Retailers are radically reorienting their technology, people, and processes around customer needs.

Accelerating retail personalization at scale

Key takeaways

- **Increasingly sophisticated retail customers expect shopping experiences that center around their needs and desires.**

- **AI, advanced analytics, and other emerging uses of technology can assist retail planners and sales associates in creating deeply personalized customer journeys and interactions.**

- **Cloud-based platforms will enable retailers to break down the traditional silos between areas such as merchandising and customer data to create a holistic view of the customer, inventory, and operations.**

Today's retailers are faced with a clear opportunity for transformation. Consumer expectations are constantly evolving, challenging retailers to keep pace. A blend of online and in-person shopping forged during the pandemic persists, forcing retailers to deliver a highly personalized omnichannel experience. And retailers' values are becoming as important to consumers as their products and services.

"As consumers, we are more sophisticated shoppers. We have so much buying power with the mobile technology at our fingertips and high expectations," says Mike Webster, senior vice president and general manager at Oracle Retail. "And despite the grand promises of retail technology, the shopping experience may leave us underwhelmed due to a poor execution."

This is a clear call for many retailers to create customer-centric shopping experiences. Forget about a laser-like focus on product development and delivery. Rather, savvy retailers are creating holistic, personalized shopping experiences that engage and fulfill customer needs throughout the customer journey.

Consumers want this personal touch: 66% say they want brands to reach out to them, with personalized messages such as discounts and offers on items they've purchased before (44%) or predictions about products they may like (32%), according to a **2022 consumer research report by Oracle Retail**.

"In a world where the consumer is getting more and more diverse, more and more segmented, and more and more individualistic, it's critical that retailers reimagine how to put the customer at the heart of their processes," says Daniel Edsall, principal and global grocery leader at Deloitte Consulting LLP.

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Mike Webster, Senior Vice President and General Manager, Oracle Retail

But while shifting focus from traditional merchandising to a fully customer-centered view is imperative, retailers must overcome some significant obstacles to succeed. Many are burdened by legacy technology that is expensive to maintain and difficult to reconfigure. Labor shortages continue to hamper retailers' efforts to embark on new endeavors. And pandemic-induced shockwaves can still be felt in the form of supply chain disruptions and delivery delays.

The good news is that there are ways to embrace a more customer-centric business model while addressing modern-day labor and technology challenges. One key: cloud-based technology platforms that enable technology innovation and empower retailers to shift from siloed product categories and departments to a holistic view of the customer, inventory, and operations.

From beacons to service robots

With the emergence of mass retail, most retailers lost the personal connection with their customers. But an increasing number of retailers are now embracing more meaningful and innovative technologies that allow them to expertly deliver personalized interactions while reflecting customer values. "The rise of technology such as AI and analytics, and the increase in the amount of compute power available through the cloud, is helping retailers reintroduce that level of personal service, whether it be through recommendations, personalization, product assortment, or even personalization of pricing and deals," Edsall says. "We can now recognize our customers again and treat them as individuals."

Consider, for example, the power of AI. By analyzing customer behavior and identifying key customer segments, AI enables retailers to target the most valuable customers through loyalty and reward programs, launch contextually relevant digital marketing campaigns that enhance the customer experience across the entire customer journey, and drive customers to make buying decisions by better understanding how shoppers interact with a brand.

In addition to ensuring personalized experiences at every touchpoint, AI can help retailers plan their merchandising around key customer behavioral segments – for example, by creating in-store merchandise mixes that cater specifically to local customer demands so the right product assortment gets to the right store.

Technology enables personalization at scale

"The challenge for every retailer," says Daniel Edsall, principal at Deloitte Consulting LLP, "is do you have intimacy or do you have scale? In the past you couldn't have both."

Luxury retail chose intimacy. Repeat customers of top-end department stores, for example, expect concierge service, with associates offering personal recommendations and suggesting ways to commemorate family occasions.

