

A Mediaplanet Guide to the Innovations Advancing Retail

# Retail Technology

A portrait of Steve Dennis, a middle-aged man with grey hair and glasses, wearing a light purple shirt and a patterned blazer. He is smiling slightly and looking towards the camera. The background is a blurred office setting.

## Steve Dennis

The retail industry veteran talks about improving customer relations during a global pandemic

Recapping how retail kept associates, customers, and communities safe and well-stocked during 2020

See how technologies like intelligent automation and SMS are improving customer experience and streamlining business

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PLANET**

## Why Retailers Need to Invest in Demand Planning and Forecasting

**With more retail sales being made online — and more consumer data being generated — than ever before, there's a dire need for actionable insights.**

The COVID-19 pandemic impacted nearly all aspects of society, but the retail industry felt some of the strongest effects.

"There was a downturn in the economy, so people constricted their spending habits," said Eric Wilson, director of thought leadership for the Institute of Business Forecasting (IBF). "And that really caused problems for understanding what exactly is going to be that new norm going forward."

In addition to spending less, where consumer dollars were being spent shifted as well — ecommerce was on the rise before 2020, but was greatly accelerated by the pandemic. That's fundamentally shifted how retailers need to go about business forecasting and planning.

"Retailers used to get their forecast based on who came to the door, and they really planned within their own four walls," Wilson said. "The walls are broken down now, especially with ecommerce, so they need to start getting in the minds of the consumers, and they need to transition into understanding consumer behaviors and consumer sentiment to try to figure out exactly what consumers are going to do."

Getting that accurate, omnichannel picture of how consumers interact with a business or product — and using that understanding to generate insights — will drive profits. A new IBF study shows that a 15 percent increase in forecasting accuracy equates to a 3 percent boost to a business' bottom line.

"Understanding that consumer a little bit better pays for itself over time," Wilson said. "Besides just the cost savings, it's the service improvement as well."

**Dustin Brennan**

# What Will Matter Most for Retail in a Post-Pandemic World

**History will remember 2020 as the year the world turned upside down in the fight against COVID-19. No industry was immune to the turbulence.**

In retail, companies reimaged operations to keep associates, customers, and communities safe and equipped with the things they needed to live in our new reality.

The lessons learned over the past year will propel retail innovation faster than anyone could have imagined.

In terms of technology, the need to keep people safe continues to be paramount. Retailers have accelerated innovations around contactless payments and click-and-collect methods that will likely be commonplace long after the pandemic.

Not all technology is glamorous; things like sneeze guards, capacity counters, and shopping reservation integrations have proven to be effective and reassuring to both guests and associates. These safe-shopping measures allowed retailers to build trust in their communities.

Expanding pickup options became the new retail norm. Many key retailers implemented curbside pickup operations within days, allowing customers to continue shopping with little interruption.



**Nick Ahrens**  
Vice President, Innovation,  
Retail Industry Leaders  
Association (RILA)

According to eMarketer's 2020 research, ecommerce grew 32 percent in 2020, peaking in Q2 when many stores were forced to close their doors. Click-and-collect doubled in 2020 and is up 5X over the past three years.

### Back to business

Once the vaccine is widely available, we anticipate a resurgence of customers looking to shop, gather, and experience life away from computers. During this time, the industry will likely experience a second acceleration focused on refining pandemic-driven investments and recommitting to trends derailed by COVID-19.

Post-pandemic shoppers will expect more from cross-channel experiences, beginning their shopping journey on a store app, website, or via shoppable social media, and picking it up where they left off in-store.

Having now grown accustomed to online grocery, click-and-collect, and expanded buying

options across platforms, customers are expecting retailers to make the online-to-physical experience even more seamless. We have already seen improvements in parking lot layouts, signage, and contactless payments to help accelerate this change.

And retailers who have invested in all facets of omnichannel infrastructure have been rewarded with customer loyalty and increased online sales; this trend will only accelerate.

At RILA's Retail Innovation Center, we are working to help retailers create those experiences by connecting retailers with the startups, investors, and technologies that will drive retail in the 21st century. We remain optimistic that this second acceleration will be driven by the lessons learned through crisis and a lasting desire for leading retailers to use technology to serve their customers.

The retail industry rose to the challenge in 2020 as a year of new constraints led to rapid innovation, but the fundamentals are enduring. Creating a top-notch customer experience will always be the linchpin for innovation in retail. What improves and what's created next will be driven by customers. With retailers and customers unfettered by COVID-19 restraints, the second acceleration awaits. ▣



# Reasons Integrated Retail Planning Is the Future of Retail Tech

Retail tech made retailers agile during the pandemic, but the future of retail tech is transforming retailers into resilient, data-driven organizations.

**R**etail technology delivered agility to retailers in 2020, saving them from the COVID-19 pandemic. But is the future of retail tech improving order management, inventory control, supply chain optimization, or enhancing the customer experience?

The right retail tech will integrate data across those functional silos, transforming your business through integrated planning, modeling, and predictive analytics.

Let's look at why this means integrated retail planning is the future of retail tech:

- Resilience through digital transformation and digital maturity
- Breaking data silos to power predictive modeling & planning for decision-making
- Achieving a 360-degree view of the customer

## Resilience through digital transformation

Twenty-twenty was all about agility. At this year's National

Retail Federation Virtual Big Show in January, Janey Whiteside, Walmart's Chief Customer Officer said they experienced five years of digital acceleration in five weeks! In 2021, that's not enough.

