RESHAPING RETAIL

ABOVE ALL ELSE, EXPERIENCE IS CRUCIAL TO THE FUTURE OF SELLING GROCERIES.

By Jim Dudlicek

T hink click-and-collect is cutting-edge? Think again. How about a supermarket that shoppers can actually drive through — not up to a pickup window, but right up to the shelves?

A Russian inventor actually holds a patent for such a concept, which has made the rounds on social media. Shopping motorists actually pick products off rotating shelves from behind the driver's seat, dropping items onto a conveyor belt that whisks them off to checkout, where the shoppers pay their bills and speed away, without ever getting out of their cars.
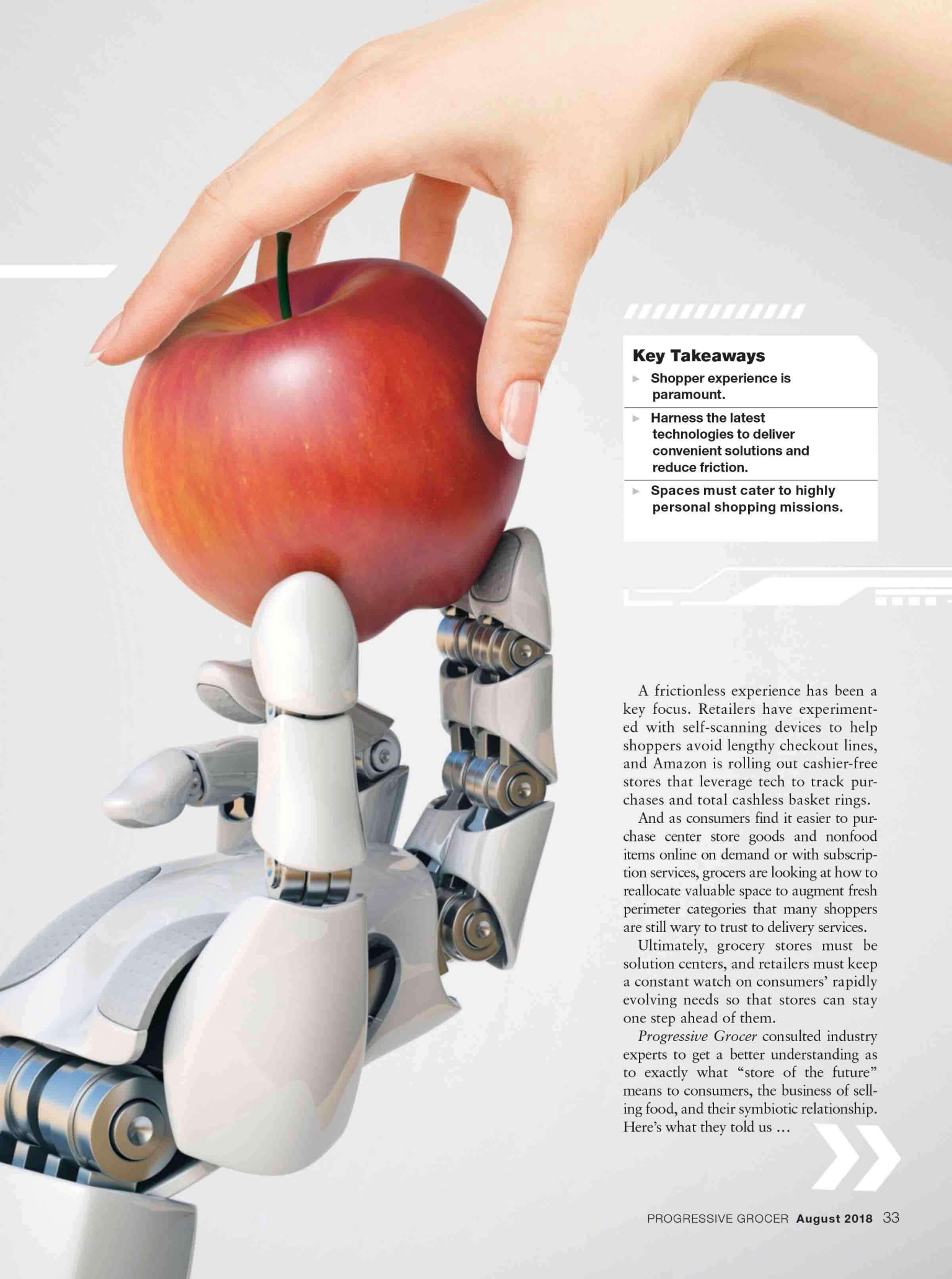
Is this the store of the future?

