SAMSUNG SDS AMERICA

WHITE PAPER

Understanding the QSR Customer Through a Digital-first Strategy

Contents

Executive summary

The foundational elements of quick service restaurants remain the same: speed, convenience and affordability. The difference for today's establishments is how they use technology to reimagine the established customer experience for digitally fluent consumers.

As customers move away from physical touchpoints and embrace digital solutions in their day-to-day worlds, they expect every company they interact with to do the same. Such expectations are forcing QSRs to refresh their offerings, backed by digital and mobile solutions. Data insights are crucial for the success of these solutions, which include customer behavior analytics that inform targeted business decisions. A digital- and mobile-first strategy allows quick serves to better understand the QSR customer and make data-driven decisions that not only enhance the customer experience but also give the company a competitive edge.

While the industry is experiencing positive growth, much of the development is concentrated in the fast-casual segment or in off-premises strategies. According to the National Restaurant Association report, 38% of U.S. adults and 50% of millennials are more likely to schedule food delivery than they were two years ago. Further, market threats, such as changing consumer preferences as well as rising labor and food costs, are impacting both the top and bottom line for quick service restaurants.

In response to the current state of the industry, QSRs need to focus on implementing digital solutions that will help owners anticipate changes in consumer behavior and tackle customer demands. With tools like behavior sensing technology, video analytics, evolved point-of-sale systems, mobile-first payment integration, digital drive-thrus, online ordering and virtual employee training programs, technology can make a difference in all aspects of managing a successful restaurant.

According to results from the State of the Restaurant Industry Report, restaurant operators are on board with this need for QSR digital transformation. More than 8 in 10 of those surveyed agreed that investing in new technology will help restaurants maintain a competitive edge. In the QSR segment, 70% of operators plan to invest in customer-servicing technologies, such as app ordering and mobile payment.

With increasing consumer demand for greater convenience and speed, QSRs must respond by implementing more robust digital solutions in their day-to-day operations. What's more, restaurants that want to attract young digital natives should consider experimenting with personalized incentives, loyalty programs, rewards and other promotions through digital channels.

While industry growth predictions are promising, quick serves must make strategic operational improvements to be included in such forward progression. The QSR industry is in the midst of a digital revolution, largely sparked by a tech-savvy consumer base.

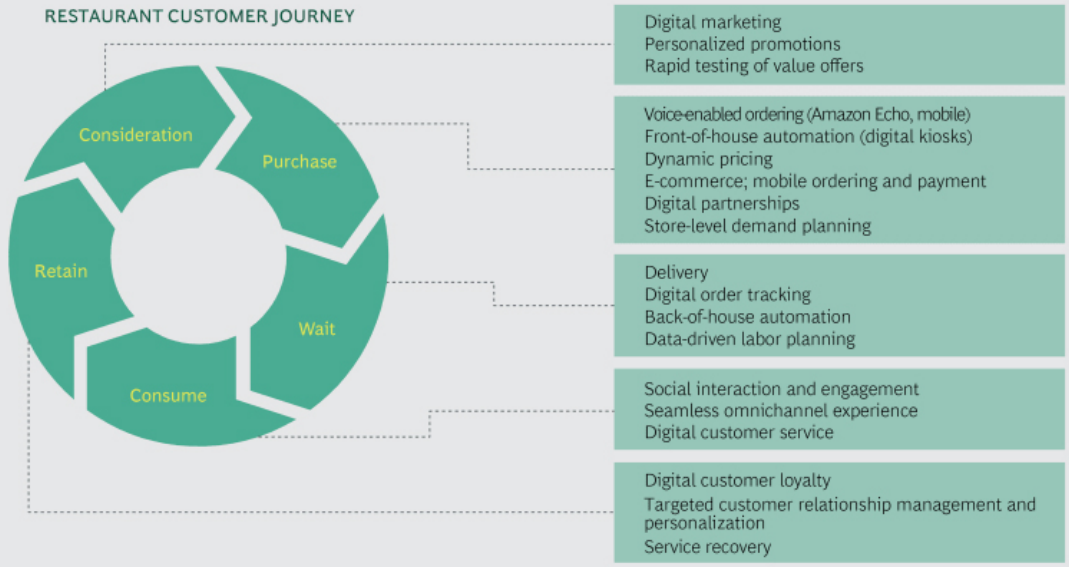
Developing a digital-first customer approach

Serving today's consumers means building a connected restaurant with tools that provide insight into the needs, preferences and demands of the QSR customer. Along with bolstering customer experiences, adopting digital solutions can boost sales and overall revenue.

