

High-velocity/high-volume retail demands digital excellence. Modern self-checkout gives consumers control over the experience and provides retailers with a reliable way to increase checkout capacity as well as sales and operations productivity.

Optimizing Automated Checkout for an Excellent Customer Experience

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Introduction

High-velocity/high-volume retail demands digital excellence. When it is time to check out, the customer wants fast, easy-to-use options. Modern self-checkout gives the consumer control over the experience and — when set up well — provides a reliable way to increase checkout capacity and thus sales and operations productivity.

Automation of checkout processes has been front-page news with retailers evaluating and testing various capabilities that digitize store processes, removing friction from customer experiences. Approaches include adding smart shelves, RFID, sensors, or computer vision, but the costs and return on investment (ROI) on these solutions vary widely. Some approaches are still maturing and thus have sparked more curiosity than investment among many retailers. The excitement related to achieving completely touchless checkout has driven significant interest in self-checkout. Astoundingly, only 8.1% of 607 retailers worldwide in IDC Retail Insights' *Global Retail Innovation Survey* reported that they have no plans to implement an automated checkout solution (self-checkout or fully automated). Twenty-eight percent will complete implementations in 12 months, and another 23% will make selections in 12 to 24 months.

Customer Satisfaction at Self-Checkout Guides Self-Checkout Strategies

All self-checkout solutions are not created equal, however, and the retailer needs to make customer satisfaction and operational risk the guiding forces behind design; ergonomics; training; task and fraud management automation; and centralized monitoring, management, control, and reporting. The strategy of great self-checkout encompasses development, planning, deployment, support, and operations and includes:

- » **Industry best practices applied as a baseline.** The most fundamental component of delivering a successful self-checkout strategy is understanding when and how the consumer wants to use self-checkout. This may require reaching beyond preconceived organizational beliefs about whether self-checkout is appropriate. Surveys and focus groups may improve this understanding, but it is also possible to learn from the successes of your peers.

AT A GLANCE

High-volume retail customers love self-checkout lanes that are designed with their experience in mind — fast, easy to use, and well supported by responsive assistants.

KEY TAKEAWAYS

Customer satisfaction at self-checkout will ultimately guide self-service strategies. Retailers seeking to achieve success should follow a self-checkout road map:

- » Apply industry best practices.
- » Design with ergonomics in mind.
- » Train shopper assistants and store operations.
- » Apply task management and fraud management automation.
- » Measure success with key performance indicators (KPIs) for experience, productivity, sales, and service excellence.

- » **Self-checkout design.** Ergonomics of self-checkout design is critical, as are footprint, usability, security, and flexibility. Even if there isn't a current plan to improve the look and feel of the checkout process, requirements will evolve, and the configuration of checkout devices will need to adapt to new needs over the course of their lifetime. Size, modularity, security, and sustainability will be factors that are evaluated.
- » **Shopper assistant and store operations training.** Early self-checkout systems sometimes suffered from deployment/process problems that left the consumer waiting for assistance. Modern self-checkout systems avoid delays by intelligently managing exceptions related to weight validation, age verification, and common consumer behaviors that frequently trigger alarms. Reduced interventions drive greater customer satisfaction and higher adoption levels.
- » **Task and fraud management automation.** Today's self-checkout systems are built to interface with sensors, cameras, weight-based security, and artificial intelligence (AI) to improve checkout speed and accuracy as well as reduce fraud and loss. Self-checkout can be the central component of increased automation in retail. It is also the ultimate "gate" and "face" to the consumer, simultaneously responsible for leaving the consumer with a good impression and making sure that the retailer's profits are protected.
- » **Centralized monitoring, management, control, and reporting.** Current self-checkout environments are managed and configured centrally, quite often in the cloud. Customers can have a great experience at checkout only when the systems work as expected, and because changes will likely be applied over time, it is absolutely critical that retailers proactively monitor and manage as well as constantly address the health of operations. The best self-checkout reporting solutions enable retailers to measure key performance indicators (KPIs) for experience, productivity, sales, and service excellence.