Much of retail, however, chose mass scale instead. "Historically, retail has been run by brute force," says Jeff Warren, vice president of global sales at Oracle Retail. "If you have a problem in retail, you throw labor at it, you throw inventory at it, you throw more stores at it." Mall chains, for example, meet customers at expansive scale, offering a consistent experience across hundreds of locations. These high-scale companies couldn't offer a personal concierge for every customer—or likely even know who they were selling to at all.

But technology now enables companies to develop intimacy at scale, based on the data their customers leave behind. That means the mall retailer can start thinking of its customers as individuals—while the luxury retailer can provide its white-glove service to a wider range of its shoppers, not just its top spenders.

This ability to know every customer can also reverse the way that retailers plan. "If you go back 10 years," says Edsall, "the planning process started with, 'What products are we going to buy next season?'" Who would buy them was left to figure out later. But now that retailers know the customer more intimately, questions like "Who are my most important customers next year?" and "What are they going to need?" become the starting point.

Smart beacons are also rewriting the rules for retailers. These tiny devices send a signal to other nearby smart devices, such as a customer's mobile phone, with the aid of a small wireless transmitter and Bluetooth technology. If customers opt in, retailers can offer them everything from promotional deals to loyalty points the moment they step foot into a store. Alternatively, beacons can automatically alert retail sales associates to the arrival of a particular customer and supply them with real-time data, such as a customer's buying history — information that can be parlayed into tailored customer service.

"Technology can augment customer experience and empower the store associates to deliver a better customer experience," says Jeff Warren, vice president of global sales at Oracle Retail. "For example, beacons can send notifications to the in-store associate before their loyal consumer walks in the door. Connected technology allows them to review the customer profile, greet customers by name, recommend purchases, and deliver a better experience."

Retail agility requires meeting consumers' immediate needs, anticipating their demands, and forecasting industry trends. Fortunately, AI and sophisticated machine learning models can generate analytical insights that retailers can use to drive planning, buying, and selling decisions.

Consider, for example, demand transference models, which help retailers compare products to determine which substitute items might meet a customer's need if their first-choice product is unavailable. Demand transference also allows retailers to calculate changes in demand resulting from changes in merchandising This way, retailers can ensure the right assortment of products across channels while optimizing inventory planning and ordering processes — a significant competitive advantage in light of today's supply chain inefficiencies.

Similarly, demand clustering tools rely on data mining to create store and customer segments based on factors such as performance data and demographic information. Using embedded retail analytics and automation capabilities, retailers can easily identify unique patterns within the data, allowing them to create customer-centric and targeted clusters to be used in assortment planning, forecasting, pricing, and promotions-planning processes.
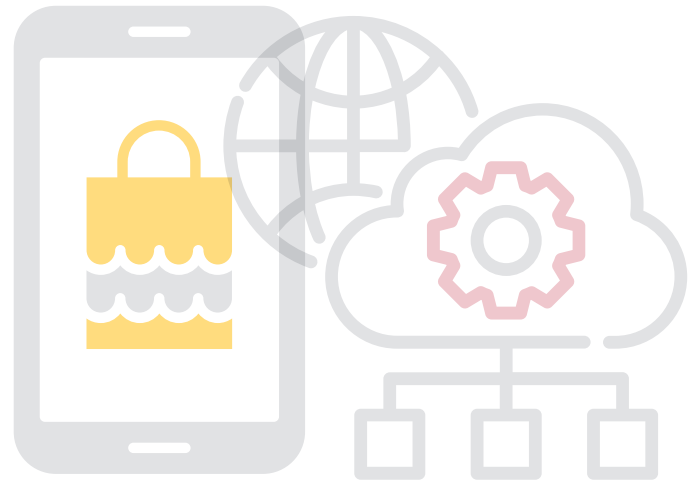
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Jeff Warren, Vice President of Global Sales, Oracle Retail

Where retailers are investing
Areas where retail-industry survey respondents are increasing spending in 2023

CYBERSECURITY/ INFORMATION SECURITY	**68**%
BUSINESS INTELLIGENCE/ DATA ANALYTICS	**65**%
APPLICATION MODERNIZATION	**59**%
CLOUD PLATFORMS	**49**%
INTEGRATION TECHNOLOGIES/ APIS/API ARCHITECTURE	**42**%

Source: Compiled by MIT Technology Review Insights, based on data from "Insights for Digital Transformation in Retail" and "2023 Gartner CIO and Technology Executive Survey," 2023.

