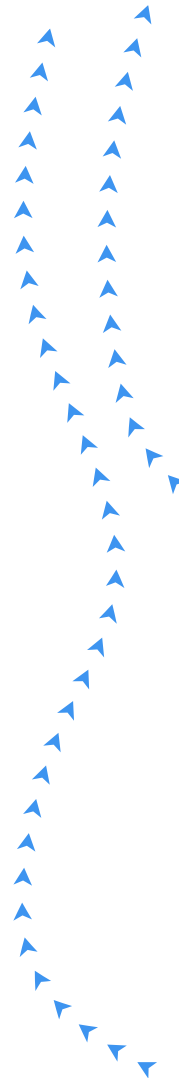
The first Amazon Go cashierless convenience store [opened in late January 2018](#) to [a line that wrapped around the block](#). The idea of grabbing the items you need, walking out when you're done, and having your purchase deducted from an Amazon account utterly captivated consumers. Amazon's use of sensors, cameras and AI to track customers while shopping signaled a new era in 21st century shopping.

Since the first Amazon Go store opened, [four more stores have been added](#) – two more in Seattle, one in San Francisco, and one in Chicago. Famously data-driven, Amazon announced experiments with a smaller footprint model for airports at [450 square feet](#), and may be looking at much larger store models as well—allowing them to stock more products. Starting with smaller format stores to test and expand the connected store concept makes sense: the technology and infrastructure required to maintain the functioning of just one store is [over \\$1 million according to Amazon](#). By retail sector, grocery build-outs historically have the highest construction costs per square foot, excluding equipment and hardware. Grocery retail also faces industry-topping energy costs due to electricity, heating and cooling requirements. The additional [energy](#) required to power a cashierless store filled with cameras and sensors is assumed to be significant.

The eCommerce giant anticipates that bet will pay off—with that heavy equipment investment comes an utterly convenient shopping experience meant to wow customers. Customers [scan their phones upon entry](#) to connect with their Amazon account for payment. While shopping, [several hundred cameras](#) use computer vision to visualize items in the store and how customers are interacting with them. A network of sensors tracks shopper and product movement throughout the store to calculate the total purchase value upon exit.

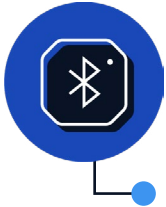
While the new Amazon experience was extremely rewarding for customers, it initially required additional testing and troubleshooting to accommodate [larger volumes of customers at one time](#). Because pilot testing has focused heavily on Millennials, it's unclear if there will be barriers to adoption with Baby Boomers. This automated approach to shopping requires customers to be much more diligent about checking receipts which many analysts believe will be acceptable to customers for the tradeoff of convenience and speed at checkout. One question this model surfaces is what role human connection will play in future connected store environments.

Amazon plans to open [3,000 more cashierless stores by 2021](#) and major retailers are taking stock. The idea of a connected store has ignited across the retail sector, fueled by key innovations that will transform how we consume over time.



Supporting the Shopper Journey

A key promise of the connected store is the increase of convenience and ease in shopping enabled by technology. Retailers have [invested heavily over the last 15 years in technology](#) that can enhance the shopping process and contribute to higher sales.

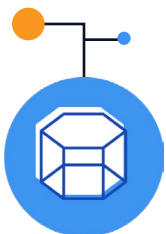


Beacon Technology

Beacon technology emerged in 2013 with the launch of Apple's iBeacon. Beacons allow retailers to send messages to nearby mobile devices using Bluetooth signals. Some of the top brands have used beacons to [deliver rewards, ease the path to purchase, and deliver added convenience](#):

- [Nordstrom](#) uses beacons to compare items in a customer's mobile shopping cart to retail store stock as a shopper passes a store with beacons. Shoppers receive a push notification if there's a match in the physical store.
- [Target](#) employs beacons to assist customers as they look for products in stores. Using the Target app, customers can see their in-store location and the location of the product they are searching for.
- [CVS Pharmacy](#) uses beacons to send refill and prescription pick-up reminders to customers in stores.

An even stronger value proposition for beacons is their ability to collect in-store customer behavior and act on it. [Major League Baseball \(MLB\)](#) has installed beacons to track fan usage of concessions, sponsor interactions, and even which parts of the stadium get the most foot traffic – all with the goal of improving the fan experience.