Benefits

Self-checkout technologies provide the digital experience many consumers expect from evolved omni-channel retailers. The benefits include qualitative improvements in customer experience and quantitative improvements in customer satisfaction ratings as well as operational improvements in productivity and sales growth. According to IDC Retail Insights' *Global Retail Innovation Survey*, 51% of retailers will select or implement some form of self-checkout within 24 months, and these retailers expect significant benefits as a result of the innovation that they are undertaking, including the following:

- » 39.4% expect greater than 10% increased revenue.
- » 33.9% expect greater than 10% increased customer experience metrics (Net Promoter Score and customer satisfaction).
- » 37.6% expect greater than 10% reduced operational costs.

Key Trends

The business of retail is being modernized to speed and personalize the omni-channel customer journey. One of the most critical parts of that journey happens at checkout. The customer expects that when he or she scans a product at self-checkout, the product will be found quickly, bagging will be straightforward, and payment will be seamless. Any interruption of this flow because of a record not found, weight validation out of tolerance, or manager-required interaction must be met with immediate assistance from an attendant.

Self-checkout solutions today incorporate AI and integrate with Internet of Things (IoT), RFID, and cameras to deliver the automation and value retailers have craved for decades. Investment in self-checkout is greater today than ever for the following reasons:

- » The retail market is motivated, and the future of the store is understood. Many retailers are shutting down or reducing store count, but at this point, it is a math problem, not a question regarding the value of stores. Omni-channel retailers have demonstrated that when customers can be driven to stores for repeat purchases or to pick up online orders in addition to traditional shopping journeys, foot traffic increases and so do store revenues. Retailers are rapidly figuring out how to squeeze more value out of stores. One example is how quickly retailers are transforming part of the store to a fulfillment hub. According to IDC Retail Insights' *Global Retail Innovation Survey*, 27.5% of retailers have implemented this strategy and 35% are currently doing so.
- » Retail technologies including AI, cloud-based architectures, microservices, and API-based integrations have made implementing stable, yet highly adaptable, automated, and intelligent self-service technologies a very realistic option. Three IDC retail data points support this conclusion:
 - According to IDC Retail Insights' *Global Retail Innovation Survey*, retailers reported that spending on innovation will increase by 25% next year compared with last year, and 39% of all IT spending will be tagged as innovation related.
 - Retail investment in cloud has matured. Nearly 16% of retailers expect to move from the "managed" level to the "optimized" level of cloud maturity, according to IDC's Retail Cloud Maturity Benchmark. This matters because cloud is an enabler of innovation, and when retailers reach higher levels of maturity, what once seemed complex now simplifies operations.
 - AI is integral to improving sales and satisfaction and reducing fraud. IDC's May 2019 *AI Global Survey* found that a sample of 161 retailers that are using AI are more focused on automation-oriented business process areas that include fraud/risk management (25%), customer service and support (34%), and IT operations (40%).

Considering Toshiba

Toshiba's next-generation self-service solution, System 7, builds on previous success by delivering consumer-focused technology in a modern, modular design, allowing retailers to customize their in-store experience, improve operational efficiencies, and protect investments as their front-end requirements continue to evolve. Designed with the consumer in mind, System 7 provides shoppers with choice, control, privacy, and convenience at checkout — all while delivering a fast, convenient, and frictionless experience. Advancements in Toshiba's self-checkout technology, processes, and training have resulted in improvements in usability, attendant interaction, data integration, and ergonomics.

Voice of the Customer

"We are empowering our consumers to curate their in-store shopping experiences based on their needs and desires," said Anuj Dhanda, executive vice president and chief information officer at Albertsons Companies. "Our partnership is resulting in a smoother experience for our shoppers using self-checkout by reducing the interventions they experience. Toshiba's strength in applying machine learning and intelligence to the checkout process across our 2,200+ stores will enhance how we serve our shoppers and build greater trust with our loyal customers."