Consumers view their mobile devices as the ultimate source of convenience and connectivity. As such, a digital-first strategy calls for mobile solutions, such as push notifications, contactless payment systems, online delivery, in-app promotions and reward programs. These solutions create more engaging, personalized and positive customer experiences that drive increased sales and loyalty. Digital drive-thrus further support multiple upselling and segmentation functions, while updating technology systems allow restaurants to collect telling insights about how to better engage their customers with relevant messaging, promotions and offerings.

Today's reality is that digital solutions redefine how consumers interact with restaurants, making an impact at every stage of the customer journey.

EXHIBIT 1 | Digital Redefines How Consumers Engage with Restaurant Brands



Source: BCG analysis.

Survey results from the Boston Consulting Group revealed that as early as 2017, orders placed through digital channels accounted for nearly 25% of Panera sales and 30% of Starbucks sales.[3] The consumer demand for digital-first approaches continues to grow, encouraging QSRs to start strategizing sooner rather than later.

[3] https://www.bcg.com/en-us/publications/2017/technology-value-creation-strategy-new-digital-reality-restaurants.aspx

The key to implementing the right digital solutions is keeping the customer top of mind. It is less important to impress consumers with flashy technology, but rather more productive to serve the next-generation consumer with strategic, digitally driven experiences that enhance the speed, convenience and affordability of QSRs.

Enhancing the customer journey with behavioral analytics

Creating a consistently positive, seamless experience for customers can be particularly challenging for QSRs. However, restaurant brands that rely on real-time data insights rather than instinct can make more informed decisions, as well as implement uniform improvements across locations. As such, those QSRs will be better positioned to create the positive experience the customer expects.

Taking a holistic approach

Holistic approaches to collecting and interpreting in-store analytics effectively combine data, communication, technology and organizational execution to ensure QSRs can implement profitable programs that introduce positive change at scale. Take, for example, the Customer Operating Zone Improvement research and development approach. COZI recognizes that every restaurant has individual operating zones, within which customers behave differently.[4] For instance, QSRs typically have zones for entering, lining up, ordering, paying, getting beverages, picking up orders, dining and exiting. If restaurant managers identify these zones and understand how consumers interact in each one, they can produce zone-specific posters, signs, menu boards, window decals and other displays with targeted messaging that complement customer needs within each area of the restaurant. Such consumer data can also influence an optimal restaurant layout, including where to route the line or how to configure dining tables.

Case in point: When Starbucks conducted a COZI analysis, the results revealed that the drive-thrus lacked the barista-driven ordering experience consumers had come to love - and positively associate with the brand. The coffeehouse chain responded by introducing video baristas to their drive-thrus, an upgrade that became the largest capital program in the company's history to that point.[5] Through zone analysis, Starbucks also discovered that there were specific saturation points for marketing and messaging within individual zones. Once a customer saturation point is reached, additional investment leads to wasted resources and detract from the customer experience. As a result of these findings, Starbucks developed guidelines that enabled them to better manage messaging, increase purchases, and optimize the customer experience.[6]

Collecting and applying the data

Of course, consumer behavior data is at the heart of such analysis and strategic improvement. Quick serve managers can gather the information from operations data, product sales reports, labor statistics, surveys and consumer focus groups. Behavior sensing technology, such as heatmap analysis and zone counting, can also reveal data-driven answers to key questions at highly efficient speeds.

[4] https://www.qsrmagazine.com/outside-insights/challenging-times-restaurants-require-holistic-marketing
[5] https://www.qsrmagazine.com/outside-insights/challenging-times-restaurants-require-holistic-marketing
[6] https://www.qsrmagazine.com/outside-insights/how-starbucks-reinvented-customer-experience-drive-thru

"86% of consumers admit leaving retail stores because of long lines, resulting in loss of interest and sales."