Smart Digital Signage

Smart digital signage is gaining ground in retail. Rather than static displays with standard printed signs, digital signage can change quickly and feature interactive content to inform or enhance the shopping experience.

Sephora offers prospective makeup buyers the opportunity to try products without applying them, getting the perfect match. Using [Modiface's 3-D augmented reality mirror](#), shoppers can test out colors on a live video feed from a camera that captures their facial features.

Rebecca Minkoff takes a similar approach with [smart mirrors](#) installed in dressing rooms. Shoppers have an array of options using the mirrors, including requesting different sizes or colors of clothing and changing the lighting in the dressing room. This kind of customer-rewarding, brand-enhancing strategy is sure to drive loyalty and delight.



Many grocers are adding digital signage across the sales floor with electronic shelf tags, digital menus and ordering kiosks, and even point of sale signage. With increasing scrutiny around food safety and the introduction of preventative legislation to safeguard against foodborne illness, digital signage and menus offer grocers complete data accuracy and control across thousands of business units. Instead of waiting days or weeks for an item, price or nutritional detail to be updated, those changes can be made at a global level and pushed down to stores with just one click. Whole Foods Market experimented with digital signage for marketing in its 365 stores and eliminated paper price signs in full while landing product attribute messaging for customers in a colorful and creative way.

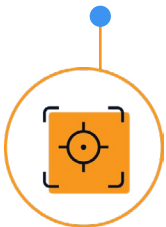


Virtual Reality

Virtual reality (VR) is also gaining a foothold in retail, with Goldman Sachs projecting [\\$1.6 billion in AR and VR investments for retail by 2025](#). Effective use cases do the following:

- **Create virtual encounters** for testing and trying on merchandise, like [Volvo's virtual reality app](#) that offers virtual test drives and [Timberland's virtual fitting room](#) that allows shoppers to virtually try on clothes.
- **Allow shoppers to design custom products**, like the [Nike Maker's Experience](#) where shoppers can create a pair of custom shoes that are then made in less than 2 hours. The proliferation of 3D printing is taking root across retail and Consumer Goods industries, and many analysts believe the future of personalization and on-demand custom purchases [will revolutionize apparel retail first](#).

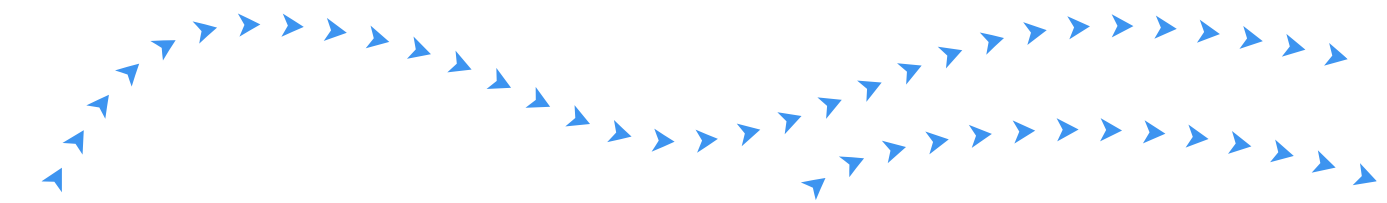
On the back end, VR supports store optimization by [enabling businesses to visualize store design](#), including layout, product assortment, and shelf placement, and to analyze those factors' impact on a store's financial performance.

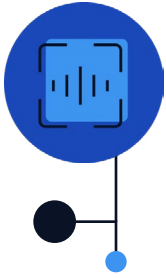


Artificial Intelligence

Artificial Intelligence (AI) is starting to make its way into the retail setting too —[optimizing inventory and reducing returns](#), and improving the customer and team member experience. Macy's recently partnered with IBM Watson's Satisfi platform to pilot [Macy's on Call](#) in 10 select stores. Shoppers can access the service in their mobile browser to ask questions regarding store stock and item location.

[Amazon, Google and Microsoft are racing to build out cloud computing infrastructure](#) and development tools to prepare for the explosive demand in custom machine learning applications. Machine learning was the third-highest category for the number of patents granted between 2013 - 2017.