Despite the growth of ecommerce, shopper insights indicate that most consumers still like a brick-and-mortar store experience that delivers sights, sounds and smells, perhaps allowing them to linger over a cup of coffee, a full meal or a cooking demonstration.

But the broader picture indicates that most grocery consumers want a seamless experience — the ability to purchase goods in person, online, or by employing click-and-collect or delivery, as their needs and circumstances warrant. To be sure, industry experts agree that experience is paramount in creating a place that shoppers want to be, out and away from their computer screens.

So while you likely won't see cars driving into every grocery store any time soon, it could be just one component of a larger, increasingly diverse picture of a continually evolving store of the future.

A frictionless experience has been a key focus. Retailers have experimented with self-scanning devices to help shoppers avoid lengthy checkout lines, and Amazon is rolling out cashier-free stores that leverage tech to track purchases and total cashless basket rings.

And as consumers find it easier to purchase center store goods and nonfood items online on demand or with subscription services, grocers are looking at how to reallocate valuable space to augment fresh perimeter categories that many shoppers are still wary to trust to delivery services.

Ultimately, grocery stores must be solution centers, and retailers must keep a constant watch on consumers' rapidly evolving needs so that stores can stay one step ahead of them.

Progressive Grocer consulted industry experts to get a better understanding as to exactly what "store of the future" means to consumers, the business of selling food, and their symbiotic relationship. Here's what they told us …

An Entirely New Customer Experience

Looking back 10 or even five years and comparing that shopping experience to today's retail reality, the difference is vast. As frictionless checkout and delivery become commonplace in grocery conversations, one can't help but ask, what does this mean for the future of grocery? With providers teasing the democratization of frictionless checkout, which could enable adoption by the masses and not just the likes of Amazon, there's much to discuss.

"Many of our grocer clients are realizing successes by leveraging tech that blurs the line between digital and brick-and-mortar," says Steve Duffy, VP of grocery for Orlando, Fla.-based Cuhaci & Peterson Architects, Engineers and Planners. "In order to be where their consumers are, they have to virtually be omnipresent. The question is no longer whether or not to delve into omnichannel, it is determining which channels to focus on."

Duffy continues: "We are creating an entirely new customer experience for grocery and food, end to end. We are challenged with literally understanding the implications of the product, the freshness and the reality of getting it into the consumer's home."

Successfully getting food to consumers' homes — the "last mile" — is "a battleground of epic proportions," says Cuhaci & Peterson Principal Steven Blevins.

"This is an arena with fierce competition, and even fiercer challenges to making sure it is both a profitable and viable venture for grocers," Blevins says. "Artificial intelligence and robotics are helping overcome some of the challenges, but the paradigm shift to stay close to customers, increase automation and do this at a scalable level is a conundrum that requires agility to overcome."

Eric Thorsen, who leads global business development in retail and CPG for Santa Clara, Calif.-based tech company Nvidia, sees significant interest in using new technology like GPU (graphics processing units) in the retail industry.

"Retailers are interested in computer vision to monitor shoppers, prevent loss and enable a cashier-free departure," Thorsen says. "This keeps in-store associates focused on contact with the consumer, rather than ringing registers. The end result is a more personal interaction, assisting customers with questions and providing advice on products. Customer satisfaction improves, and revenues increase as a result."

And while there are more and more ways to obtain product (in-store, pickup, driveup, delivery), one added trial for grocers is maintaining relevance across multiple generations, all with varying levels of comfort with omnichannel options. Whether that's through innovations that allow small to midsize grocers to embrace frictionless technologies, the improvement of micro fulfillment and last-mile capabilities, improved experiential shopping for increased brand engagement, or creating a "digital twin" to allow omnichannel consumers to have a "virtual" shopping experience, keeping up in an environment that's undergoing seismic technological changes will set industry players apart moving forward.

"As retail store designers, creating an effective, stimulating experience involves stirring emotions to form powerful bonds with the target demographic," says Lewis Shaye, founder of South Carolina-based Grocerant Design Group and former VP of culinary concepts for the Schenectady, N.Y.-based Price Chopper supermarket chain. "A brand refresh on its own is not powerful enough to cause people to feel remarkably different; it won't deliver the results long-term. Unlocking the unique differentiators that drive people to shop with a particular retailer and using technology to target unmet needs in the marketplace will be what sets apart the store of the future."