"Retailers can use demand clustering to do a better job of understanding variables that are similar," says Webster. "How do we group stores? How do we group customers into clusters? Using analytical insights, they can start to make the right decisions."

And then there's the value of demand forecasting. By accurately anticipating customer demand for new products, retailers can improve inventory productivity in retail supply chains, decrease operational costs, and enhance customer experience.

"Retailers have to plan in advance and predict what customers will need and to have that assortment curated for them when they need it," says Shankar Srinivasan, senior manager of the retail practice at Deloitte Consulting LLP. "It's not only being there for what's needed, but knowing in advance what is needed. With the wide variety of data available on preferences, historic spends and new trends, it's essential to curate the assortment for them and have it ready once you have that relationship established with them."
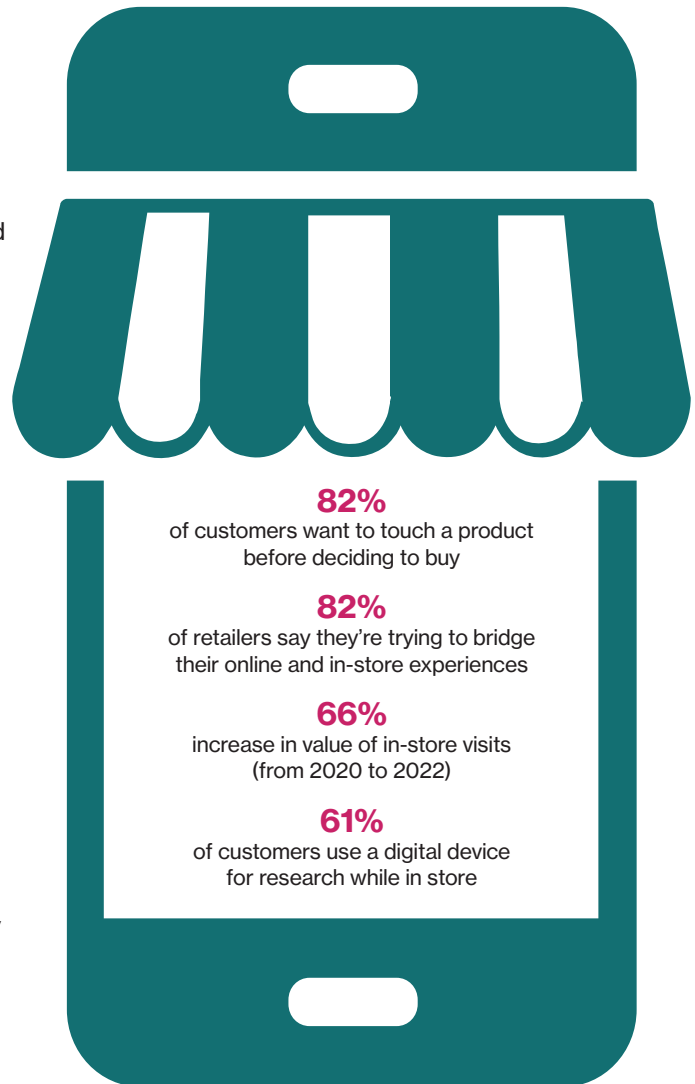
Retailers' interactions with customers are also evolving and becoming more customer-centric. "Generative AI models like GPT-4 may enable a new level of conversational customer-facing service that helps retailers gather even more insights into customer behavior and preferences," says Srinivasan.

Trust, transparency, and collaboration matter

"It's very easy to get seduced by the glittering prizes of one customer experience change, the augmented reality glasses, the whatever," Edsall cautions. "But none of that's possible unless you can make the mind shift in your core retail processes. The future of retail hinges on curating immersive, highly personalized technological experiences, but embracing a customer-centric approach will also require a re-examination of organizational structures and processes."