Voice Recognition

With the widespread adoption of devices like the Amazon Echo and Google Home, the use of **voice recognition** has also exploded in recent years. However, retailers are still sorting out how voice technology translates to brick-and-mortar purchase intent, and translation to direct eCommerce sales has been slow. A cursory use case included [Kroger's launch of voice ordering for grocery pick up via the Google Assistant voice app](#).

Making Payments Easy

As banking went digital and self-check out became commonplace, progressive retailers sought new ways to reduce friction and frustration in the checkout process as a means to drive velocity in transactions, repeat trips and brand loyalty. Various mobile payments like [Apple Pay](#), [Samsung Pay](#), and [EMV](#) are considered table stakes today. Retailers looking for convenient checkout experiences will win new levels of consumer loyalty in the next 3 years.

Forrester reports that mobile payment transactions will balloon to a whopping [\\$282.9 billion by 2021](#). Major innovation is happening with players in the U.S. like [Uber and Airbnb](#) and in China by [AliPay and WeChat](#).

Innovations like [wearable payments and contactless cards](#) are poised to make payments even easier for consumers, and that ease-of-use is slated to deliver sizable benefits to retailers. [Mobile payers usually spend about double](#) what they would have using other methods. With Visa forecasting the addition of [100 million contactless cards in the U.S. for 2019](#), retailers are poised to capitalize on that extra spend.



Retailers are also motivated to inform the direction of this progress, because credit card fees can represent a painful and exorbitant cost center in their business. Savvy eCommerce players like Amazon have partnered with Visa to introduce a proprietary card. More than a strategy to drive at cost savings or interest income, however, is the power of the data Amazon gains when you use its card. A step beyond a traditional consumer insights play, this could signal the company's interest in moving into [banking services](#).

Chinese retailer [Alibaba launched their "smile to pay" service](#) through their affiliate, Ant Financial, at KFC locations in Hangzhou. In order to use the payment method, customers must have the AliPay app installed with facial recognition enabled. They can then snap a photo to pay at the point-of-sale kiosk.

Walmart's launch of Sam's Club Now weaves the checkout stand through the entire shopping process. Customers are [required to scan items using the Sam's Club Now app](#) while they navigate through the store. With everything in both their virtual and physical carts, a Sam's Club employee will run a final scan to complete the purchase before departure.

Dutch retailer Ahold Delhaize offers customers the option to [pay via an app or a "tap to go" card](#) in its Albert Heijn grocery stores. As they browse, shoppers can tap the card on the appropriate shelf tag for any items they'd like to purchase. Their total will be automatically debited from the associated bank account after 10 minutes.



Nordstrom Rack introduced roving cashiers equipped with mobile checkout devices stored in fashionable crossbody mini bags. These flex cashiers can absorb and eliminate long lines in minutes. Industry-adjacent luxury properties like Hyatt's Andaz hotel have done something similar with restaurant wait staff and a check in process that doesn't include a front desk. Both brands are looking for ways to reduce barriers between the customer service agent and the consumer--a different approach to building a "connected store" experience, powered by human connection and empathy.

In an omni-channel world, although [85.7% of retail sales are still in brick and mortar](#), retailers are also optimizing how to reduce friction in the online checkout process as well, with important insights from [Nielsen about how to streamline mobile fields](#) and reduce clicks and data entry which cause frustration for consumers and can lead to abandoned carts online.

When it comes to payments innovation, one thing is clear: [convenience is of paramount importance](#). As retailers continue to test new payment formats, those that provide ultimate ease-of-use are most likely to succeed.

Optimizing Execution and Operations

Building connected stores can increase operational efficiency, lower costs, and increase visibility across a portfolio of locations. As labor leveraging continues to be a key lever many retailers pull to manage the business, technology can reduce labor and free up human capital to connect with customers—where it matters most.



Robots

Robots can support store management on both the sales floor and in the warehouse. Both [Walmart and Lowe's](#) are using robots in stores to scan shelves, check inventory, verify pricing, and collect a number of other inputs. This frees up team members to be on-hand for critical customer interactions. [AB InBev deployed drones](#) for inventory management in a Montreal IGA Extra Beck store, scanning 16 million SKUs with a 98% accuracy rate. [The Gap, Inc., deployed robots](#) in a Tennessee distribution center to sift through inventory and reduce the demand for labor during peak shopping seasons.