IDC defines three levels of digital maturity for digital transformation: Not Strategic, Determined, and Mature. Of 150 retailers surveyed, only 10 percent achieved the Mature level, while 63 percent were Not Strategic.

Why? They didn't have an integrated retail planning system that takes in all the data you have, both internal and external, creating a decision loop where data and results are considered in building business models using predictive analytics.

Are AI and machine learning the answer? Yes, but they are only tools in the overall solution.

A technology platform that takes in data from all critical organizational areas — finance, strategy, operations — to build predictive models, based on analytics from

those functional areas' data, is required to achieve digital maturity.

**Building predictive modeling**  
“Integrated” means breaking down retail data silos — marketing, finance, HR, merchandising, supply chain, and operations all working together in a coordinated fashion from one master plan, not a collection of spreadsheets.

So, if you need to review your merchandise assortment, you don't want to filter through a series of spreadsheets to know your inventory, buying plan, and fulfillment rates to adjust your replenishment. You need an automated system that allows you to model different scenarios and adjust your operation, supply chain, and financials automatically and predictably.

That's how integrated planning and predictive scenario modeling make your business resilient.

## A 360-degree view

Since an integrated retail planning solution considers all the

data you have, both internal and external, to create business models and predictive scenarios, you essentially have a complete view of your lifetime customer value.

Now you can model how customers react to new experiences while operational processes and financial metrics are adapted.

What if an apparel retailer considers building an AI-based wardrobe assistant in its mobile app? This assistant acts as a personal stylist and recommends new merchandise based on what is in the customer's closet.

A 360-degree model will allow you to answer the following questions:

- Based on customer demographics, will certain merchandise be recommended more often by the AI?
- What impact will that have on forecasting, assortments, and operating margin?
- Will the supply chain support the variation in products ordered based on app adoption?
- Will suppliers be able to meet

the demand based on the seasonality of the merchandise and shopper buying habits?

All these questions can be simulated and predicted according to models that an integrated retail planning solution can deliver. You will connect the dots between customer experience and your business operations, allowing you to determine if the new experience or innovation is worth pursuing based on financial performance.

## The future of retail tech

It's clear why integrated retail planning is the future of retail tech. After a year of developing the agility to quickly deploy technology, retailers need resilience in 2021 to grow revenue and profitability predictably.

Whether deploying same-day delivery services, modeling new supply chain forecasts, or enabling digital customer experiences in-store, retailers can become resilient with integrated retail planning technology. □

**Board International**



## Why Robots Are Becoming Commonplace in Grocery Stores

**One hundred years after the word “robot” first appeared, grocery store shelves are now being scanned by autonomous bots. And that’s just the beginning.**

Grocery shopping in Woodman’s Food Market stores just got a little more convenient and a lot more interesting thanks to a robot rolling down the aisles and scanning shelves. The six-foot-tall robot checks for empty shelves, misplaced products, and incorrect pricing so shoppers searching for their favorite box of graham crackers aren’t disappointed.

Today, robots are found not only in Woodman’s stores in Illinois and Wisconsin, but also in a growing list of grocery stores around the country. These include Sam’s Club, Giant Food Stores, and Schnuck Markets.

### Everyone hates empty shelves

Shoppers often visit grocery stores with a list and a mission to get everything they need. So they are disappointed when they reach for a favorite brand of baking powder or salad dressing or cereal, and it’s not there.

Grocers also hate empty shelves, because it means they are disappointing their shoppers and losing sales. According to Ben Forgan in the Harvard Business Review, “Robots free up workers from routine tasks ... but that’s only the beginning. The real benefit is for robots to capture more granular data about the products on the shelves and customer buying patterns, which can increase efficiency and accuracy in inventory management.”

This means fewer disappointments caused by empty shelves for shoppers and grocers alike.

For shoppers, the benefit of robots roaming store aisles and warehouse racks is quicker and more reliable access to products. For retailers, the benefit is avoiding inventory disruptions that prevent getting the right products to the right places.

**Joe Skorupa, Editor-at-Large, RIS News**

# Leveraging Technology to Meet the Demands of Today’s Consumers

We asked Joe Keenan, editor-in-chief of the Retail and Travel Group at NAPCO Media, about how retailers can use intelligent automation and SMS to boost their customer engagement.

### How has technology become critical for retailers looking to continue growth and maintain competitive advantage through the pandemic?

The front-end experience use of technology for consumers and how they are engaging with brands [is critical]. The digital acceleration that we’ve seen has been trending in this direction for quite some time and it’s really taken off due to the pandemic—consumers being a little more reluctant to go in-store, and for a certain period of time early on, many brick-and-mortar retailers being closed for periods of time. So that front-end experience [is critical]—consumers are more comfortable shopping online, whether that be from their desktop or laptop, or using their phones. With the experience they are getting using some of the technology capabilities, there is a level of comfort that is growing.

### What technologies are helping retailers provide this consistent experience across all channels?

With things such as intelligent automation and AI-powered software, these things are enabling speed and accuracy across the supply chain that’s not possible with a manual, human approach. AI can process vast amounts of data in nanoseconds versus what would be possible for a data scientist to crunch. So the speed you are able to make decisions is really key there. The accuracy level, too—not just speed but ensuring the level of accuracy with AI and intelligent automation can really help to do that.

