



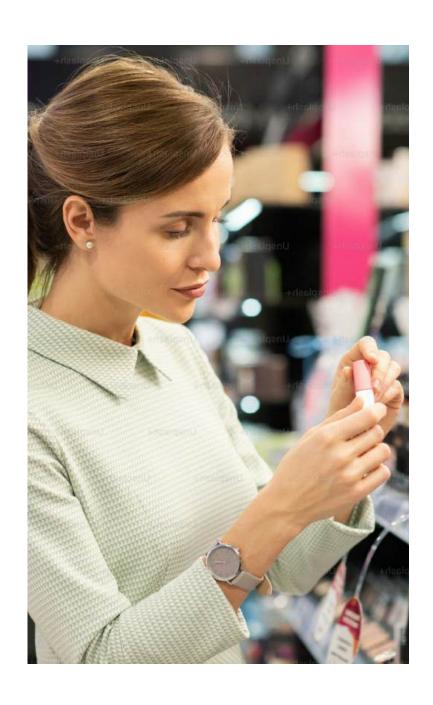
# HOW SELF-SCANNING IS TRANSFORMING THE CUSTOMER EXPERIENCE IN RETAIL INDUSTRY

The integration of self-service technologies (SST) significantly impacts customer experience, a crucial factor for organizations today. Retailers benefit from adopting SST as it enhances the overall shopping experience. To fully grasp the influence of SST on customer experience and its value, it's important to first build a strong understanding of the concept. Customer experience can be defined as the sum of customers' cognitive, emotional, social, sensory, and value-based responses to a company's offerings over time, including both preand post-consumption phases. This concept arises from the various interactions between a customer and a service provider.

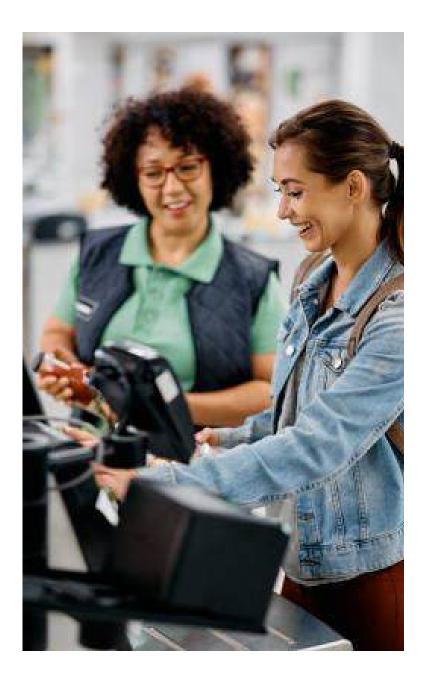


Marketers today increasingly rely on technology to improve customer experience, resulting in what is often referred to as a "technological customer experience." This involves "customer usage of any form of in-store technologies while interacting with a retailer." The adoption of innovative digital technologies such as mobile devices, location-based services, virtual reality, digital twins, blockchains, AI, wearable tech, and business process automation is becoming more widespread. Companies leverage these advancements as a competitive edge, driven by the need to stay updated with evolving market demands and rapid technological progress.

Research suggests that technology positively impacts perceptions of store atmosphere, evokes positive emotions, and adds value to the customer's shopping experience. Additionally, interactions with technology can influence customers' purchase decisions, satisfaction levels, and loyalty. However, several tangible and intangible factors in the in-store environment, such as design, music, temperature, and scents, play a key role in influencing spontaneous purchases. These elements are critical for retailers as they work to enhance customer experience through the adoption of smarter in-store technologies.







# **CUSTOMER-CENTRIC PERSPECTIVE**

Many organizations employ a customer-centric approach, which involves understanding the specific tasks that customers need to complete, how offerings are integrated into customers' daily processes, and how customers utilize resources to co-create value. This approach allows businesses to better understand and optimize the customer experience. The absence of a strong customer focus is often cited as a reason for business failures. Furthermore, a customer-centric view involves gaining insights into the overall customer experience, rather than just focusing on reactions to interactions with a single firm.



# SMART TECHNOLOGY

The integration of technology in retail opens up new opportunities for improving the customer experience but also presents certain challenges. Both aspects will be explored in the following sections. First, it's essential to delve deeper into the nature of smart technologies such as SST to better understand their impact on customer experience. In today's world, technology is ubiquitous and is considered a primary driver of innovation.

Research identifies three key impacts of technology on service: enhanced communication with customers, improved customer data storage, and better analysis of customer data. These advancements create new opportunities for businesses to personalize services and strengthen customer relationships. As a result, the concept of "smart technologies" is gaining traction across industries. Smart technologies are defined as those that learn from interactions between employees (or firms) and customers, gradually adapting to provide customized, desirable services.

Smart technology stems from cognitive computing, which refers to self-learning and deep-learning systems that rely on high-level data abstraction and non-linear processes based on input data, adaptation, and learning. Examples of smart technology include smart home devices, smart cities, smart cars, wearable technology, smart healthcare devices, and automated services. This research specifically focuses on automated services, particularly self-service technology.