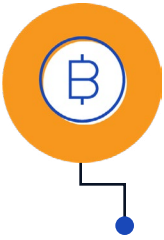
Machine Learning

Machine Learning (ML) and Artificial Intelligence (AI) have the ability to support both the customer-facing store interactions and the warehouse management functions of the retail engine. [Target](#) leverages one of their startup accelerator companies, Inspectorio, to automate the human labor that goes into managing their retail supply chain — specifically for [apparel inspections](#).

Zara recently retooled a 6-month supply chain and design process to get new looks into stores [in less than 30 days](#) through a combination of machine learning and 3D printing. Cutting production time and bringing new looks to market in a fraction of the time of their competitors gave the apparel innovator tremendous edge in the marketplace.

[PepsiCo is using computer vision and image recognition](#), powered by machine learning with the Beta HiFi app by GoSpotCheck, to audit and optimize sets in the field. What used to take 15 minutes or more has been reduced to 30 seconds. Field reps are realizing tremendous labor efficiencies, and redirecting time to selling and relationship-building activities. The app tells reps what's in-set, what's missing, and percentage of compliance to planograms. It also collects localized set data which can be used to inform category optimizations and future rounds of R&D.

Brands can also use AI in the “last 10-feet” of retail to localize sets and produce powerful data-driven insights for cross-functional marketing, R&D, eCommerce, supply chain and operations teams and inspire future innovation.



Blockchain

In addition to its major use case of airtight payments security, **blockchain** technology will support retailers with a costly pain point: returns. The [National Retail Federation \(NRF\)](#) estimated fraud costs for the retail industry in the neighborhood of \$15 billion for 2017. Blockchain can be used to associate unique attributes to each individual product and allow retailers to easily identify (and swiftly reject) fraudulent returns.

Mobile-Training & SOPs

Finding ways to streamline training through **mobile-enabled technology** will help retailers reach Gen Y and Gen Z members who expect to use the most updated technology at work. They also expect platforms to house intuitive interfaces like those used in their personal lives and social channels. Studies show that both generations need to feel they're working for a purpose, and mobile-enabled training and auditing apps can deliver real-time reporting to team members on the ground and help them understand how their actions are benefiting the business as a whole. Brands are also using these tools to gamify and build cultures of reward around compliance. As labor leveraging becomes a reality for retailers facing thin margins, keeping team members on the floor and with customers while training or auditing key tasks throughout the day drives top line labor savings.

Taking numerous operational tasks and consolidating them in a mobile platform gives retail workers easy access to program launches, operational SOPs, and reference materials outside of email.

[Online training materials, audits & inspections](#), and even [in-store display execution](#) can be accessed on mobile and provide real-time insights to mitigate risk and increase innovation. By launching a mobile-enabled field execution platform, [Dairy Queen](#) was able to slash time spent on routine data collection by 80%. [Beam Suntory](#) used the increased visibility into field execution to hold sales reps accountable for in-store sales. For restaurants and grocery retailers, [food safety protocols](#) can be monitored electronically using these same tools to protect public health and avoid costly foodborne illness crises.



What About the Human Connection?

Retailers are ready and willing to deploy technology where they see opportunities to improve sales, cost savings, operational efficiencies, and customer loyalty. Research continues to reinforce that human employees will continue to play a vital role across retail channels.

What *will* change is how and where human labor will be used, and where machines will automate mundane tasks to benefit the business and employee. Economists predict we'll see a shift from [low-value labor to high-value customer interactions](#). Staff who formerly worked the checkout counter or stocked shelves can now be available to help customers locate products, answer questions, and check backstock. And in order to provide satisfying interactions, those employees will need access to mobile devices ([supported by smart infrastructure](#)) to help the customer quickly.

Angela Zutavern, author of the *Mathematical Corporation*, makes a case for combining artificial intelligence and human creativity and explores how technology can complement, not replace, human creativity and problem-solving skills. Zutavern reports the areas where humans outperform machines are in [creativity, imagination, problem-solving, and strategy](#). She reveals how none of the predictive models for the last World Cup got it right--because machines can't predict and comprehend outcomes for things that have never happened before, as in the case of innovation. So we will continue to need humans to make clear decisions if we want to move our organizations to higher levels of performance and demand.