QSR solutions like Samsung Nexshop Behavior Sensing make it easy for restaurant operators to collect real-time customer data analytics. The technology provides managers with powerful insights into their consumer base, such as:

- Demographic breakdown of customers, including gender and age
- The number of people in line
- Average wait time
- Peak ordering times
- Popularity of ordering methods, such as counter, mobile kiosk or drive-thru
- Foot traffic patterns
- Zone count and behaviors

These analytics can help managers optimize the back of the house, such as strategic scheduling and employee placement for peak ordering times. Objective camera sensors can measure real-time traffic flow to report on statistical trends. Zone counting and heat mapping data further unveil insights into where people are in the restaurant and how they interact in those areas, which can influence optimal store layout and display placement.

For example, a recent study revealed that 86% of consumers admit leaving retail stores because of long lines, resulting in loss of interest and sales. What's more, retailers lose over $1 billion in sales when they don't support preferred payment methods.[7] For QSRs, this can mean losses in brand equity and sales, as well as financial hurdles from labor inefficiencies and food waste. However, real-time behavioral analytics can help QSRs understand these challenges and correct the issues before consumers choose to eat elsewhere.

As a significant driver of QSR sales, drive-thru experiences can especially benefit from behavioral analytics. Not only can the data inform strategic upgrades, but the technology can also help restaurant operators monitor performance and highlight where there's room for additional improvement. Everything from kitchen layout to menu boards can influence the speed, convenience and accuracy of drive-thru orders, making the data-driven insights a helpful tool for creating an ideal customer drive-thru journey.

The technology also proves useful for increasing QSR marketing effectiveness. For instance, tracking information about customer proximity to the restaurant as well as time spent inside can guide strategic signage placement. Analysis of customer behavior and sales can also help marketers determine how effective the messages were in encouraging customers to enter the QSR or buy certain products. Furthermore, customer demographic information helps marketers create more targeted content and promotions.

[7] https://www.chainstoreage.com/technology/study-long-checkout-lanes-cost-retailers-billions/

While digital displays and other technology can improve the QSR experience, behavioral analytics is about using data to better understand the consumer. That way, QSRs can implement the digital solutions that will resonate with customers, rather than using the technology for the sake of it. This strategic decision-making yields better results for digital transformation projects. The Starbucks video baristas, for instance, serve a true customer-service purpose by making the convenient drive-thru experience more reminiscent of ordering inside. Smart ordering and intelligent greeting signage further increase customer convenience and satisfaction.

From a corporate standpoint, working with a QSR solutions vendor can further help restaurant operators centralize their digital transformation efforts, as well as ensure the data they're collecting doesn't contain any personal identifiable information.

Unleashing the untapped potential of AI and machine learning

It's clear that digital transformation is disrupting the QSR industry in deep and fundamental ways. Artificial intelligence and machine learning are major players in the digital revolution for QSRs as well as companies spanning various industries. According to Gartner, augmented analytics focused on machine learning are transforming how all content is developed, consumed and shared, and, as a result, will likely see mainstream adoption by 2020.[8] AI-powered devices are no longer new to QSR customers, but how quick serves decide to implement the technology has the potential to impress them.

QSRs can use AI and machine learning to improve the guest experience and increase revenue while simultaneously reducing operational complexity. Along with powering the data collection and behavioral analytics tools that drive digital-first strategies, the advanced technology automates menial tasks for significant increases in QSR speed and accuracy.

Manage QSR employees and supplies

AI is an especially effective tool for solving QSR labor issues before they have a negative impact on customer experiences. Notorious for high turnover rates, QSRs can use advanced technology to enhance operational efficiency, support customer service initiatives and increase revenue despite the ever-changing workforce. Digital customer service solutions, for example, leverage machine learning to automate the repetitive and tedious elements of food orders. With touchscreen technology and voice-ordering, these digital representatives can record consumer selections, make personalized recommendations and improve order speed and accuracy. The technology seamlessly and continuously learns from each interaction to provide even more nuanced, natural and helpful exchanges with consumers.

