



# OPERATE WITH EXCELLENCE

How retailers are leveraging technology to boost customer satisfaction, optimize efficiencies and stay agile to meet the challenges of tomorrow.

**TOSHIBA**

**RETAIL DIVE**

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**Retailers today face a multitude of challenges, from evolving customer expectations and difficulty attracting and retaining talent, to the ongoing need to maximize efficiencies in any environment. Against this backdrop, retailers must pull every lever to gain a competitive advantage, and optimize their tech stack to support them every step of the way.**

**Retailers’ top priorities when investing in technology:**

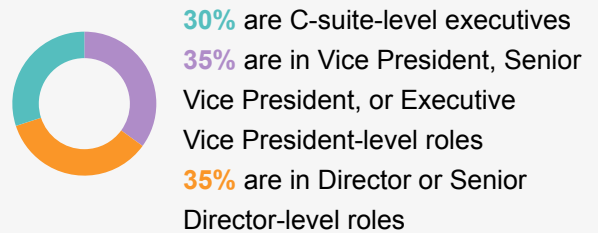
- 54%** Improving operational efficiency
- 51%** Enhancing customer service
- 39%** Optimizing inventory management

Curating the optimal tech stack that allows retailers to achieve these goals, though can come with its own set of challenges. Retailers need to deploy innovative technologies that help them stay agile, while legacy solutions may remain a part of their tech stack. They need to deliver on customers’ increased demands for personalization, while also delivering a consistent brand experience across demographics and locations. And, finally, they need to both enhance and streamline the associate experience to attract and retain top talent in a challenging market.

This report, based on a survey of retail leaders conducted by Toshiba and Industry Dive, delves into how top retailers are rising to meet these challenges, and how they’re adapting their tech stacks to stay agile and succeed. We’ll explore the key trends in technology that are shaping retailers’ strategies today, delve into the challenges they’re facing on the path to innovation, and share insights into how retailers can forge a path forward with the optimal tech.

**Who are the respondents?**

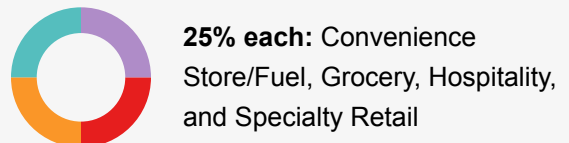
**530 senior-level leaders with formal or informal oversight roles in their company’s technology teams.**



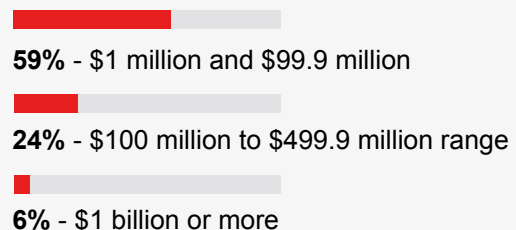
**Global presence:**

- 250 respondents - EMEA (United Kingdom, France, Germany, Spain, and Turkey)
- 150 respondents - North America (Canada, Mexico, USA)
- 80 respondents - South America (Colombia, Chile)
- 50 respondents - APAC region (Korea)

**Retail sector:**



**Revenue:**



**Key finding:**

## RETAILERS ARE DRAWN TO THE FLEXIBILITY THAT HYBRID TECH STACKS PROVIDE, BUT THEY STRUGGLE TO SCALE NEW INNOVATION IN LEGACY ENVIRONMENTS

By and large, retailers know they need to invest in technological innovation to overcome the challenges they face today. But ripping and replacing existing technology simply isn't an option in most cases, and retailers are instead layering new and modular tech over end-to-end solutions to curate a tech stack that meets their needs.