In terms of individual channels, I think SMS is a growing one as the consumer adoption of that continues to rise. You need to be respectful of consumers’ privacy—they obviously need to opt in and you can’t just start blasting an audience with text messaging. But I am bullish on that as a communication.

Chatbots and live chat is becoming more utilized by consumers and retailers, particularly on-site as a customer service tool. If you notice the customer has been on a checkout page for a


certain length of time and think they might be experiencing a sort of roadblock or challenge, pop up a live chat bot that will be able to address their challenge; that’s another way the use of technology helps to making the customer experience a little more convenient and easier for them.

### What do you find is the biggest challenge for retailers during the COVID-19 pandemic? What advice would you give to retailers moving forward to gain a competitive edge in 2021 and beyond?


The challenge for many, industry-wide, is rethinking or shifting mindsets on what physical brick-and-mortar retail is and how it fits into their organization. I think we are getting to the point where the days of just opening a store, putting in a product, and it only being a transaction channel are going away. I think retailers need to get out of that mindset that it’s just a place commerce is going to occur. ▣





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# Improving Customer Loyalty During the Pandemic

**With COVID-19 changing the way people shop, Steve Dennis, the president and founder of SageBerry Consulting, explains why it's more important than ever for retailers to keep up with consumer demands.**

Enhancing the customer experience should always be a priority for businesses, but

the current climate makes that extremely challenging. Retailers need to be aware of the different technologies and tools available to make the buyer's journey easier.

"First and foremost, they need to accept that in a world of abundant choice and anytime, anywhere, anyway convenience, even very good is not good enough anymore," Steve

Dennis said. "They must find ways to be truly remarkable. Retailers need to eschew one-size-fits-all approaches and become much more dynamic.

"Given that it's so hard to figure out where both technology and customer desires are headed, they must build agility into their business model and establish a culture of experimentation."

## Recognizing shifts

Dennis notes that over the past year, the average customer has changed the way they make purchases.

"The most obvious way is that it's much more digitally driven or enabled," he said. "We have also seen a great acceleration of trends, like curbside pickup, virtual shopping, contactless payment, and more home delivery. Out of safety concerns, consumers are tending to consolidate their

spending at fewer retailers and spend less time in stores.

Shopping, he says, is becoming much more hybrid in nature, demanding a more harmonized experience across channels.

"The most remarkable retailers are embracing the blur that is shopping today, and taking steps to better integrate the digital and physical worlds, and provide more choices for how customers can gather information about their potential purchases and ultimately have their orders fulfilled," Dennis said.

"Journeys must be well-harmonized," Dennis explained. "That is, the discordant notes must be eliminated, and the key aspects of the experience must be blended all together beautifully."

## Long-term changes

According to Dennis, the ongoing

ing pandemic has undoubtedly left its mark on the industry, and retailers must accept that.

"Physical stores will evolve to become more hybrid in nature, serving roles that include showrooms, service centers, brand advertising, and fulfillment hubs," he said. "Less-than-remarkable retailers will cease to exist or continue to shrink, causing a consolidation of market share to the biggest and the best."

For retailers, Dennis says it's crucial to step up, and there's no time to lose.

"First, remember that a slightly better version of mediocre is not a winning strategy," he said. "Second, failing to innovate aggressively is the most risky strategy of all. Lastly, the waves of disruption are going to keep coming. You're going to have to learn how to surf." ■

**Cindy Riley**



## Connecting Retailers And Shoppers Together

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# Transforming Your Contact Center for Omnichannel Success

**Sixty-two percent of retail CX professionals agree that antiquated on-premises contact center technologies are limiting their ability to connect with omnichannel customers, yet 81 percent of retailers continue to use them.<sup>1</sup>**

A seamless, consistent customer experience (CX) is now an imperative. Customers expect fast, flexible, and personalized service, but many brands are lagging under the weight of outdated technology. Leaders are transforming their contact center to drive increased satisfaction and create long-term value.

## Connecting the omnichannel journey

As agents and digital associates are tasked with handling more issues, engaging across new channels, and operating remotely, yesterday's technology is not capable of providing the scale, flexibility, or agility needed to serve the modern customer.

Cloud-based contact centers have the power to connect the pre-and post-purchase experience in a meaningful way for brands and their customers. They elevate self-service, streamline journeys, augment agent performance and help uncover rich insights. With the right tools, CX will be more satisfying, agents will be more productive, and experience designers will be more effective.

## Providing flexibility and choice

AI and automation have the power to dramatically elevate all facets of CX operations, yet only 31 percent of CX professionals report using AI in their contact centers today. Innovative brands are using cross-channel bots and intelligent routing to optimize omnichannel CX. Their customers can quickly solve problems on their own and rapidly reach a helpful agent when they cannot. Automation handles repetitive back office processes, freeing agents to focus on more complex, revenue-generating work.

AI assists agents by providing predictive insights, next best action recommendations,

cross-sell and upsell recommendations, instant knowledge lookups and more. Automation fuels a robust customer intelligence program, analyzing every interaction to help CX leaders glean insights about affinity, sentiment and intent.

## Delivering customer intelligence

Seventy-two percent of CX professionals are experiencing increased demand for customer data analytics — cloud-based contact centers can serve as customer intelligence hubs by providing operational feedback for all departments. Product teams gain insights into which features create loyalty or frustration. Marketing teams learn how to build deeper customer connections. And sales teams hear what customers are saying about their experiences.