Duffy says a store-of-the-future design "takes the optimal shopper's various needs and ability to acclimate to the disruption in new retail into consideration. Their future interactions with both the physical and virtual store worlds help shape our vision of what this future store could be."

Five primary strategic underpinnings are central to change and are no longer considered trends, according to Duffy: technology, convenience, experience, fresh food and local.

Future grocery design will be significantly affected by technological advances like artificial intelligence, machine learning and robotics. The compounding effect of these multiple technologies bears great

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Engaging shoppers, whether through sampling at community tables (left) or leading group dances to celebrate a fresh batch of chicken, demonstrates a retailer's commitment to an experience that transcends the mere selling of wares.

significance in the rate of change, as well as what can arguably be described as a metamorphosis into the next grocery design innovation curve.

This becomes key to bear in mind for traditional grocers, especially the smaller or regional operator; obtaining a complete understanding of current trends and coming innovations as they develop a strategic game plan will play an integral role in harnessing the operational efficiencies needed to maintain viability in tomorrow's marketplace.

Other technological advances involve store infrastructure improvements, including predictive equipment, energy efficiencies in lighting and refrigeration systems, and possibly augmented or virtual-reality options that give consumers a wealth of information about products.

"As the demand for fresh and local options expands, the ability to provide more sophisticated and accessible information may bring about 'digital twins' as one way to fulfil this demand," Blevins says. "Imagine consumers being able to 'virtually' walk through a store and take their time to look over new products without ever leaving their home. With advancement in BIM [building information modeling] technology, this is something that is not far off."

To deliver a compelling, experiential and customizable shopping experience, as the evolution of grocery intensifies, grocers must maintain an advanced technology store platform and remain agile enough to provide the best of online and in-store shopping in a dynamic retail environment. Together, all of these elements coalesce into a store of the future that engages on many levels, and one that can win in the new retail frontier.

The 3 Most Important Features for the Store of the Future

Jeffrey Nader, project director, API(+)

1 **Real estate:** Based on local demographics, grocers will provide or lease out stores within stores to create a more differentiated shopping experience and a strong sense of place.

2 **Social interaction:** Spaces that go beyond lounge or seating areas. These spaces will need to be activated through community events centered on connectivity and growth.

3 **The theater of food:** This concept is focused on positioning food at the center of everything. Architecture, design and landscape elements will play a key role in setting the stage (e.g., vibrant produce displays, curated meal ingredients and locally sourced products) and creating a sense of engagement with the local community.

How close are these concepts to being a reality? The future is now. The innovative grocer spans a vast landscape, and innovation is happening in beta platforms across the world. Grocers of various scales are currently testing these concepts in small batches and are operating as small innovation centers for bigger things to come.

Mark Hardy, CEO, InContext Solutions

1 **Top-notch ecommerce fulfillment and in-store inventory:** The shopper experience will have to be fluid — no more wondering what's in stock, hoping you get it in time or trying to price compare between the two channels.

2 **Relaxing atmosphere:** An experience that's easy to navigate, clean and non-stressful. Instead of a huge store stocked full of real products, virtual products will help cut down on space at the customer level, while the majority of store real estate will be used for warehousing. Augmented reality will help shoppers navigate the aisles or various sections.

3 **Digitized supply-and-demand chain:** Using technology to cut down on all of the back and forth and the travel, and visualizing and testing concepts and products in digital before bringing them to market, will be the new normal.

How close are these concepts to being a reality? Some of this is here, now. Stores are already using digital and virtual methods to maintain a competitive advantage. But none is that far off. The technologies are available; we just have to figure out the best uses for them. We need to work on creating faster, more efficient processes on the back end so we can better focus on providing amazing, future-focused experiences for shoppers.

Image courtesy of API(+)

Grocery stores should deliver an environment that reflects the neighborhood they serve, including design, decor and graphic elements that set the tone for the shopping experience.

Experience is the Central Focus

"One of the biggest trends that we are noticing across all retail project types is customer experience," says Jeffrey Nader, project director at Tampa, Fla.-based design firm API(+). "Experience has become the central focus of the design process. Maximizing store layouts with an emphasis on product placement is no longer the focus of the user experience. Instead, the design process has become human-centric, with careful attention to how the public enters and engages with spaces."

Nonprice factors are going to be the biggest differentiators among traditional grocers, Nader asserts. "A strong focus on quality, freshness, customer service and a unique shopping experience are key elements that are shaping the path for a competitive playground among traditional grocers," he says.