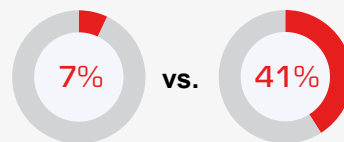
**85%** of retailers now report using a mix of modular and end-to-end solutions for both hardware and software

**61%** use a combination of cloud and on-premises solutions

This hybrid approach offers a range of benefits. "Legacy technologies often control core aspects of business, so replacing them isn't just expensive, it's also time-consuming," said Sharon VanNoy-Frisby, Senior Product Marketing Manager, POS hardware and infrastructure at Toshiba. "But incorporating modular tech into your tech stack allows you to affordably layer on new functionalities within your existing technology ecosystem."

This flexibility allows retailers to tailor their tech stack to their unique needs, and scale as their needs evolve. It also allows retailers to create bespoke experiences that serve the unique needs of separate locations, while providing a consistent experience across the organization as a whole.

However, retailers report struggling to fully integrate modular tech into their legacy systems, particularly as they scale the technology across multiple locations:



**Just 7% rate their ability to scale their tech stack to the needs of individual locations (e.g., a flagship store vs. small-format boutique) as 'excellent', vs. 41% for 'fair' and 'poor'**

### Top challenges to scaling hybrid systems:

**42%** - high costs of customization

**35%** - integration issues with existing infrastructure



Overcoming these challenges starts with a robust strategy, and identifies the right functions to modernize to make a significant impact on the business. “Gather stakeholders from across the business to reflect on your capabilities and your road map. You can’t necessarily modernize everything, so these discussions will guide your investment and where you’ll spend your time,” VanNoy-Frisby said.

The ideal first use case could involve functionality not offered by your existing technologies, for example, mobile POS or advanced personalization. Since these functions likely don’t tie back into the technology controlling core aspects of the business, retailers gain more flexibility to deploy functional tech without investing heavily in integration with existing systems.

However, modular technologies can excel at bridging data silos and streamlining operational workflows, and by integrating a scalable approach can significantly extend the lifespan of legacy technologies. The key is to find a modular solution designed with hybrid tech stacks in mind.

“The right modular tech should be designed for ease of integration. It should be as device- and technology-agnostic as possible,” VanNoy-Frisby said. “This allows you to more easily scale the technology across multiple locations, even if your tech varies significantly from store to store.”

**21%** of retailers say they experience inconsistent connectivity or hardware capabilities across locations

Finally, retailers should devise a plan to use technology to blend bespoke experience with a consistent core customer experience. Whether a customer is on your website, shopping at a flagship location or stopping by a boutique, your technology should be able to recognize who they are and offer a personalized experience accordingly, VanNoy-Frisby said.

To do this well, retailers should focus on leveraging modular tech to bridge data silos, allowing retailers to gain a complete picture of each shoppers’ preferences and purchase history. If this level of data is not available, instead of taking a “one size fits all” approach, VanNoy-Frisby recommends using demographic data to best serve the most likely shoppers at each individual location.

“It all comes down to knowing your customer, and a deep understanding of the core customer needs that shape the customer experience as well as the unique needs of specific locations,” VanNoy-Frisby said. “Then, you can mix and match modular technologies to create custom experiences for each location on top of the technological ‘backbone’ that shapes your core brand experience.”

**Key finding:**

# MOBILE POS DEPLOYMENT IS ON THE RISE AS RETAILERS DIVERSIFY THEIR CHECKOUT OPTIONS, BUT THEY NEED SUPPORT TO ENHANCE ON-THE-FLOOR EXPERIENCE

To attract today’s consumers, flexibility is key. Shoppers not only want a seamless experience across channels, one that allows them to transition seamlessly from online to physical channels, and vice versa, they also want a convenient and personalized experience in-store.

In response, retailers are offering more checkout options than ever, and leveraging mobile technology to support associates and shoppers in-store.

**Retailers now offer an average of 3.04 checkout options.**

**95%** offer traditional cashier-associated checkout

**67%** offer mobile POS checkout

**26%** offer self-checkout

Mobile devices are quickly becoming a go-to tech to help associates engage with shoppers, whether they’re looking up product information, checking inventory levels or helping customers check out.

