



An exceptional SCO experience

Why retail needs to rethink
self-checkout

Self-checkout – the new standard for retail

Across many sectors in the world of retail, self-checkout has become a standard. As consumers continue to value efficiency, flexibility, privacy and payment type options in their daily transactions, the empowering functions of the self-checkout have led [up to 40%](#) of US grocery chains to employ SCOs in store. Some retailers, including Walmart and Kroger have even trialed SCO-only stores, playing their part in an expected SCO compound annual growth rate (CAGR) of [13.4%](#) from 2023 to 2030. One recent survey found only [3% of consumers](#) refuse to use self-checkouts entirely. In the UK, roughly eight in 10 sales in a typical supermarket now go through self-checkouts, according to [industry publication The Grocer](#). Less than 10 percent of shoppers identify as non-self-checkout users. Despite heavy adoption, a third said using self-checkout felt like doing work for the retailer.

85% of consumers find self-checkout more efficient than cashiers

Source: [Forbes](#)

Yet, with the increased adoption of self-checkout technology comes new risks. Since staff members are often required to monitor large banks of machines, and SCOs rely on customers to accurately scan and pack their own items, shoplifting opportunities have risen fast. A recent [ECR survey](#) found SCOs account for as much as 23% of total unknown store losses, with malicious losses representing 48%, while two-thirds of respondents state SCO-related losses were becoming more of a problem in their businesses.

Similarly, customers are easily frustrated with SCOs if items are not being scanned or recognised correctly, leading to increasing numbers of shoppers abandoning their baskets and walking out without paying. And if retailers employ more targeted camera capabilities or face recognition software in response to criminality, that can raise questions of privacy for consumers and staff alike.



\$94.5 billion in losses

2022 shrink costs in US stores,
according to [NRF research](#)

We have reached a crucial juncture in the development of self-checkouts: as their presence becomes the norm, retailers must find new ways to secure their stores, reassure their customers of their efficiency, and ensure SCO deployment fit with their corporate values.

Thankfully, there are solutions. New developments such as RFID tagging, AI-assisted computer vision, mobile scan and go and QR codes mean retailers can empower their staff and reduce the fears of their customers. Retailers are trialling, despite negative press, a variety of different approaches to find the right balance including restricting basket size and requiring loyalty program membership to restrict accessibility to SCO lanes. The question is what to deploy where?

We believe there are three factors to consider:



Managing SCO effectively will be about balancing often competing priorities – improving customer service and convenience against limiting retail losses. To achieve this outcome, retailers will need to ensure that there is a cross-functional approach in place, a clear agenda for innovation, and an appetite for investment.

Source: [ECR Global Study on Self Checkout in Retail, 2022](#)

Experience at the endpoint

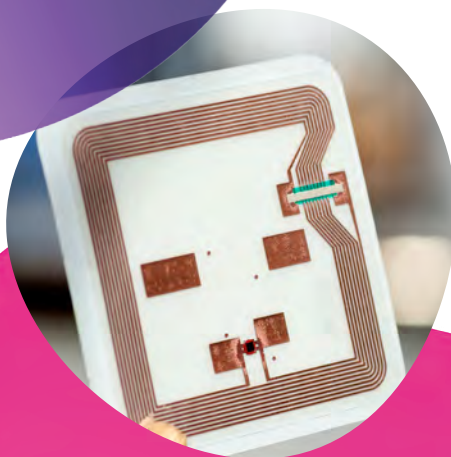
While self-checkouts promise a fast and fluid experience for customers, the reality doesn't always match up to expectations. Misidentified items in the bagging area, slow scanning, poor item recognition and out of order signs can all lengthen queues and ultimately lead to shopper frustrations.

Fortunately, there are options to keep SCOs flowing smoothly and customers satisfied. On the low-tech end of the spectrum, [ECR research](#) has shown that large, playful visual cues to alert shoppers when a kiosk is out of order or limited in functionality can help reduce frustrations, while similarly large on-screen icons for scanned items can help alert staff if there is a discrepancy between the bagging area and bill.

In more advanced developments, RFID tags are a new option for faster scanning. Retailers such as Decathlon and Uniqlo have been embedding their products with small, hidden RFID tags, each featuring a unique code that is read by the self-checkout without the need for individual scanning. Shoppers can instead place all their items in the bagging area and wait for itemization – upon payment the tag is disabled and they are free to walk out with their items.

25% of shoppers are likely to avoid self-checkouts if they have experience of kiosks not working

Source: [Raydiant](#)



41% of shoppers have abandoned a purchase due to long checkout lines

Source: [Retail Insights](#)

Computer vision can also help shoppers accelerate purchases. Rather than having to spend time manually inputting the identity of certain items, such as loose produce, computer vision cameras can identify products automatically, leaving customers to choose from a set of options with the highest probability of accuracy. Since customers are slower at scanning than cashiers, [averaging 85 seconds](#) per basket at best, computer vision can ultimately help produce touchless, smooth transaction flows.



