

# Smart Retail Solutions Deliver Seamless Checkout

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Today's shoppers, accustomed to fast, hassle-free ecommerce checkouts, have come to expect a similar experience in physical stores. To improve speed and convenience, grocers and other retailers have long provided self-checkout kiosks, but instructions weren't always clear, and some items were difficult or impossible to scan. To get help, shoppers had to abandon their merchandise and try to flag down a busy associate.

Toshiba Global Commerce Solutions, a market leader in retail store technology, focuses on continuously empowering retailers to build their resilience and agility to grow with new generations of consumers while rapidly adapting to ever-changing conditions. New kiosks have improved by leaps and bounds, with AI software that can recognize hard-to-scan items and flashing lights that alert store associates to problems. The new machines can also accept a wide variety of payment systems and cash, while computer vision helps retailers prevent shrinkage.

These innovations are just the beginning. Within a decade, specialty shops, convenience stores, and even full-size grocery stores could achieve retailers' holy grail of providing a fully automated, frictionless shopping experience.

## Customer-Friendly Self-Service Kiosks

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Automated self-checkout machines are primarily deployed at high-volume retail outlets such as grocery stores, where people buy carts full of merchandise and must wait in line for a cashier. Demand for the machines soared with the pandemic as customers sought greater social distancing and independence.

“Self-service sales went through the roof. Everybody is now looking for that capability,” says Chuck Evans, Global Product Line Manager for Self-Service Solutions Hardware at Toshiba Global Commerce Solutions.

Today’s self-service machines are more user-friendly than past versions, making checkout easier for customers and freeing associates for other duties. For example, Toshiba’s produce-recognition capability uses AI to recognize and display a picture of a banana or an apple on the screen for customers to approve, rather than requiring them to manually enter a long numeric code.

If a customer scans a liquor bottle, which requires ID verification, a light flashes, alerting staff that customer assistance is required. The customer can continue scanning additional items and when done scanning their merchandise, the light switches to amber to call for immediate assistance.

Improvements like these make automated checkout machines more efficient, encouraging customers to give them a try. Produce recognition alone has reduced self-checkout times by 35% to 40%, Evans says.

The Toshiba Self Service Retail Solution, which come in several models, can be deployed anywhere in a store, giving customers options for purchasing goods. For example, grocery chain Weis Markets has a combination of Intel® processor-powered Toshiba kiosks in its 198 stores. While shoppers with a load of groceries use the full-self service System 7 machines, someone picking up lunch at the deli counter can quickly settle up on a nearby Pro-X Hybrid Kiosk and walk out while their food is still hot.

The compact Pro-X can also be deployed to speed checkout at convenience stores, specialty shops, and sports arenas. “If you’re at a hockey game and everyone goes to buy food at intermission, automated scanning can get you back to your seat by the time the next period starts,” Evans says.

## **Retail Technology Enables New Services**

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In addition to providing more deployment options, today’s software-driven machines allow retailers to select different capabilities, or microservices. Produce recognition is one such option. Store owners can also elect to use RFID tags to prevent shrinkage for high-risk items, such as razor blades.

For payments, retailers can select from a wide range of existing systems or work with a systems integrator to create their own custom solution. “Our machines can take payments made with credit cards, debit cards, or gift cards. They can also accept bills and coins worldwide and make change,” Evans says.

Retailers can also use analytics to learn more about customer behavior, helping them remove stumbling blocks and improve operations.

“Our technology helps retailers identify how fast shoppers are checking themselves out. If they keep getting stuck at the same point, there may be an opportunity to improve the instructions,” says Mike Williams, Senior Product Marketing Manager of Self Service at Toshiba.

As #AI and #ComputerVision technologies improve, machine builders are creating more ways to facilitate checkouts. @ToshibaCommerce via @insightdottech

## **The Future of Smart Retail Solutions**

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As AI and computer vision technology improve, machine builders are creating more ways to facilitate checkouts. For example, an opt-in biometric recognition system could allow customers to scan a photo ID for faster payments, while retailers would retain only metadata stripped of all personally identifiable information.

Computer vision could also record the scanning process, helping to resolve errors. If a customer’s item selection doesn’t match up with what the system sees, an amber light alerts a shopper assistant, while the screen displays the recorded image and asks the shopper if they made a mistake. The customer can then rescan to make a correction.

“Transactions won’t go through until the error is corrected, discouraging any attempts to fool the system,” Williams says. “A user can’t put beer on the machine and say it’s a banana—it won’t work.”

The next leap for Toshiba is creating a computer vision system that can identify any item in a grocery store as the customer places it on a sensor, eliminating the need for barcode scanning. This technology now exists in small outlets with limited inventory, but for large grocers with thousands of items, it isn’t cost-effective—yet.

The ultimate goal for self-service is creating a fully automated experience that doesn’t require customers to do almost anything.

“The future of retail is frictionless checkouts that allow shoppers to seamlessly walk in, pick up their items, and walk out, even in a large grocery store,” Evans says. “We’re on track to get there, driven by our purpose to free retailers to thrive and prosper.”

*This article was edited by Georganne Benesch, Associate Editorial Director for insight.tech.*