## Exceptional customer service

"At Tuft & Needle, we provide a seamless mattress shopping experience for all customers, through all channels," said Amber Scott, head of CX for Tuft & Needle. "Talkdesk enables us to meet our customers where they are and strengthen the connections we have with them. Their industry standard for uptime and consistent product innovations have helped us grow as a business and cement our ability to provide some of the best customer experience in ecommerce."

An omnichannel contact center that is versatile, customer-centric, and AI-driven is not a fantasy. It is a reality that Talkdesk makes possible, helping leading brands deliver differentiating omnichannel experiences. ▣

**Shannon Colquhoun, Duane Peck, and Génesis Longo, Retail Team, Talkdesk**

<sup>1</sup>The CX Revolution in Retail, Talkdesk Research Report

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## How Technology Can Help Retailers Shake up the Status Quo

**In retail, one of the things we talk about a lot these days is "disruption." That's the new buzzword for upending the way business was done in the past, as innovations lead us into the way business will be done in the future. And one of the most powerful disruptions is technology.**

To some, disruption might not sound like a positive. But in a business context, disruption shakes up the status quo. When a new technology disrupts a product or a business, it often replaces old inefficiencies and makes things better and stronger than they were before.

## Plans for this year

This could be the year when many of these technologies that have been in startup mode will begin to become reality. Artificial intelligence and virtual reality might not be taking over completely, but they are starting to emerge. And we are at the point where consumer expectations are rising and influencing how retailers who want to stay on top must interact with their customers.

One of consumers' biggest demands is a seamless shopping experience, regardless of whether they are standing in a retailer's store, sitting at a computer or holding their mobile device. That means the technology behind a brand's physical stores, websites and apps needs to work in perfect sync.

If the web says an item is in stock at a store, it needs to be there when the customer shows up. If something bought online doesn't work, the customer wants to be able to return it at the store. If next-day shipping isn't soon enough, picking up in-store should be an option. If the mobile app says the store is open, it had better be open.

## Smarter shoppers

Retailers must be able to answer consumers' questions about the products they sell, and one of the ways technology helps with that is through chat bots. These are computer programs that use a form of artificial intelligence to give the customer a human-sounding conversation, either through spoken-word audio or text.

TV shopping, a predecessor to online shopping, is being reborn with fully shoppable programs, where everything seen is available for purchase with the click of a mouse or a tap on a touchscreen.

## New retail jobs

With retail using all this technology, the world of retail jobs is changing as well. Retailers don't just buy gadgets off the shelf and use them. Retailers today operate their own innovation labs to come up with the latest in cutting-edge technology. That means they are hiring engineers, software designers, and social media experts. Technology isn't just the "what" of the future, it's the "who."

From the days of the general store to paper catalogs to online shopping, retailers have always been constantly reinventing themselves. With technology, the pace of that reinvention has accelerated to a level that's never been seen before.

**Matthew Shay, CEO, National Retail Federation**



## Creating Amazing Retail Experiences

Customer service expert Shep Hyken discusses the pandemic's current impact on retail and the industry's technological future.

The impact the COVID-19 pandemic has had on the retail industry is unprecedented. As the world looks forward to an end to lockdowns, the future of retail is an open question.

"When you look at traditional retail — going to the mall, for example — the problems were there pre-COVID," said Shep Hyken, CSP, CPAE, a speaker, author, and consultant focused on helping businesses develop a customer service culture and loyalty mindset. "All COVID did was accelerate those problems."

"The future of retail will lie in a personalized experience," Hyken said. "What are you going to do to trigger an emotional response in my brain that makes it enjoyable, that makes me want to go to your store or your website?"

Hyken, an in-demand speaker on the customer experience, sees convenience and control as key.

"The most successful online retailers make it extremely easy, they give control to the consumer," he said. "Customers want confidence with who they do business with."

That comes down to the most fundamental thing in retail.

"Digital or in-person, you must create an amazing experience — better than average, all the time," Hyken said. "There are moments of misery, moments of mediocrity, and then moments of magic. And your goal is to create moments of magic — anything better than average."

Hyken has designed several training programs for customer service professionals and believes the technological future of retail must be built on old-school principles.

"You've got to have a strategy to engage customers to make them feel connected," he said. "Repeat customers are not loyal customers — but before you can have loyalty, you need repetition. So we have to move it to an emotional connection — why do you love doing business with them?"

Jeff Somers

# Enhancing the Customer Experience Through Digital Signage

Strategists Beth Warren and Laura Davis-Taylor, members of the Digital Signage Federation's Board of Directors, discuss the benefits of displaying information electronically.

**E**xperts in the field agree that digital signage can be a powerful tool, if the right approach is used.

"Every once in a while, I come across a store or venue that has nailed it, like the Nike Innovation Lab in New York City, or the Shops at Hudson Yards in New York City, where digital is integrated in ways that help navigate, inform, and inspire discovery," said Beth Warren, the senior vice president of Creative Realities. "Or Sephora, which has expertly integrated its mobile app so that it behaves in 'in-store mode' with a unified set of data that can respond to individual customer preferences based on their preferences and behaviors."

Laura Davis-Taylor, chief strategy officer of InReality, also points out that providing safety, wayfinding, or logistical help, such as a purchaser's place in line, a product price, how to get help, or where to locate an item, can go a long way in helping the consumer.