Shopping in store… with a digital twist

In-store retail has stabilized after pandemic shutdowns – more stores opened than closed in 2021 – but it now has a multichannel flavor.

82%
of customers want to touch a product before deciding to buy

82%
of retailers say they're trying to bridge their online and in-store experiences

66%
increase in value of in-store visits (from 2020 to 2022)

61%
of customers use a digital device for research while in store

Source: Compiled by MIT Technology Review Insights, based on data from "Keeping retail customers at the center," 2023.

"Retailers have to plan in advance and predict what customers will need. It's not only being there for what's needed, but knowing in advance what is needed."

Shankar Srinivasan, Senior Manager, Retail Practice, Deloitte Consulting LLP

For many retailers, this begins with fostering a relationship built on trust and respect. Thanks to e-commerce and social media, organizations and customers have access to vast volumes of data about one another. Shankar notes that organizations have grown accustomed to collecting that data, but they may not yet have a culture of putting it to use: "To ask for the data is one thing, but to actually use the data in a positive way to create a caring experience for the customer is another."

Consumers need to trust the information they are provided about the products they buy, and they also must believe that the data they share with retailers is secure and leveraged with their privacy in mind. "The best companies have realized that actually caring for your customer and your customer's preferences and respecting them is a much more effective way of building a long-term brand relationship than drowning people in unwanted advertising," says Edsall. "It's a delicate balancing act."

To achieve this balance, retailers must ensure AI-generated recommendations, e-mail marketing campaigns, and personalized messaging match a customer's actual needs and preferences and that they add real value to a customer's overall experience.

Greater internal transparency is also key to optimizing retail processes. In the past, Warren says, there was "a silo of information around how you created your merchandising plan, your stores, what you're selling, marketing, and what you know about your customers." This fragmented approach can prevent retailers from using their data, mainly when there's a real-time opportunity to improve a customer's experience — or to avoid a silly error, like sending an e-mail to a customer promoting a product they have just bought.

By migrating processes from an on-premises system to the cloud, Warren says, retailers "can break down all these silos" and create a single view of data and processes for greater functionality in the present. A large consumer electronics retailer that migrated from an on-premises demand forecasting system to a cloud-based platform, he says, reduced the labor that went into creating those forecasts and preparing them for the supply chain by 50%.

Looking to the future, Webster adds, "Ultimately, cloud is not about technology. It's about a business strategy that positions retailers to take advantage of continuous innovation, keep current, and receive new functionality on a regular cadence."

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Daniel Edsall, Principal and Global Grocery Leader, Deloitte Consulting LLP

But it takes more than technology to achieve customer-centricity. People also play a critical role. For this reason, Warren says, "retailers are increasingly starting to reorganize and create cross-discipline and cross-functional teams." By encouraging employees from varying departments to work together, retailers can ensure that the analytical insights gleaned from customer data are applied at every customer touchpoint.

The time is now

By modernizing aging technology and adopting best practices for a customer-centric approach to merchandising, retailers are positioning themselves to achieve significant benefits. At the same time, a renewed interest in physical retail, and the blending of physical and digital touchpoints with services such as "buy online, pick up in store," means retailers must deliver a consistent omnichannel experience – or potentially risk losing market share.

Modern technology tools can also help retailers in a tight labor market. Today's employees want to work with the latest technologies – innovative tools that enhance customer experience and offer speed, scale, and agility that streamline the employee workflow. By embracing a cloud-based retail platform and its advanced functionalities, retailers can increase their likelihood of attracting and retaining top talent.