**62%** of retailers say they’re already using mobile devices for customer assistance.

Of these,

**73%** use them to process payments

**62%** use them to check in-store inventory in real time

**56%** use them to scan items

**51%** use them to provide product information/education.

**41%** In addition, 41% plan to deploy mobile devices in the next 12 months.

Planned uses:

**61%** - Providing product education

**61%** - Providing product recommendations

**53%** - Scanning items

**51%** - Processing payments

“Mobile POS devices fundamentally reshape the associate experience by removing the physical constraints of fixed checkout lanes,” said Michael Connors, Product Marketing Manager at Toshiba Global Commerce Solutions. “Associates can assist customers anywhere in the store; whether it’s line busting at the front, clienteling in specialty retail, or table-side service in hospitality. This flexibility reduces friction, shortens wait times, and empowers associates to be more proactive and visible on the floor.”

**38%** **Nearly four in 10 retailers cite long wait times at self-checkout during peak hours as a top factor undermining their self-checkout experience**

Mobile POS devices can be especially helpful for retailers in space-constrained environments, like bodegas or bakeries, allowing associates to complete transactions and assist customers without the need for bulky hardware setups.

And, crucially, mobile devices help associates more easily deliver a personalized customer experience. “Mobile POS devices enable faster, more personalized service. Associates can access customer profiles, purchase history, and loyalty data on the spot, offering tailored recommendations and promotions,” explained Connors. “This level of personalization builds trust, and, ultimately, increases conversion.”

## TOSHIBA MOBILE TECH

Toshiba’s mobile solutions support key associate-led tasks, including:

- Inventory lookup and endless aisle access
- Product education
- Barcode scanning
- Contactless payment via built-in NFC
- Customer profile and loyalty data access
- Queue busting and on-the-spot checkout

Devices such as the TCx® M11 and TCx® M7 allow associates to assist customers anywhere in the store, whether in compact formats like bodegas and bakeries or larger environments like grocery and department stores. These mobile solutions reduce wait times, enable personalized service, and support a wide range of associate-led tasks. They integrate with ELERA® and third-party platforms, giving retailers the flexibility to scale and adapt with confidence.

**Key finding:**

## THE NEED FOR 'REAL-WORLD' TRAINING FOR STORE ASSOCIATES

Gaining the most value from mobile devices requires training that empowers store associates to use the technology effectively. "Mobile POS devices shift the associate role from transactional to consultative," said Connors. "Associates become brand ambassadors who guide customers through personalized journeys. This requires training in soft skills like clienteling, upselling, and digital fluency as well as knowing how to navigate apps, loyalty platforms, and inventory systems seamlessly."

Our findings indicate that associates may require more support to transition into this new role.

**23%** of retailers say they struggle to translate training into effective on-floor behavior

Several factors could contribute to these challenges. It could simply reflect the learning curve that new employees face in using new technologies: More than a quarter (27%) of retailers cited high turnover rates as a top barrier to effective store associated training. However, associates may struggle with tech that's difficult to use or poorly integrated with the location's core systems.

The ideal implementation plan should pair investment in user-friendly technology with a robust training strategy to streamline associates' customer interactions.

"I recommend that retailers start by talking to the intended end users, such as store associates or customer service representatives," VanNoy-Frisby advised. "Get a sense of their pain points with the legacy technology. That way you can invest in both technology that will have a meaningful impact on their productivity, and more easily get associates engaged with the new workflows."

From there, look for mobile solutions that embed training directly into the devices, allowing associates to learn on the floor. "Behavioral change is reinforced through real-time feedback, gamified learning, and performance tracking," Connors said.



**Key finding:**

# RETAILERS ARE MOVING AHEAD WITH THEIR INTEGRATION OF AI, WITH MORE USE CASES OVER THE HORIZON

As the impacts of artificial intelligence continue to ripple across the economy, retailers are keen to leverage AI to reach their operational goals.