## Supporting and converting shoppers

Davis-Taylor sees digital signage

as an extremely effective communications tool, but feels it's been underutilized.

"Evolutions with 5G, Internet of Things, artificial intelligence, real-time analytics, and edge processing have paved the way for it to reach another exciting potential as an intelligent, one-to-one, dynamic screen that 'responds' with contextual content perfect for the shopper at each moment of decision," she said. "As more retailers adopt a 'store as media' approach with their retail marketing assets, this will enable them to offer 'smart signage' at a premium that ties into point of sale in real time."

## Ensuring safety

Davis-Taylor says shoppers are looking for peace of mind, which involves both perception and reality.

"For health safety at stores, digital signage has been used to count and convey current occupancy levels, share often-changing COVID safety protocols and reminders, screen temperatures, and integrate with a visitor/employee app that ties to Q&A

screening questions and store entry points," Davis Taylor said. "There are also great examples of touchscreens and kiosks that offer self-service. We aren't sure exactly what digital signage solutions will stick post-pandemic, but we know when people feel comfortable in a store, they shop more and buy more."

## Improving employee engagement

According to Warren, it's essential to have interactive experiences.

"Anything that helps the shopper understand or try before they buy, so they minimize risk and fall in love with what they are looking for, is a win for both the customer and associate who provides them with a satisfying experience," Warren said.

Employers can provide tools to associates that allow them to carry out their role with greater intel, either being able to advise on inventory and tap to ship, educate their shoppers on benefits, or data capture easily to build a profile they can use for future clienteling. ▣

Cindy Riley





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## The Retail Doctor's Prescription for a Booming Business

**Bob Phibbs, aka The Retail Doctor, is a motivational speaker, business consultant, retail trainer, and passionate champion of brick-and-mortar shops. As he puts it, "I help stores sell more stuff." Phibbs offered his insights on how the COVID-19 pandemic affected retail, and what businesses can do to gear up for a potential mass post-pandemic return to in-person shopping.**

### What long-term changes do you foresee the ongoing pandemic having on the retail industry?

Digital natives are going to continue to downplay stores and say they're irrelevant, while I think the smart retailers are going to understand that stores are still the hub that everything else comes from. Customers are going to want to stay local for the foreseeable future, and I think the closer you can get to the customer, the better.

Everyone has to realize that the customer is the most important thing; you drop everything to help them. As long as we realize that, I think we can get past the "You're red, you're blue, you're horrible, you're a loser," and realize that we really are more alike. And that's what retail's point is. It's about talking to someone and making them feel, for that one minute, that they're the most important person in the world. That's what builds that gossamer thread between people and communities.

One last thing I say at the end of all my speeches right now: Back in 1918 when the Spanish Flu hit, and we lost 600,000 people, the media were saying, "This will change retail forever," and "This will change shopping forever." And then a year later we were at crowded speakeasies drinking bathtub gin.

People are pretty predictable; they're going to want to go back to what they're familiar with. And these doom-and-gloom sayers, I think they're going to be proven wrong.

# Bringing the Best of the Store Online (and Vice Versa)

**The retail industry is seeking creative ways to create a truly seamless omnichannel customer experience that also amplifies the best elements of each touch point.**

Even before the COVID-19 pandemic gave a Godzilla-sized boost to e-commerce, consumers were embracing the movement toward greater digital sales. For example, during the 2019 holiday season — before COVID was a factor — online sales jumped 18.8 percent compared to the previous year, while overall retail sales increased just 3.4 percent, according to the 2019 Mastercard Spending-Pulse holiday report.

These figures are a bit misleading: It's true that the e-commerce share of overall sales had consistently increased throughout the decade of the 2010s, but that growth was starting from a far smaller base figure. Even though consumers' shopping journeys increasingly encompassed digital elements (online product research, inspiration from social networks, price comparison apps), the vast majority (80-90 percent, depending on the retail category) of actual transactions still took place in brick-and-mortar stores.

Even so, forward-looking retailers could see the writing on the wall, well, screen. The big insight of the past decade is that consumers don't shop "channels," per se; they shop products, brands, and retailers — and increasingly, they expect those retailers to meet them where they are, and not the other way around.

### Immediate challenge

COVID, of course, turned this long-term issue into an immediate challenge, and retailers responded by pumping up their e-commerce operations and launching (or expanding) buy online, pick up in-store (BOPIS), contactless payments, and curbside pickup.

The deeper question for retailers — and one that will grow more urgent as physical stores continue reopening — will be: "How can I bring the best of the online experience into the store, and vice versa?"

There is no one perfect solution for all retailers and brands, however, the industry already is grappling with ways to create a truly seamless omnichannel customer experience that also amplifies the best elements of each touch point. And oh, yes, that experience also needs to provide the retailer with large enough profits to stay in business.

In their attempts to find the optimal balance, retailers are testing several types of technology solutions, including:

### Augmented reality (AR)

From apps that let homebound consumers visualize how a new sofa, lamp, or rug will look in their living room, to store-based apps that reveal how a shirt would look in a different color, a growing number of retailers are deploying AR applications. Retailers hope that "previewing" purchases at home will help reduce costly returns.

Additionally, in the brick-and-mortar space, AR is enabling stores to act more like showrooms with digital "endless aisles," eliminating

the space and cost requirements of carrying a complete inventory of every product.