These digital solutions can also help QSRs overcome labor and supply shortages during peak hours and eliminate human-related challenges, such as time-off requests and fatigue. AI technology further powers improved scheduling capabilities to relieve managers from time-consuming and

[8] https://www.gartner.com/en/newsroom/press-releases/2018-10-15-gartner-identifies-the-top-10-strategic-technology-trends-for-2019

complex tasks. Scheduling software can predict labor demand, allow employees to swap shifts with little managerial involvement and factor in details like employee performance and history to schedule optimal teams for sales and customer service. From an inventory perspective, AI automatically tracks food sales to ensure appropriate supply levels and reduce waste at each location.

"Drive-thru orders are inaccurate more than 10% of the time and high employee turnover rates significantly slow average speed-of-service time."

Enhance consumer experiences

AI-powered recognition technology further plays a significant role in the future of personalized drive-thru experiences by making recommendations based on customer profiles. Voice-ordering technology can also present custom upsell messages that make recommendations based on the weather, current promotions or consumer inquiries.

The advanced technology also increases the chances that QSRs meet the standards of order accuracy and speed expected from a drive-thru experience. According to the 2018 QSR Drive-Thru Study, drive-thru orders are inaccurate more than 10% of the time and high employee turnover rates significantly slow average speed-of-service time.[9] AI and machine learning can take over recording and processing orders, reducing the likelihood of human error and enabling employees to focus more of their attention on the in-person interaction at the service window. With improved order accuracy, decreased wait times and enhanced interactions, both customers and employees experience a surge in satisfaction. Additionally, BCG estimated that labor savings in the drive-thru segment of QSRs could reach upward of $100 million for large brands.

By managing drive-thru orders, AI can also help franchisee managers comply with service agreements that require multiple lanes to be open during certain hours of the day without facing staffing or operational hurdles. Plus, the more lanes that are open, the less time customers have to wait to place and receive their orders.

Inside quick serves, AI enables the self-order experience. Studies show that self-serve kiosks and digital displays give guests more time to study product photos, ingredients and nutritional information, which ultimately encourages them to purchase more.[10] Self-serve also eliminates transactional demands at the counter, resulting in shorter lines and additional time for employees to focus on other customer-service tasks.

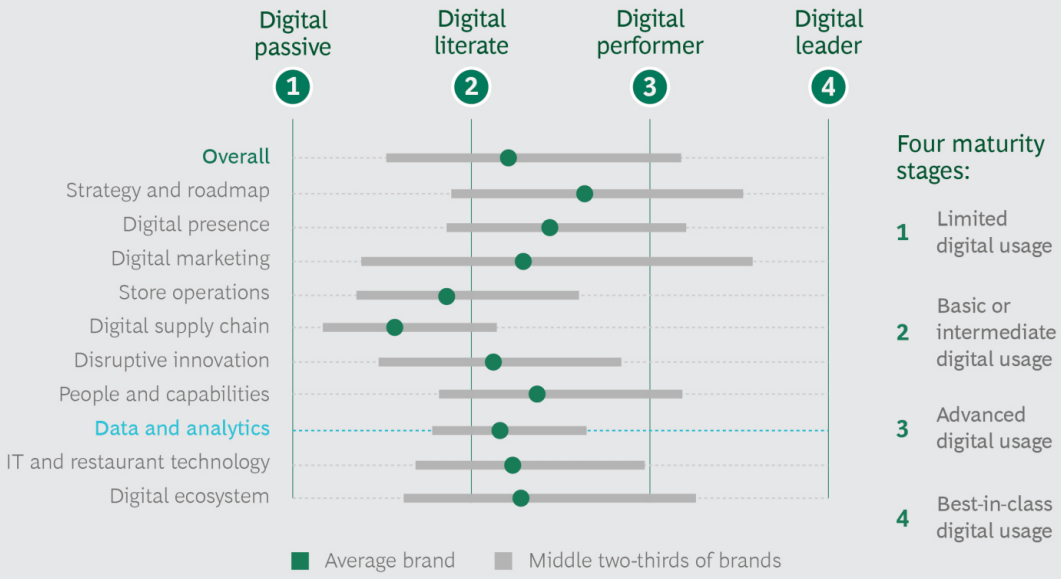
In a similar vein, restaurants can modernize elements of the customer experience with augmented and virtual reality technology. For instance, guests may don VR headsets to learn more about the products or company when deciding what to order or while waiting for their food. QSRs can also augment employee training with VR and gamification. The fast-casual chain Honeygrow created a food-safety game with VR headsets that requires employees to select the correct locations for vegetables and raw meats. The virtual onboarding tool improved training consistency across locations, relieved managers from the responsibility of leading the sessions and reduced employee training costs.[11]