One of the most important technologies that stores of the future will need to employ, according to Nader, is a robust consumer relationship management (CRM) platform that manages critical customer information unique to the grocer's brand. "It will create a single source of information that will increase sales efficiency, boost sales and improve forecast accuracy," he says. "These tools have built-in algorithms that crowdsource information from various outlets, including social media, mobile applications and geo-located foot traffic."

In addition to the current key personnel that maintain today's

retail establishments, stores of the future will have a more specialized and highly skilled workforce such as health experts (including dietitians, nutritionists and macrobiotic experts); in-store chefs and food prep experts; and shopping guides. "This futuristic workforce will function as a group of go-to experts that will guide the customers on what to buy and how to store it," Nader says. "Along with a highly skilled workforce, stores of the future will rely heavily on the Internet of Things, allowing them to better predict consumer demands and manage inventory across a network of stores."

Additionally, Nader notes, grocer innovation will play a key role in reshaping customer satisfaction by concentrating efforts on creating a more modern shopping experience. He observes, "Experience will improve with focus on eliminating hassles such as long checkout and customer service lines, and those time-consuming aisle searches for products that are sold out or nonexistent, among other demotivators."

Customer-Centric Solutions

While a multitude of factors are influencing store design, "it ultimately comes down to the need to better serve evolving customer lifestyles and preferences to create more convenient and engaging in-store experiences," says Dr. Pallab Chatterjee, chairman and CEO of Dallas-based artificial-intelligence solutions provider Symphony RetailAI.

Weekly pantry-loading trips have declined in favor of quick trips and online shopping, and time-starved customers increasingly place a greater value on prepared foods and grab-and-go options. Discounters are also challenging traditional grocery stores, not just bringing lower prices, but also introducing new paradigms for what a grocery store experience can mean.

"There is so much change happening that current supermarket formats need to be fundamentally reconsidered to respond to a new role they serve," Chatterjee says. "Grocery stores of the future will offer innovative, customer-centric shopping experiences to meet needs and demands of modern shoppers."

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A primary challenge for traditional grocers is that current store layouts no longer meet the demands of today's customers. "Ultimately, a wide variety of steps can and should be taken, but they all require that traditional grocers place customer experience as the foundational driver and rationale for change — and smarter data management is the linchpin that will make it happen," Chatterjee asserts.

AI-Enabled Robots Aim to Make E-Groceries Viable

Boston-based Takeoff is launching a groundbreaking technology that's bringing innovative automation to the e-grocery industry.

Customers' orders are placed online through their local grocery store and filled by automated micro fulfillment centers provided by Takeoff, where AI-enabled robots assemble full supermarket orders of 60 items in a few minutes. These centers have a tenth of the footprint of a typical supermarket, thanks to innovative robotics and compact vertical spaces.

"The time is ripe for e-groceries," asserts Jose Vicente Aguerrevere, co-founder and CEO of Takeoff. "Grocers have been dipping their toes in e-groceries for years. Now it's time to jump in with both feet. Our automated, hyperlocal fulfillment centers enable grocers to do so with minimal operational costs."

Takeoff is ready to build its fulfillment centers in urban and suburban locations. Retailers can leverage underused real estate by turning existing stores into micro distribution centers that can serve a broader market through a hub-and-spoke approach.

"Takeoff is a win-win for grocers and consumers across the board," says Max Pedro, the company's co-founder and president. "Our e-grocery automation is a turnkey solution that uses robotics to unlock ultimate convenience for shoppers, without the need of charging fees or a price premium."

The first micro fulfillment center is expected to go live in October 2018, with others following alongside Takeoff's several grocery partners across the United States. **www.takeoff.com**

Image courtesy of Takeoff

To compete in the near future and in the long term, the store of the future must emphasize a host of customer-centric features. "This will require that grocers reconsider the role of space within the store, the impact of multichannel and convenience shopping on the center store, and the potential for internal- and customer-facing technologies to improve the experience across the board," he says. "Finding the right approach for each store and local market will require deep insight into owned business and customer data, along with partner/supplier data, which AI-enabled systems will be increasingly critical to manage."

Stores of the future must employ technologies that help customers get what they want, when they want it, in an environment that they enjoy, Chatterjee says. "They will increasingly rely on technology to reduce friction in traditional processes, using AI-enabled systems to predict customer needs and manage assortments, promotions, associate responsibilities and more," he notes. "AI will be essential, as only the grocers who are able to predict behavior can create the conditions customers demand."

Beyond smarter data management, retailers also need to reduce the friction across customer touchpoints and ensure that multichannel shopping journeys are a cinch.