Finally, mobile scan and go systems can provide a minimal intervention solution for retailers looking to create a queue-free shopping experience. Used by major grocery retailers such as Marks & Spencer, Waitrose, Tesco and Asda, these apps allow customers to use their own devices to scan items, pay online and walk out of the store without any need for interactions with staff members. In a hybrid landscape of online and physical transactions, mobile scan and go systems can be a viable option for many retailers.



Shrink – the biggest threat to retail?

Since the return of in-person shopping after the Covid lockdowns, criminality has soared. Shop thefts have [more than doubled](#) in the UK over the past six years, while in the US shrink accounted for [\\$112.1 billion in losses](#), up from \$93.9 billion in 2021. Self-checkouts can become a key contributor to this retail theft epidemic, with criminals employing tactics such as product switching (choosing a cheaper item to place on the weighing scale than the one taken), barcode switching (multi-scanning a barcode for different, more expensive items) and simply walking away with baskets of items without paying.

Retailers are fighting back. As well as increasing security personnel and cameras in-store and encouraging greater police interventions, there are several technologies that can be employed to help cut losses.



“Retailers are seeing unprecedented levels of theft coupled with rampant crime in their stores, and the situation is only becoming more dire.”

NRF Vice President for Asset Protection and Retail Operations

David Johnston



Thanks to the unique code employed by RFID tags, embedded products will alert security gates if a customer has walked out of the store without paying and deactivating the sensor. Clothing brand Zara has employed RFID and its owner Inditex reports that it could reduce checkout times by 50% and potentially lead to theft reductions of up to 80%. Lowe's has also produced an RFID program, Project Unlock, which embeds products with a chip that is set to inoperable and only unlocked when legitimately purchased and scanned.

AI-assisted camera scanning can also produce behavioural alerts on suspicious shoppers. Front-facing cameras can deter criminal activity, according to [Coresight Research](#), since a video feed plays back dishonest behaviour in real time to perpetrators, while computer vision item recognition can display alerts on the kiosk if an incorrect item is placed in the bagging area and make mis-scanning more visible, as well as detecting non-scanning.



Over 60% of staff believe they cannot cope with the number of self-checkout machines they are assigned to manage

– [ECR Working on the Frontline of Retail Self-Checkout Report](#)

With staff attention often overstretched across banks of kiosks, real time data can be invaluable to spot unusual behaviour. Mobile scan and go technology can provide updates on scanned items to staff terminals and customisable algorithms can trigger alerts when there is a discrepancy between what is scanned and bagged, allowing for security interventions if necessary. Visual receipt checks before customers leave the store can also ensure that they have paid for the correct items through their app, while QR codes can be employed when customers have completed their transactions, producing a unique image that is then scanned at exit gates and enabling them to leave the store.

Safe, ethical shopping

Ethics

Additional cameras and data tracking purchases might make for a more challenging environment for thieves, but it can also have knock-on consequences for consumers and staff.

Highlighting increased incidences of potential crime can lead staff to act and potentially put themselves in harm's way. With levels of retail violence and abuse reaching [over 850 incidents per day](#) in the UK according to the latest research, the constant vigilance required of staff can seriously affect morale, as well as lead to feelings of frustration, helplessness and discomfort as they might be required to remain passive while criminal activity takes place. Detailed training policies therefore need to be put into place, so staff can remain safe and know when to intervene or when to refer to security personnel.



There is also the question of data. Mobile scan and go apps might produce a thorough record of purchases that retailers can monitor, but that poses the question of how to store and deal with this information once the transaction has been completed. With a recent [UK government report](#) finding that over half of the population feel they know only a little or nothing about how data about them is used and collected in their day-to-day lives, leading to feelings of concern about security, retailers must not risk sacrificing their customers' trust over data considerations.

Equally, heightened surveillance across stores can lead to a negative experience for shoppers, who might feel unjustly suspected. "From the consumer's perspective, the feeling that everyone is watching you, suspecting you of shoplifting, creates a negative atmosphere," Angela Y. Lee, a consumer psychologist, [told the New York Times](#). "If you're treated like a potential thief, you're going to have a bad experience, which will then make you less likely to shop there."

Safety is therefore key – not only in protecting retailers from shrink, but also in keeping staff secure and ensuring customers that their data is protected as much as their shopping experience.

463 Exabytes:

The daily amount of data produced by companies and individuals globally by 2025

Source: [McKinskey](#)

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Go forward with Flooid

Each of these three vital factors – experience, loss prevention and ethics – can be tackled in different ways. But the amount of differing and sometimes costly solutions can be overwhelming for retailers to consider. Businesses need guidance on the latest technology but also to understand potential ramifications of adoption for their specific business and clientele.