[9] https://www.qsrmagazine.com/reports/2018-qsr-drive-thru-study

[10] https://www.qsrmagazine.com/outside-insights/how-artificial-intelligence-reshaping-restaurant-world

[11] https://www.qsrmagazine.com/technology/virtual-reality-your-restaurants-next-favorite-tool

EXHIBIT 3 | The Four Levels of Restaurant Digital Maturity



Source: BCG Digital and Technology Maturity Assessment Survey, June 2018.

With increasing accessibility and affordability, these advanced technological solutions are becoming more feasible options for QSR digital transformation. However, the potential is still there for QSRs to spearhead new applications of AI and machine learning. In a digital maturity survey conducted by BCG, only 1 in 5 of top restaurant brands reported having big data strategies in place. Few to none considered their company to be fluent in advanced analytics techniques such as AI and machine learning.[12] As such, there is a sense of urgency for quick serves to reach their tech-savvy consumer bases before it becomes commonplace among competitors.

Making inroads into QSR digital transformation

Investing in new technology does not have to break the budget, although it should be a well considered and thoughtfully planned endeavor. As such, QSRs must be strategic about their digital transformation initiatives, investing in the solutions that complement their customer base as well as enhance their established brand identity and the basic tenets of quick serves.

A unified technology platform is important for consistency and easy integration, which is why many forward-thinking QSRs choose to work with end-to-end service vendors to centralize their digital systems. With the rate of change in consumer preferences and digital solutions, it is also important to future-proof digital transformations with flexible tech stacks. Partnering with an analytics vendor also provides access to the necessary data collecting and analyzing capabilities for informed strategies, programs and initiatives.

[12] https://www.bcg.com/publications/2018/feeding-algorithm-restaurants-use-data-capture-competitive-advantage.aspx

QSRs are especially invested in offering mobile apps that provide easy off-premise access and promote customer loyalty. Drive-thru and in-restaurant experiences can also utilize mobile solutions, such as self-ordering kiosks. Research from App Annie suggests that consumers actively engage with mobile apps, with the top four delivery apps experiencing a 115% increase in downloads in 2018 when compared to 2016.[13] Such high mobile engagement creates a viable opportunity for QSRs to connect with their customers.

Of course, simply having a mobile app is only half the battle. Research shows that 67% of retail mobile users will delete an app after a poor experience.[14] Quick serves must adopt strong infrastructures and implement engaging user experiences to retain app users, and in turn, customers. Modern frameworks will also integrate web, mobile and analytics for consistent, data-driven customer experiences.

"Big Brand QSRs like McDonalds and Sonic are leading digital transformation initiatives through strategic partnerships and M&A strategies, with a focus on mobile-forward, customer-centric approaches."

Strategic digital transformations in action

As part of the company's commitment to a robust digital transformation, McDonald's acquired the AI-powered omnichannel personalization platform Dynamic Yield Ltd. in March 2019.[15] Dynamic Yield's machine learning technology will enable the fast-food chain to provide personalized digital promotions informed by massive amounts of customer data. The company plans to roll out the personalized experiences in drive-thrus and self-order kiosks, as well as on the McDonald's mobile app. Essentially, the acquisition allows McDonald's to drive sales at the point-of-purchase by using consumer data to offer favorite meals or recommend popular items. The fast-food chain's investments in the tech space continued, defined by the role its mobile app plays in the brand's digital acceleration. The recent agreement was to acquire 9.9% of Plexure, a mobile-app platform that focuses on mobile order and pay, loyalty programs, analytics, personalization and operations integration.[16] The investment gives McDonald's access to enhanced back-end and front-end features, customer functionality and targeting insights.