# SELF-SERVICE TECHNOLOGY (ALSO KNOWN AS SST)

Self-service technology (SST) is increasingly being adopted in the retail industry, with a projected growth rate of 9.8% from 2021 to 2030. SST refers to automated technologies designed to enhance service quality, customer satisfaction, and operational efficiency, while boosting productivity. This type of smart service reduces the need for personal contact, with employee involvement during customer transactions.

SST includes innovations like self-checkout kiosks, self-scanning machines, interactive digital screens, and digital ordering stations, commonly found in retail environments such as grocery stores and fast-food outlets, which represent the largest users of SST. Standardization technologies like SST are primarily focused on efficiency, allowing for greater output with fewer resources. They are typically applied to routine, repetitive tasks where demand remains constant, even as prices or income fluctuate.



In industries where services are commoditized, the cost of switching between providers is low, leading to greater competition. Additionally, the potential for customer lifetime value in these sectors tends to be limited, meaning the relationship between customer and company holds less value. Mass production industries, such as fast-food chains, are prime examples of this, with services like ATMs, kiosks, and self-checkouts fitting into this category. The defining characteristics of standardized technologies like SST are maximum efficiency, cost reduction, and consistency in service delivery.

# ADVANTAGES AND DISADVANTAGES OF SST ON CUSTOMER EXPERIENCE IN-STORE

To fully understand the pros and cons of self-service technology (SST), it's essential to explore how customers experience these technologies. Various studies have highlighted several positive aspects of SST and its impact on the customer experience, which are detailed below.



#### **CUSTOMER LOYALTY**

Research shows that enhancing customer experience significantly improves customer satisfaction, which in turn fosters greater loyalty. Increased satisfaction generally leads to stronger customer retention.



# TRANSACTION SPEED

Transaction speed refers to the time it takes to complete a purchase using SST. The quicker the process, the more value it adds to the customer experience, as reducing wasted time is highly appreciated by customers. Studies have shown that "saved time" is a major factor contributing to a positive self-service experience. Additionally, waiting time plays a crucial role in shaping customer satisfaction, with shorter waits often leading to higher levels of contentment.



# PERCEIVED CONTROL

Perceived control in the context of SST is the customer's belief in their ability to manage and influence the outcome of a self-service transaction. When customers feel they have control over the technology, they tend to be more confident and comfortable exploring its various features. This sense of control enhances the customer's ability to navigate the system efficiently, allowing for a smoother and quicker transaction process.





Ease of use refers to the extent to which customers believe a system is simple and requires little effort to operate. This is a critical factor in shaping the customer experience. When SSTs are intuitive and require minimal instruction, customers are more likely to view them favorably. Additionally, customers value having close support available, as it further boosts their confidence in using the technology.



### **CONVENIENCE**

In a self-service context, convenience is defined as the ability to reduce physical or cognitive effort during a transaction, without requiring employee involvement. Speed and convenience are often the primary reasons customers opt for SSTs, as they allow customers to decide when and where their transactions take place, giving them more flexibility.

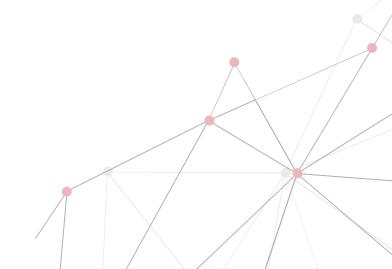
However, despite these advantages, there are still some drawbacks to the use of SST in enhancing the customer experience. Even with the many benefits mentioned, customers often prefer having an employee available for assistance. Employee support and product knowledge remain important to customers, and having informed staff who are attentive to their needs is still highly valued.



# FRUSTRATION AND DISSATISFACTION

On the downside, customers can experience frustration when using SSTs, particularly if there are no clear instructions or guidance on how to navigate the system effectively. In many cases, retailers introduce SSTs without providing sufficient instructions, expecting customers to figure out the process on their own. This lack of direction can limit the customer's ability to explore the full range of options within the technology, diminishing the overall experience. Additionally, inadequate employee training on how to assist with SSTs can exacerbate this issue, leading to further customer frustration.

These two factors—lack of instructions and limited employee support—can negatively impact the customer experience. Customers may feel powerless, which can lead to dissatisfaction and discourage them from completing their transactions. This highlights the importance of retailers ensuring both employees and customers are well-informed and prepared to use SSTs effectively.





# QUALITY CRITERIA:



Reliability in qualitative research refers to the consistency of results and the extent to which a study can be replicated. If a study is repeated and produces similar results, it is considered highly reliable. Conversely, if results deviate, reliability is lower. In qualitative research, reliability is categorized into internal and external types.

Internal reliability relates to how researchers interpret the data and agree on observations, while external reliability focuses on the ability to replicate the study in different settings. However, replicating social settings exactly is often deemed impossible. To enhance reliability in this study, four separate focus groups were conducted, ensuring that questions were clearly understood.



Validity is about ensuring that the research measures what it is intended to. Internal validity examines whether observations align with the theoretical framework, while external validity looks at the generalizability of findings. In qualitative research, generalizing is often challenging due to small sample sizes. This study uses multiple focus groups with diverse participants, which strengthens both internal and external validity by ensuring the data collected reflects a broader range of perspectives. The authors will constantly review whether participants' answers meet the research objectives to maintain validity.