[PwC's Global Insights Survey](#) in 2018 and [2019](#) indicated that 75% of respondents want more human interaction in the future, not less. The study explores how people are needed, in concert with technology, to deliver the experiences customers are seeking. Authors Steve Barr and Ellen Davis make meaning of the survey and highlight three ways retailers can amplify the role of people in the connected store: by inspiring communities of commerce and deepening the delight of customer experience and exploration in-store, by creating cultures that empower employees, and by recruiting data-literate workforces.

PwC's studies show that 53% of respondents said interacting with knowledgeable, helpful sales people gave them the most satisfaction as shoppers. 2019's study goes deeper into the concept of ROX--return on experience, and outlines ways retailers can place a strategic focus on the human-enabled "magic moments" in-store as true revenue and brand-building drivers.



The Connected Store is Here.

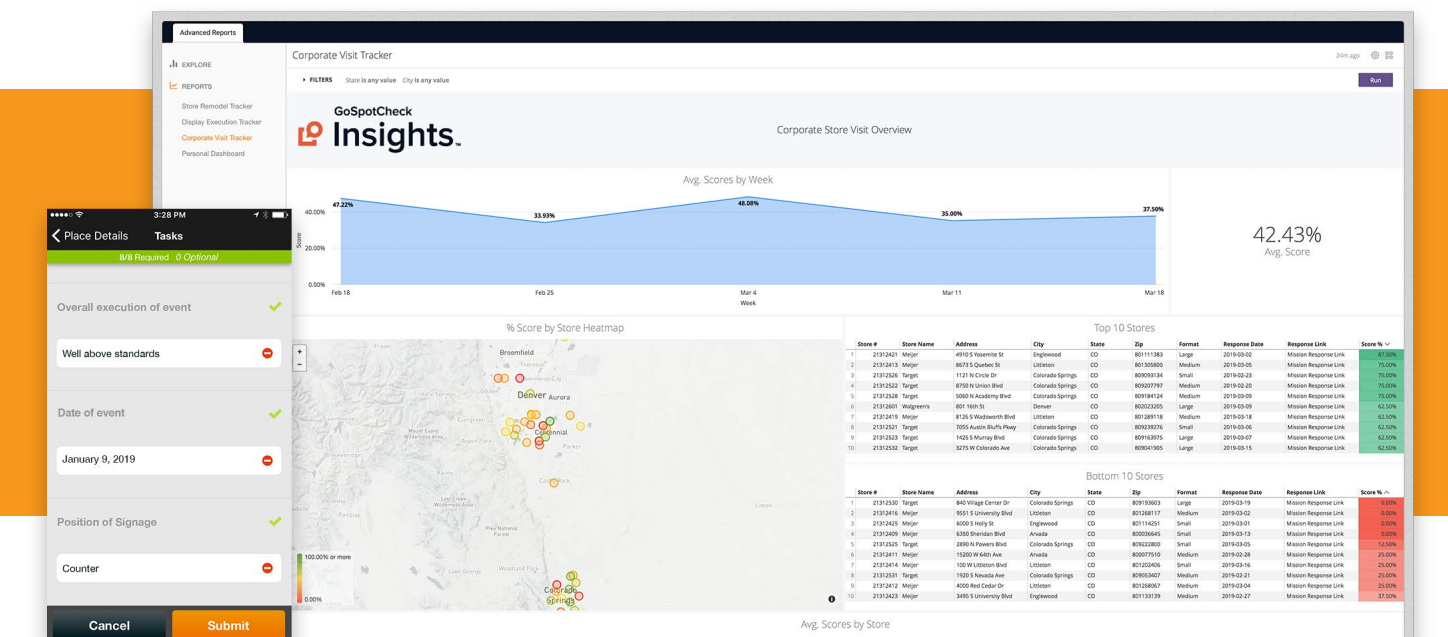
Ultimately, technology can be leveraged in nearly infinite ways in a retail environment, but above all else, any technology implemented should create **efficiencies of process** to decrease costs, drive sales or reduce labor and to free up human capital to take care of customers. The ultimate goal of any technology deployed should be to unleash team members to address things that only people can. Technology should give team members more time and resources to imagine, create and evolve the businesses they serve.