One essential service in this regard will be click-and-collect, according to Chatterjee. "Today, as more customers start their shopping journeys online, grocers are identifying follow-on benefits from offering this service by optimizing store layouts to adjust to new foot-traffic patterns. For example, they might relocate their pharmacy near a click-and-collect counter for fast collection, deploy a prepared-meal counter close by, or create a drive-through lane that keeps the customer's time investment to a minimum," he says.

For traditional shopping trips, the checkout is another area rapidly changing through technology. "As revealed in Symphony RetailAI's 'Supermarket 2020' research, we expect self-service kiosks to make up 80 percent of checkout lanes by 2020, with only 20 percent remaining manned," Chatterjee observes. "This allows for more lanes, faster checkouts and happier customers."

In response, the grocery workforce will become more optimally deployed, moving from transactional to value-driving roles. "As checkouts and other processes become automated or self-service, associates will be positioned as click-and-collect pickers, prepared-food chefs and mobile customer support staff," Chatterjee predicts.

Customer experience will also move from transactional to experiential, as retailers create more enjoyable spaces, better convenience and new services. "The barriers between the digital and the physical will break down with services like click-and-collect, but also the presence of

touchscreens on in-store tables where customers can gather and consume prepared meals," Chatterjee says. "These touchscreens will allow customers to engage with new products online, scan loyalty cards, and search for new offers and promos as they eat. The store will serve multiple purposes, ranging from ultra-convenience to ultra-experience."

From a supply chain perspective, AI will help create far more intelligent assortments and demand forecasting to help customers find the products they want, increase the value of fresh produce and meat, and allow for special product aisles with assortment changing twice a week to surprise and delight the maximum number of customers, Chatterjee notes. "The supply chain will become increasingly intelligent, agile and customer-serving, while limiting the waste and slow adaptations to customer demand that often occur in grocery today," he adds.

Chatterjee expects these concepts to quickly become reality as retailers identify the value of these changes and customer expectations continue to become more demanding: "We expect the store of the 'future' to resemble this vision by 2020."

Adapt to Market Trends Faster

Increasingly thinking like specialty stores, grocers are "taking a bigger interest in designing spaces that cater to different shopping missions," says Mark Hardy, CEO of Chicago-based retail optimization solution provider InContext Solutions. "So they're testing new aisle layouts, product groupings and store configurations to see what resonates best with their shopper base. Taking a cue from Target and others, they're trying to learn if they should develop special sections for quick shopping and online pickup areas. They're [also] trying to decide what signage and technologies resonate best."

According to Hardy, one of the most important factors for grocers going forward will be agility. "The ability to move quickly and make changes on the fly will be key in keeping on top of the ever-changing landscape," he says. "Ecommerce has traditionally held the upper hand when it comes to being agile — websites can be easily updated, products can be switched out in seconds, promotions and discounts can be applied and communicated instantly. Brick-and-mortar grocers have the benefit over online grocery right now, but they are going to need to look to technology to help them adapt to market trends faster."

Helping grocers keep up are mixed-reality solutions, which are InContext's stock in trade. "We know mixed-reality solutions — including virtual and augmented realities — are changing retail dynamics for our clients by enabling faster, lower-risk and higher shopper-impact decisions at the speed of thought," Hardy notes. "Virtual simulations have quickly become a game-changing tool for visualizing and testing new in-store concepts before having to create any physical prototypes or mock stores. It also enables teams to collaborate within an immersive virtual space from anywhere in the world, saving the time, expense and headache of travel."

Artificial intelligence (AI) is also going to be increasingly important to brick-and-mortar stores. "Not only for things like frictionless checkout and more seamless shopping experiences, but taking a cue from Amazon and really leveraging AI for data collection and interpretation will be an integral part of retailing," Hardy says. "AI in the field of agriculture — creating predictability for farmers and their produce — will have a big impact on the quality and availability of food at the supermarket. Predictive analytics is going to open up hundreds of doors we haven't even come to yet."

While technology will help retailers eliminate tasks so they can focus on other things, Hardy observes that "what it will also do is create new avenues for people to hone new skills and expertise. For example, the supply chain will become digitized. Procurement could be done through 3D and mixed-reality content, which will cut down on time and travel, and allow the buying and planning process to become faster and more efficient."

Customer experience will continue to become more fluid between online and in-store. "We'll no longer have to weigh the pros and cons of ordering online versus buying in-store — same-day free delivery, in-store pickup and matching price points will make shopping easier and more cohesive for the customer," Hardy says, "and we'll need the workforce to meet those demands." **PG**

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