Credibility refers to the trustworthiness of the data and whether it accurately represents the social reality being studied. Conducting multiple focus groups with participants from varied backgrounds improves the credibility of the findings. The authors also ensured the use of reliable secondary sources, such as academic journals and books, to support the research. By including multiple focus groups and diverse sources, the credibility of the study is further reinforced.



Since qualitative research is rooted in detailed, context-specific data, applying findings to other settings can be challenging. However, by providing rich descriptions, readers can determine if the results are transferable to other contexts. The detailed findings from this study should offer insights that could be adapted to similar areas.







# **DEPENDABILITY**

Dependability, closely linked to reliability, involves maintaining complete records of the research process to allow for future review. In this study, focus groups were recorded, and transcriptions were added to the appendix, ensuring that the data can be revisited and verified. This process strengthens the dependability of the research by providing a clear audit trail for future reference.



# **CONFIRMABILITY**

Confirmability addresses the objectivity of the research. While complete objectivity is difficult to achieve in qualitative studies, researchers should minimize personal biases and ensure that findings remain faithful to the data. Acting in good faith, the researchers aimed to exclude personal values and maintain neutrality throughout the study.





# 3 WAYS THAT SELF-CHECKOUT CAN TRANSFORM THE RETAIL CUSTOMER EXPERIENCE

The modern consumer has grown used to the convenience of online shopping and now expects that same ease during in-store visits. In fact, convenience is now the second biggest factor driving customer loyalty, right after pricing. Making in-store shopping as seamless as possible is crucial for staying competitive, boosting revenue, and setting the stage for long-term growth.

One effective way to meet this demand is by introducing self-checkout systems. With a relatively low initial investment, retailers can significantly improve their in-store experience, offering the flexibility that today's customers expect.

Here are three key ways self-checkout can transform the retail customer experience and support a retailer's success in the long run:



#### **Shorter Lines, Less Cart Abandonment**

Long lines often deter customers who are seeking a quick and easy shopping trip. Most people don't want to spend more than a few minutes waiting to pay for just a few items. Studies show that 86% of customers avoid stores with long lines, and 70% are unlikely to return if they've experienced them. For those with smaller purchases, many choose to abandon their carts rather than wait, costing businesses potential revenue.

Offering self-checkout alongside traditional registers helps reduce long lines, giving customers the option to quickly check out and be on their way. This convenience enhances the shopping experience, encouraging repeat visits and attracting new customers who prioritize a fast and easy checkout process.



# **Employees Can Focus on Customers**

By utilizing self-checkout systems, staff can be reallocated to more value-added tasks. Instead of operating cash registers, employees can focus on restocking, managing inventory, and most importantly, assisting customers. This shift not only maximizes labor efficiency but also elevates the customer experience.

Research shows that a fully satisfied customer generates significantly more revenue than a merely satisfied one, and nearly half of consumers are more likely to buy if they interact with a sales associate. Simple changes, like redeploying employees from registers to the sales floor, can have a considerable impact on revenue, customer retention, and overall satisfaction.





### It's What Customers Want

Ultimately, consumers prefer self-checkout. Reports indicate that 60% of shoppers favor self-checkout for its ease of use and shorter wait times.

Equipping stores with self-checkout systems ensures retailers keep current customers satisfied while attracting new ones who seek efficient payment options. With convenience becoming a priority in all aspects of life, offering self-checkout is essential for staying aligned with customer preferences.



# Paving the Way for Long-term Success

Self-checkout systems are becoming increasingly common in stores. By 2020, around a third of convenience stores had adopted self-checkout, with that number continuing to rise as more retailers plan to introduce automated checkout systems in the near future.

Self-checkout not only improves the shopping experience but also brings in new customers. With 63% of shoppers saying they're more likely to choose stores with self-checkout options, implementing these systems is key to staying competitive and ensuring a store's long-term presence in the retail landscape.

To conclude, self-scanning technology is revolutionizing the retail customer experience by offering enhanced convenience, reduced wait times, and greater control for consumers. While the integration of self-service technologies addresses customer demands for speed and efficiency, it also empowers employees to focus on more personalized interactions.

However, for retailers to fully capitalize on these benefits, it's essential to ensure that customers and staff are well-equipped to handle the technology. With the growing consumer preference for seamless, tech-driven shopping experiences, self-scanning is poised to become a cornerstone of modern retail strategies.





helping smart factories achieve unprecedented levels of efficiency, quality, and safety through its advanced machine vision and industrial vision solutions.

We help organisations improve product quality, reduce errors, lower operational costs, amplify productivity, tone down wastage, improve establishment safety, and ensure traceability. From picking technologies to advanced machine vision, our solutions are highly configurable and reliable, serving a wide range of industries.

#### WE PROVIDE END-TO-END SOLUTIONS INCLUDING:



**Autonomous robotics** 



Conveyor belts



RFID tags, scanners, and printers



Laser scanners



Barcoding systems

Book a call with us today to learn more.

www.qodenext.com