### Micro-fulfillment centers and "dark" stores

Omnichannel retailers stuck with expensive real estate are considering turning their stores "dark," closing them to the public so they can function as micro-fulfillment centers to support online orders in different geographic areas. In the grocery space, stores could operate as hybrids, with a mini-warehouse for efficient fulfillment of commodity items, and a public area where shoppers could pick out their perfect tomato or get a specific cut of steak.

### Central repositories for customer data

The e-commerce boom has created an enormous opportunity for retailers to gather data from consumers who previously would have been largely anonymous, in-person shoppers. By collecting customer data across all touch points, physical and virtual, in a CRM (customer relationship management) or CDP (customer data platform), retailers can move closer to creating the seamless omnichannel experiences that customers are looking for.

Those retailers that successfully deploy these and other technological and business process innovations will take giant steps toward offering a customer journey that matches up with consumers' real-world, channel-agnostic shopping behaviors. ▣

**Adam Blair, Editor, Retail TouchPoints**



# How Humanscale Is Giving Customers 24/7 Virtual Access to Its Showroom

Matterport delivers an immersive 3D shopping experience that aligns with its brand, incorporating the idea of movement, which is key in ergonomics. Humanscale is focused on designing and manufacturing ergonomic products that improve the health and comfort of work life.

The company needed to figure out a creative way to give visitors virtual access to its showroom in New York City — one that rang true to its brand. We asked art director Denise Figueroa why Humanscale chose Matterport as its solution.

## What inspired you to capture Humanscale's HQ in NYC?

In early 2019, I began researching VR renderings for a business opportunity. During the process, I'd hoped for the visual experience to have a photorealistic quality and feel true to life, but my experiences didn't quite meet my expectations. We ultimately didn't move forward with the project, but it left me curious about ways in which to share our showroom and products with potential customers. It was also important that the experience feel authentic to our brand and incorporate the idea of movement, which is key in ergonomics.

Fast forward several months to when the marketing team was well into planning updates to the Humanscale showroom in Chicago for NeoCon 2020, one of the largest trade shows in our industry, and when COVID-19 caused widespread cancellations of large social gatherings.

We needed to figure out a creative solution that gave visitors high-quality access to our showroom, virtually. Our CMO Leena Jain mentioned hearing about Matterport through an acquaintance and shared a link to the site. When I went to the site, I could instantly see the opportunity to keep our plans moving forward, even if in

a slightly different manner. It was also exciting that you could create this experience simply by using a phone app; a unique bonus to the tool.

## How do you plan on leveraging the digital twin of your HQ?

What I appreciate about the digital twin and the Matterport experience is that you're virtually in our showroom! My hope is that folks are able to see our products in a new and interesting way and feel as if they're actually exploring and moving through Humanscale's HQ.

The idea of movement is authentic to our brand, and thanks to Matter-

port, visitors can take a tour from their own homes and at any time of day. The showroom is truly accessible 24/7. As a visual person, I think it's great to be able to see products from multiple angles and different points of view within the space. It helps you envision what it might look like in your own space and provides real context. ▣



This has been paid for by Matterport.

# Leveraging 2020 Lessons Into Better Customer and Employee Experiences



**Curtis Campbell**  
Senior Marketing Leader,  
Hughes Network Systems



**Leo Coates**  
CEO,  
Coates Group



**Dan Gilmore**  
CMO,  
Softeon



**Fabio Lovesio**  
Head of Industry Solutions,  
Board International



**Lori Greiner**  
Investor,  
"Shark Tank"

We asked our panel of experts to share how retailers can turn the challenges experienced throughout the COVID-19 pandemic into opportunities for the future.

**What is the biggest challenge facing modern retailers today and what advice would you provide to these businesses?**

**Curtis Campbell:** The pandemic has changed virtually every facet of our lives — especially how we make purchase decisions. In the months following the first COVID lockdowns, many stores were shuttered. Some remain shuttered today.

What emerged as critical to surviving that phase and everything that's followed is a retailer's ability to adapt. For example, to keep their "doors" open, retailers needed to enhance their buy online, pickup in store (BOPIS) and curbside options. And because customers had to select and order products online, it became essential for

retailers to deliver a positive ecommerce experience. Without being able to acclimate and innovate in these ways, the retail industry would have struggled even more than it has.

**Which retail technology trends have you seen make the biggest impact in the past year as a result of the pandemic?**

**Leo Coates:** Solutions that offer the most frictionless customer experience have undoubtedly seen an accelerated adoption rate due to the pandemic. The integration of mobile, delivery, and curbside services; contactless payment; and the reimagining of the physical space are all trends we've seen our clients implement at an expedited rate to pivot with the changing

restrictions and ultimately to create the safest experiences for their customers.

**What does "smart retail" mean to you in 2021?**

**Dan Gilmore:** "Smartness" is obviously a function of what you know. From a retail supply chain perspective, "what you know" is a function of the level of granular, real-time visibility a retailer has to inventory, orders, capacities, and constraints across an extended network. A "smart" retail supply chain is one that has the ability to decide the best way to fulfill each and every order in the moment, as it is received, considering a wide range of variables and attributes, and maintaining that real-time visibility.

The "best way" applies at both a network level and at

a node or distribution center level. Think in terms of creating both a smart network and also a smart "warehouse of the future" — though what many consider a future state is in reality available right now.