One way retailers can stay ahead is to work with a partner that has a longstanding history of helping the world's biggest brands tackle the latest developments in the fast-moving world of retail.

Flooid has nearly four decades of experience as a trusted advisor and technological expert, helping retailers make the decisions that work best for them. Our modular, composable solutions put the retailer in the driving seat, by providing the ability to quickly make significant business changes with low impact on resources. Retailers trust us to keep on top of the latest developments and to give an objective take on their efficacy, allowing them to trial new technology and build an ROI case for its implementation through our unified, customisable framework.



“Composable commerce leads to world class customer engagement and experiences – keeping consumers loyal and spending more for the long-term.”

Flooid Product Manager, Andy Bourke



floid Empower

Floid's Empower app also enables associates to remotely monitor and respond to self-checkout issues in real-time and from the palm of their hand. Instant alerts allow staff to understand who needs help, meaning customers are no longer left waiting and employees can catch non-payment activities. Data analytics and a customisable algorithm additionally enable a real-time summary of scanned items and transaction values, giving staff the ability to check whether a customer's bag matches their bill. Wide-ranging compatibility means Empower can be deployed across self-checkout, cashier operated registers, convertible lanes, kiosks and the new generation of mobile POS devices.



As well as sharing our own experience, platform and expertise, we work with industry-leading partners such as Bluseed Retail to provide a psychological understanding of retailer strengths and challenges, rather than just an IT-focused perspective. Merging psychology with business process and technical expertise, we can provide a holistic, lasting approach to business transformation.

Ultimately, we care about your priorities. With our in-depth knowledge of new technology and real-world examples of self-checkout evolutions, Floid can help retailers scale with frictionless efficiency and minimal risk. Through working together, we can think carefully and adapt to change with due regard to risk and reward.

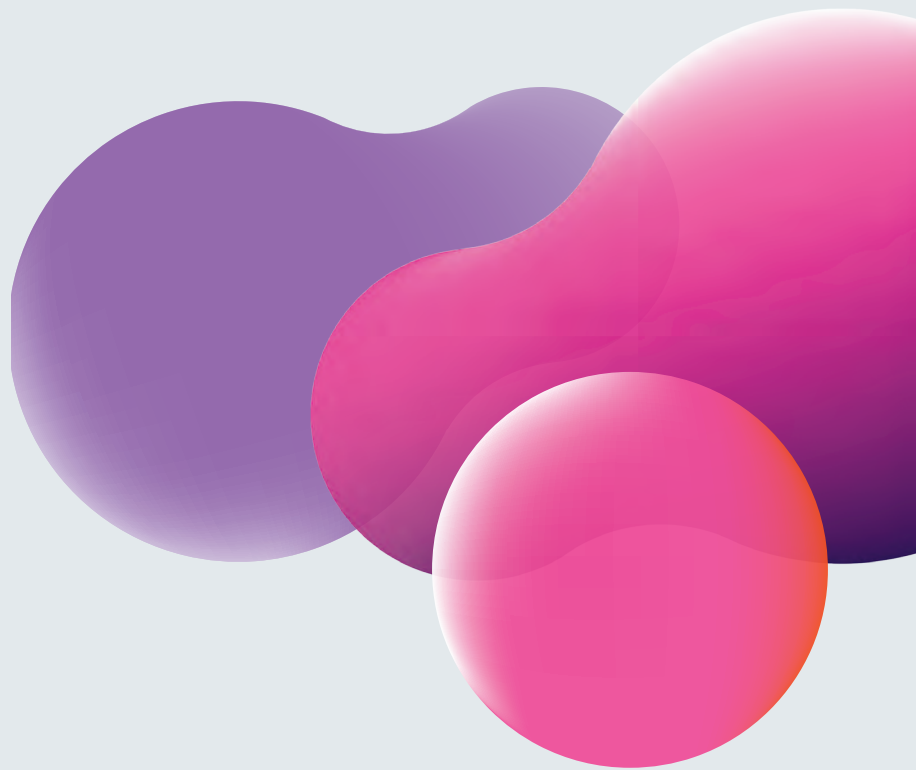
If you are interested in learning how Floid's solutions can help make your self-checkout systems more efficient, cost-effective and safer, please speak to a member of our team.



About Floid

Floid, a Glory company, is the leading unified commerce platform provider that enables retail and hospitality brands to sell to customers flexibly and consistently, wherever they are and however they choose to shop. Our scalable cloud-native composable solution and services portfolio includes assisted and self-service experiences, an open API services platform and operational business analytics as well as estate management solutions that enable retailers to select the right mix of services and technology partners to facilitate the selling journey that's right for every customer. One unified commerce platform. Unlimited innovation.

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