In 2018, Sonic rolled out its fresh digital initiative, internally coined the Integrated Customer Engagement strategy. As part of the customer-first digital transformation, the QSR implemented a Mobile Order Ahead system, which quickly represented nearly 30% of the company's total sales. Point-of-personalized service displays are also present at roughly 95% of drive-in stalls, and the company increased its marketing spend on digital channels, customer rewards and other value-added features. Striving toward increased guest loyalty and sales, Sonic is on track to open another 50 to 55 restaurants as well as relocate or rebuild another 35 to 40 storefronts. Such development is a strong indicator of how the company strategized a long-term digital transformation plan.[17]

Partnering with global and national QSRs, Samsung SDS has been leading the charge to transform restaurant storefronts into restaurants of the future by utilizing Samsung SDS' QSR solutions to create seamlessly connected experiences for customers. For instance, with our QSR brand clients that have a strong drive-thru focus, i.e., 60% to 70% of customers ordering through the drive-thru,

[13] https://www.qsrmagazine.com/technology/why-winning-app-war-matters-restaurants
[14] https://www.wwt.com/industry/retail/
[15] https://www.qsrmagazine.com/fast-food/mcdonalds-spends-300m-startup-dynamic-yield
[16] https://www.qsrmagazine.com/technology/mcdonalds-makes-first-investment-mobile-app-vendor
[17] https://www.qsrmagazine.com/finance/sonics-digital-strategy-could-be-game-changer

the first step to a meaningful transformation is to revamp the experience for even more engagement. By introducing drive-thru number plate recognition technology, digital displays can be configured to provide personal recommendations and suggestions. For instance, the customer may receive a greeting like "Would you like the same order as last time?" or "It's hot outside. Would you like an ice cold drink?" The result is a drive-thru experience that increases customer satisfaction, reduces order inaccuracy and speeds up the entire process.

Samsung SDS also improves the dine-in experience by providing a total refresh, complete with mobile kiosks that allow customers to place their orders independently. What's more, recognition technology within the establishments is able to recognize repeat customers, giving them the same personalized recommendations as the drive-thru customers received. By reimagining the in-restaurant customer journey, the QSR brands we work with have been able to provide customers an upgraded experience that met their demands for greater speed and convenience.

Joining the digital revolution

The goal of digital transformation is to optimize QSR processes and learn from data to provide the best possible customer experience. The new digital reality requires QSRs to implement new technology that enhances speed, convenience and accuracy, all while creating an ideal customer experience that increases satisfaction and builds loyalty.

QSRs that develop a digital-first strategy and make smart investments in the appropriate digital solutions will be in a position to overtake the competition. Understanding consumer needs through behavior analytics will help QSRs determine where digital solutions fit within the brand's overall vision and strategy. As quick service restaurants continue to digitalize operations with AI-powered solutions, it will also be important for leaders to plan for future applications of the technology before they go mainstream.

The current QSR landscape and its consumers demand digital transformations that will secure quick serves a place in the future of the industry.

IMPROVING THE CUSTOMER EXPERIENCE WITH SAMSUNG NEXSHOP

Samsung Nexshop provides the data-driven insights and interactive technologies that enable QSRs to develop an intimate, constantly updated understanding of their customers. From there, they can serve customers with relevant and engaging QSR experiences.

Samsung is helping restaurants utilize digital touchpoints in strategic, high performing methods. This includes enabling mobile-first customer approaches with engaging strategies like push notifications, contactless payment systems, online delivery and in-app promotions. Samsung also provides the tools and support for streamlining and digitalizing drive-thru experiences, such as intelligent customer signage and automatic license plate recognition technology.

Video analytics that measure foot traffic, sense dwell time and capture consumer interest in menu board items support QSRs in creating data-driven in-restaurant experiences. Customer purchase history, satisfaction and other behavior analytics further drive proactive business decisions to enhance customer experiences. Integrated technology and device management allow restaurant managers to monitor devices, ensuring all digital touchpoints are performing as expected. Should anything go wrong, Samsung managed services ensure minimal downtime to avoid lasting consumer frustrations.

With Samsung SDS as a partner in the digital revolution, QSRs can capitalize on consumer trends and make profitable improvements in real time.

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Samsung SDS America (SDSA) is the U.S. subsidiary of Samsung SDS, a $8B global software solutions and IT services company. SDSA helps companies optimize their productivity, make smarter business decisions, and improve their competitive positions in a hyper-connected economy using our enterprise software solutions for mobility, security and advanced analytics.

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