Paco Underhill, founder and CEO of Envirosell, has been [quoted](#) as saying “It isn’t technology that’s changing retail, it’s people who are changing retail.” New technology is only adopted when it enables the people that use it to have an easier or more enjoyable experience. When considering technology platforms for your tech stack, it is essential to keep the end user (whether your employees or your customers) at the forefront of your strategy. It’s also critical to start with the business problem you’re trying to solve--saving money, increasing revenue, increasing loyalty, speeding transactions--and deploying a combination of technology and human innovation accordingly.

Retailers are making strides to integrate technology throughout their brick-and-mortar ecosystem to enhance the customer experience, drive operational efficiency, and to integrate rich data into their omni-channel platforms.

Automating work in distribution centers and in-store can reduce costs and create greater visibility for retailers. It allows them to use labor more efficiently and focus it on revenue-generating activities.

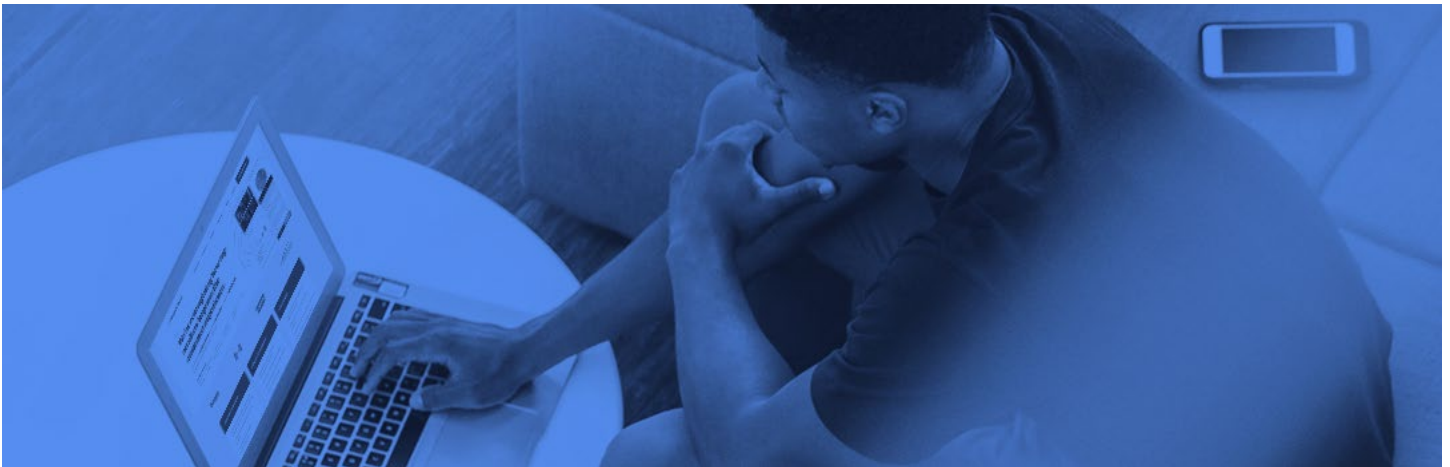
Understanding how to power the mobile workforce--team members who don’t work at a desk or in an office--to deliver exceptional retail experiences to build and bring to life the connected store will be key for tomorrow’s retail innovation.



These technologies mimic the work that humans would do if they weren't busy with mundane, repetitive tasks. Discovering that a coveted item seen online is available in a nearby store or requesting additional sizes electronically from inside the dressing room are win-wins for shoppers AND retailers. In the future, customers will get what they want, faster and with ease, and retailers will sell through more product. Retailers who will win are aggressively innovating and driving tremendous efficiencies through the perfect integration of machines and humans.

[GoSpotCheck's](#) mobile execution platform supports over 200 enterprise brands in their quest to perfect merchandising, increase sales, reduce labor and expenses, ensure safety and quality, and improve profitability from the field through mobile audit, photo capture and image recognition technologies. It was named a [2019 Editor's Pick by Consumer Goods Technology](#).

Top global brands use GoSpotCheck to deliver training, validate store conditions, capture qualitative customer feedback, and optimize operations. With in-depth reporting in real-time, corporate leaders have full visibility into their field within moments and understand how and where to close execution gaps in order to capture incremental sales and mitigate risk. Data collected through the platform informs powerful business insights and innovation for some of the world's best brands.



Learn how GoSpotCheck's mobile platform can support your journey on the path to generating Return on Experience in the connected store. [Contact us today](#) to receive a demo of our mobile and reporting tools.



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