**12%** of retailers have already integrated AI across multiple functions, and an additional 40% are piloting AI in limited areas

**Most common use cases:**

**53%** - Customer service  
(e.g. chatbots, virtual assistants)

**42%** - Dynamic pricing and promotions

**38%** - Demand forecasting

These are areas where AI is particularly poised to excel, VanNoy-Frisby said. "AI is excellent at detecting complex patterns, which makes it ideal for inventory planning and optimizing pricing and promotions. And, by tasking AI with simple customer service inquiries, retailers can free up associates to focus on delivering the best shopping journey."

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**Spotlight on:****AI-enabled loss prevention**

AI-powered biometric cameras are reshaping how retailers approach loss prevention. And the ideal innovative technologies help manage shrink while also enhancing the customer experience.

**Innovation: Facial detection**

- Enables shopper identification can enhance security programs
- Facilitates biometric payments, provide a personalized experience (e.g. personalized upsell suggestions)
- Allows for hands-free checkout and age verification

**Innovation: Gesture control**

- Monitors hand movements in real time, alerting security teams to heightened theft risk
- Supports contactless engagement with kiosks, displays or checkout systems
- Provides shoppers with a fast, convenient and hygienic shopping experience

**Innovation: Eye tracking**

- Alerts security teams to suspicious behaviors, such as avoiding staff gaze or fixating on high-value items
- Helps retailers measure engagement throughout the store
- Provides valuable insights to help brands capture, and keep, shoppers' attention

In the future, though, retailers plan to deploy AI for more complex functionalities, from minimizing shrink to maximizing back-end efficiency.

**Retailers most anticipated use cases for AI:**

**25%** - Loss prevention

**22%** - Workforce optimization

Embracing modular tech can help retailers pursue these goals effectively. "One of the biggest hurdles to deploying AI is the ability to access unified insights, ideally in real-time," VanNoy-Frisby said. "Modular solutions can help you bridge datasets across siloed systems, enabling the level of data management you'll need to inform AI algorithms."

Modular tech also allows retailers to take a phased approach to embracing AI, since brands can "plug and play" with different AI-powered functionalities to create the solutions they need. Plus, because the ideal modular architecture works with a range of systems and solutions, retailers can integrate AI technologies from multiple sources, rather than being limited to AI innovation from any single vendor.

"This level of flexibility is critical as AI advances more and more rapidly," VanNoy-Frisby said. "No one can predict the future, so the more flexible your tech stack is, the more freedom you have to innovate and forge your path forward."



## STAYING AGILE IN A NEW ERA OF INNOVATION

Advancements in technology are transforming what customers expect from their retail experiences, and retail leaders need to innovate to stay ahead of the curve.

Doing this well means blending past, present and future, with hybrid tech stacks that allow retailers to layer new innovations over legacy solutions to create new, bespoke solutions. At the same time, innovation also requires a people-first approach, one with a plan to ensure new technologies translate to better performance on-floor. Finally, it requires finding the right balance of flexibility and consistency to scale technologies across disparate locations without undermining the brand experience that customers have come to expect.

### **We're here to accelerate your path to efficiency and growth**

Whatever your ideal future looks like, having a trusted partner in your corner is key to your success. With Toshiba's modular retail solutions, you don't have to choose between leveraging your legacy investments and embracing the future. Our modular, device-agnostic technology empowers you to integrate new capabilities at your own pace.

**Learn how we can help you build a smarter, more agile retail ecosystem to move your organization forward today, and tomorrow.**

**Visit us online at [www.commerce.toshiba.com](http://www.commerce.toshiba.com).**





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## About Toshiba Global Commerce Solutions

Toshiba Global Commerce Solutions empowers retail to thrive and prosper through a dynamic ecosystem of smarter, more agile solutions and services that enable retailers to resiliently evolve with generations of consumers and adapt to market conditions. Supported by a global organization of devoted employees and partners, retailers gain more visibility and control over operations while enjoying the flexibility to build, scale, and transform retail experiences that anticipate and fulfill consumers' ever-changing needs.



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