Key Features

Toshiba's self-checkout systems:

- » Are built with industry benchmarks and best practices as a baseline but are customized to each environment to accommodate traffic, attendant support, and fraud management support.
- » Are designed for customer flow, usability, and ergonomics. With a customizable user interface, self-learning, and correcting system behavior, Toshiba's Checkout Environment for Consumer Service (CHEC) software supports smart security thresholds, exception stacking, and customer-guided features, including LED lighting, audio indicators, and scan-to-bag placement.
- » Enable shopper assistant and store operations engagement and provide for training that reinforces responsive behavior while balancing the shopper experience with tolerance for risk.
- » Automate task management and fraud management with visible and auditable alerts and monitor and manage critical front-end lane operations from a single mobile device with Toshiba TCx Elevate Mobile Operations Manager.
- » Are measured and managed to a high standard for experience, productivity, sales, and service excellence.

When retailers deploy System 7 in their stores, they get a self-checkout solution that enables faster lane rollout, streamlines operations, optimizes lanes, and tracks lanes' performance so retailers can start to realize the return on their investment quickly. Data is an integral part of System 7, and when retailers implement Enterprise Back Office System Server (eBOSS) software, they can centrally configure and manage their entire enterprise, generate specialized reports, and spend more time testing, measuring, and optimizing to refine the store's or enterprise's operations.

Toshiba Global Services also provides collaborative consulting services to guide design, operational innovation, and deployment and management of checkout solutions so that maximum value is realized. The following services are part of Toshiba's portfolio:

- » Business Consulting Services include strategy, total systems design, business value assessment, and operational consulting such as leveraging AI automation and task management tools.
- » Operational Consulting Services include front-end design and optimization, best practices, and training advice and performance data analysis through the eBOSS centralized enterprise management software. Using the intelligence gathered from eBOSS, retailers can measure important KPIs, learn how day-to-day operations are impacting their bottom line, explore their options for improvement, and make adjustments for the future.
- » Professional Services include planning and executing against current and future platform and integration requirements.
- » Managed Services include testing, implementation, and support of the total solution life cycle (deployment, testing, maintenance) including Toshiba and non-Toshiba products. A rich set of Proactive Availability Services further enhances this offering and allows for remote monitoring, diagnostics, and faster issue resolution.

- » Technical Support Services include customized retailer support, training, and engagement management to ensure smooth deployments and long-term optimization.
- » Self-Service Project Management Office (PMO) Services include Total Deployment Services to ensure simplified, on-time, on-budget execution against business objectives.

Challenges

One challenge in the retail industry today is that some organizations view self-checkout as inefficient and difficult to operate, which may have been the case with initial systems. In addition, retailers fear that the customer expects interpersonal engagement at checkout and really does not want to do the work during the checkout process. This challenge is easily overcome by Toshiba's self-checkout solutions, which proactively address ease-of-use issues, enabling faster checkout and improved shopper experience.

Training is another challenge that is a bit more complicated because even though customers sometimes prefer to bring their purchases to a staffed checkout station, more and more customers enjoy the experience of self-checkout. Toshiba's best practices recognize that a well-trained attendant and operations team can augment the experience by providing responsive, well-informed engagement throughout the shopping journey. Checkout is no longer the only place the retailer interacts with the shopper, so the end-of-transaction "thank you" that occurs during checkout can be reinforced throughout the shopping experience with proper training.

As retailers consider full automation alternatives to speed customers through checkout, they gravitate toward greater investments in self-checkout.

Conclusion

As retailers consider full automation alternatives to speed customers through checkout, they gravitate toward greater investments in self-checkout for ease of deployment, operation and support, and enhanced customer experience. IDC believes that the self-checkout market is expanding faster now than it did in the past decade and that it will continue to grow. Toshiba is an industry leader in the self-checkout space, and the company has a significant opportunity for success whether through its advanced self-checkout system or its frictionless store platform with incremental smart shelf technology.

About the Analyst



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As Group Vice President for IDC Retail Insights, Leslie Hand is responsible for the research direction for IDC Retail Insights and leads research related to the digital transformation of retail omnichannel operations. Hand works with retailers and technology providers on developing best practices and strategies, aligned with where they are and where they want to go, leveraging IDC quantitative and qualitative data sets.

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