The stakes are high, but the right technologies and best practices can serve as a powerful enabler for retail success – if companies are prepared to make the necessary mind-set shifts. Says Edsall, "I think the big question for retail is, how do you want to use these tools? How are you willing to allow technology to really grow intimacy and to be your brand representative? The best retailers will make them the best possible reflections of themselves, their values, and the way they value their customers."
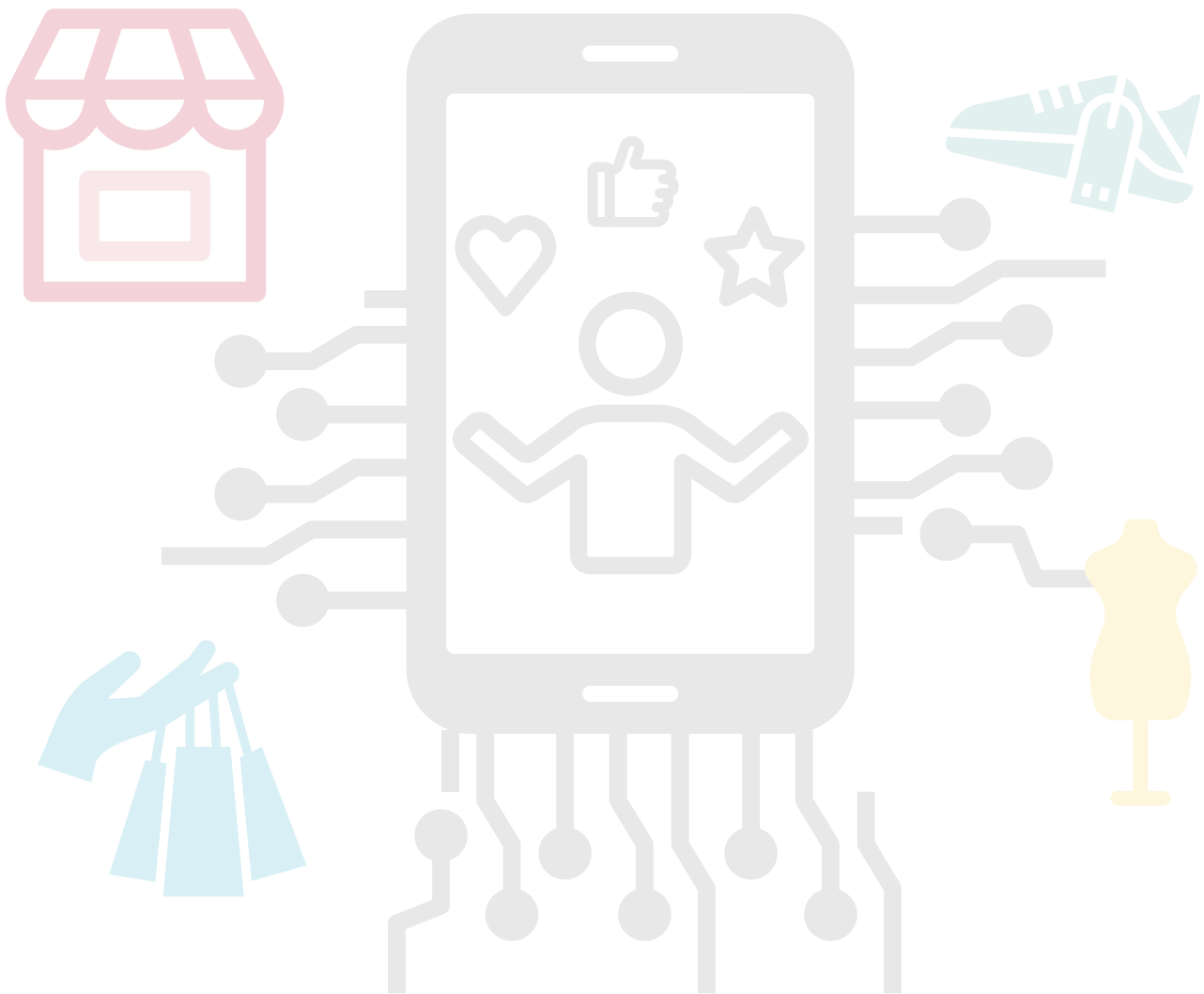
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