**Fabio Lovesio:** To me, smart retail refers to the ability to continuously reinvent in line with changing markets and consumers. This means introducing innovative products and services (think about the new clothing rental trend or food delivery services that literally didn't exist a few years ago) with a constant focus on customer experience at every touch point and on all channels. Smart retailers are already three steps ahead in their digital transformation journeys, and can now put all their efforts into innovation

rather than fixing information silos or slow planning processes behind the scenes.

**What are the points that a product or service must have in order for you to know it will be "sellable"?**

**Lori Greiner:** If it's a product, that it can be manufactured at a good price, or if it's a service, that the business can be run economically.

That product or service can be purchased at an affordable price; you can have a great product or service, but if people can't afford to buy it, it's not going to work. You have to compare yourself to what's on the market already and beat it. A winning combination is being a better product or service, and being even more affordable than your competition. □





**Robin Daniels**  
CMO,  
Matterport



**Adam Settle**  
CXO,  
Sharpen



**Shannon Colquhoun**  
Vice President of Retail,  
E-Commerce and  
Consumer Goods, Talkdesk



**Andrew Lozier**  
CEO,  
Lozier Corporation



**Anne-Queline Keller**  
Solutions Marketing  
Director, Retail and Supply  
Chain, Alteryx



**Kristian F. Beloff**  
CEO,  
SellPro

# How the Right Technology Improves Retail Across All Channels

Our expert panel discussed the retail technologies that will make a difference for consumers and businesses alike in 2021 and beyond.

**Which retail technology trends have you seen make the biggest impact in the last year due to the ongoing pandemic?**

**Robin Daniels:** The ongoing pandemic has massively affected retailers everywhere. Due to closures and limiting regulations, retailers must find a way to capture the attention of customers from far and wide to drive growth. Retailers offering a holistic approach that integrates the physical and virtual touchpoints of the customer's journey are able to reach a wider audience and have seen some of the biggest impacts. A recent Matterport survey revealed that 73 percent of respondents prefer to shop a 3D virtual store. The future of retail is hybrid.

**Adam Settle:** Being "connected" is a pain point we all feel, especially as it pertains to retail. Since our customers can't walk in the door anymore, digital channels are more important than they've ever been. If you aren't already available through digital channels, you really have to be. To take that a step further,

since customers can't stop in to browse, ensure you're participating in outbound campaigns to get yourself in front of the right customers at the right time. This isn't all on you, digital automation is your friend.

**What does "smart retail" mean to you in 2021?**

**Shannon Colquhoun:** Technology, technology, technology! It should be integrated into every business, customer, and organizational strategy. Smart retail means having a 360-degree view of your customers at all times and being able to make insightful decisions based on data from all of their engagements with your company: their complaints, sentiment, mood, and preferences.

**What does the future of retail automation look like to you?**

**Andrew Lozier:** A smart automation strategy will be a key driver of success for retailers, but human interaction and environment will be equally important, and it must all tie together

seamlessly in a brick-and-mortar store. The store needs to transact accurately and efficiently like a warehouse, but it needs to look visually appealing and have human touch points.

Customers like the low prices efficiency brings, but they don't want to feel like they've stepped into a robotic warehouse. Automation in the store will need to fit the aesthetics, or be invisible and non-disruptive. There's no question automation will be essential to be competitive, and successful retailers will find a way to integrate it into the overall customer experience in a very positive way.

**What is the single most effective way manufacturing professionals can begin to utilize their data in the coming months?**

**Anne-Queline Keller:** Right now, it's about one thing: automation. It's vital that manufacturers look for analytic process automation in their supply chain. Using a process intelligence tool can help identify anomalies, identify dependencies, and

pinpoint areas in the process that can be automated. Once these automation opportunities have been identified, using a platform that provides a way to integrate the data, analyze it, and automate the process is imperative to find better ways to play out scenarios, and predict what can happen.

**What long-term changes due you foresee the ongoing pandemic having on the retail industry?**

**Kristian F. Beloff:** I think many of the core changes that happened in retail started years earlier, and the pandemic just ultra-accelerated them. Those changes are here to stay. Consumer behavior shifted toward online shopping, so multi-channel retail will continue evolving. Retailers will continue optimizing physical stores for it, including allocating more space for local fulfillment, re-tasking store personnel between facilitating in-store and online shopping, and adopting new technology to make the experience more seamless. □

# Turning the Supply Chain From Ugly Duckling to Beautiful Swan

**The supply chain has undergone several transformations over the past few decades. Throughout the 1980s and '90s, the main objective of supply chain management was cost reduction, which was typically achieved by minimizing inventory and outsourcing manufacturing.**

As consumer expectations continued to grow over the past 20 years, supply chain objectives have shifted from simply cutting costs to increasing profits. With the proliferation of online shopping, improving delivery speeds, order accuracy, and the overall customer experience are all

ways for organizations to drive profitable growth through the supply chain.

Then a perfect storm hit in 2020, when just as ecommerce was already booming, the COVID-19 pandemic created a ripple effect that shook supply chains across the world, prioritizing the need for resilience and agility to ensure business survival and longevity.

## **A heavy dose of disruption**

The COVID-19 pandemic revealed many weaknesses in traditional supply chain models. Supply and demand were out of sync, from the shutdown of supply production and shipping, when the virus initially spread through China,

to the unpredictable demand due to changing work and lifestyle habits, and stockpiling in the Western world.

The level of uncertainty and lack of flexibility in supply chains made it difficult for many organizations to quickly and efficiently pivot their operations to accommodate changes in manufacturing, volume, shipping, and delivery.

Part of the problem stems from the traditional, linear supply chain model, where information — and complications — flow from one link to the next in the chain. Minimizing risk and impact requires organizations to move away from the linear supply chain structure and

into a connected digital supply network that provides end-to-end visibility and real-time planning, collaboration and execution across all functions, partners, and suppliers within the ecosystem.

## **Software saves the day**

As the supply chain model has evolved, so too has the technology and requirements for effective supply chain management. Building a resilient, agile supply chain requires sophisticated software capable of dealing with constant disruptions, and shifting as business and customer needs change.

The end-to-end supply chain of a product could contain hundreds of points, from the individual materials manufacturers to the consumer's hands, making access to real-time, reliable data more important than ever. Control

tower solutions provide total visibility and collaboration across the entire network, and utilize artificial intelligence and machine learning to predict and resolve problems in real time. These solutions deliver actionable insights that enable organizations to make better business decisions based on the highest service level at the lowest cost.

While we cannot fully predict or prevent disruptions in today's volatile and uncertain world, we can minimize the risk and impact by building more resilient supply chains. Achieving maximum resilience requires agile supply chain solutions with the ability to quickly pivot from one option to the next to deal with the disruption of the moment. ▢

**Jim Tompkins, Founder and Chairman, Tompkins International**

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# How a Global Pandemic Affected Retail Supply Chains

**Deborah Weinswig, CEO and Founder of Coresight Research, a global advisory and research firm specializing in retail and technology, shares some of the best ways for retailers to improve their supply chains and boost customer loyalty.**

## **What is the biggest change you have seen retailers make during the pandemic?**

The biggest change retailers are making today is managing their supply chain. They need to implement robust supply chain solutions, via software, which will give them visibility, flexibility and control over their supply chains. The two most commonly used terms are agility (the ability to respond quickly to unforeseen changes in demand) and resilience (the ability to manage disruptions quickly to revert to prior stability).

## **How has the current crisis impacted retail supply chains?**

Demand shifted toward essential items, such as food at home, IT and entertainment products, and outdoor

and exercise equipment, as consumers spent more time at home, away from restaurants and office and fashion apparel. This shift in demand created volatility and shortages. Previously, supply chains had been fine-tuned for maximizing profitability. Now, they have to be optimized around flexibility.

## **What steps can retailers take in order to improve their supply chains?**

Retailers need end-to-end supply chain visibility, from the manufacturer to the warehouse and the physical store to know where inventory is at all times. Their supply-chain platforms also need to be robust and agile, so as to quickly respond to changes in demand and consumer preferences. They also need the analytical tools to forecast demand and optimally allocate their inventory and assortment.

## **Where do you see analytics having the biggest impact in retail this year?**

End-to-end visibility means that retailers can track every product in the supply chain, and agility means that they can easily make rapid changes, such as finding alternate sources due to shortages or rapid shifts in demand. Demand forecasting is the key piece of the supply chain, since it drives inventory, assortment, and fulfillment.

## **How can retailers use analytics to help enhance customer satisfaction?**

Analytics helps retailers ensure that key products are in inventory, in the correct location, and also on the shelf. Consumers leave stores (i.e., become dissatisfied) due to product being out of stock, experiencing an unfavorable product selection, and due to relative prices. Analytics can also help with customer service, safety, returns, and in new-product development, which all improve customer satisfaction. □

## **Why Logistics Robots Are a Necessity, Not a Luxury**

**Nothing is impacting the logistics industry as much as the growth of ecommerce. American consumers spend 40 billion hours shopping in stores — the equivalent of 20 million full-time jobs.**

As more consumers shop online, that free labor needs to be replaced with automation. Robots can do your shopping for you. With emerging automation opportunities, here are some trends to watch in the next five years.

### **Autonomous Mobile Robots (AMRs)**

AMRs for order fulfillment will increase significantly, with the largest rise in their use for warehouse transportation solutions. Similarly, deployment of AMRs for sortation applications will also increase. AMRs provide fulfillment flexibility and opportunities abound for more use cases.

### **Better data**

Artificial intelligence (AI) will help warehouses analyze operations based on historical and real-time data. This information goes toward predictive analysis for inventory management, last-mile optimization, and reverse logistics.

### **Micro-fulfillment centers (MFCs)**

MFCs focus on last-mile delivery by bringing products closer. They can satisfy consumer demands because they will have fast automation with robots.

**Tom Galluzzo, CEO and Founder, IAM Robotics**

A banner advertisement for Softeon. The background is a dark blue grid with white dots and lines, overlaid on a blurred image of a warehouse interior with blue shelving units. The text is in white and yellow. The Softeon logo, consisting of a stylized 'S' made of four colored squares (yellow, grey, blue, and white) followed by the word 'Softeon' in white, is on the left. To the right of the logo, the text reads 'Powerful + Flexible solutions for today - and every day after.' in white. Below this, a yellow arrow points to the right, containing the text 'Delivering supply chain success - every time.' in white.

**Powerful + Flexible**  
solutions for today - and every day after.

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Delivering supply chain success - every time.



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