



# Key Investments for Quick-Service Restaurants: Tracking Opportunities to Boost Ticket Size & Customer Engagement

Digital technologies help quick-service restaurants increase profits while enabling them to offer high-quality food choices and the game-changing convenience customers crave. But winning the QSR technology arms race requires a careful investment strategy — an especially clever trick when it comes to franchisees — and investing in three key areas, or risk falling behind.

## Executive Summary

The quick-service restaurant (QSR) space has always been tumultuous — fraught with pressures and liable to change overnight. Traditionally, QSRs have struggled to provide the menu variety and food quality their customers crave. Even more important has been the need for greater speed

and convenience. To cope with these demands, QSRs have tried in recent years to increase their ability to execute at scale via process automation. As they say, however, the more things change, the more they stay the same.

During and post-pandemic, QSRs face a number of pressures, both old and new, including:

- I Consumer demand for better quality food at a low price *and* greater menu variety. Customer food choices are ever-changing — one day people are eating [triple decker pizza](#), the next day they want a [vegan meat lover's](#) offering. How do QSRs keep up? Consumers are also demanding traceability of ingredients and better loyalty experiences. There seems to be no end to their expectations.
- I Touchless options for ordering, payment and delivery continue to suit germ-phobic QSR customers, even after the pandemic. There will be no letting up on contact-free delivery models. Market research company Incisiv finds that digital sales will make up [more than half \(54%\)](#) of limited-service and quick-service business by 2025. Even with the CDC admitting the virus largely [does not spread via touch](#), the focus will continue on expanded cleaning and sanitization protocols for all QSR locations, products and packaging.

- I Labor costs are a source of worry, with the specter of increases in the minimum wage. The [cost of food and supplies](#) is soaring. And the chronic [shortage of staff and drivers](#) threatens to swamp the industry in the post-pandemic period. Taking the lead of more-formal restaurants, some QSRs are raising wages and even offering unheard-of [signing bonuses](#) in an attempt to alleviate the shortage.

Amid the legion of stresses, there is good news for QSRs: American consumers still aren't much into cooking. With [takeout sales exploding during the pandemic](#), convenience is still the most fundamental value for American eaters. Americans don't like to spend much time making dinner. All over the country, the thought of getting a hot, tasty, low-cost dinner on the table (or in one's stomach) in 10 minutes becomes powerfully attractive around about 4 o'clock in the afternoon. These habits are not going to go away any time soon. [Takeout and delivery are expected to make up 80%](#) of food-service industry growth by 2025, according to the National Restaurant Association.

## Widely varying digital adoption

QSRs already had several digital projects in flight when COVID-19 hit: multichannel interaction with guests, kiosk innovations, digital menu boards, mobile apps and modernized back offices to maximize efficiency. Based on our work in the field, many of our QSR clients had already invested in Customer 360 and loyalty programs to help increase customer engagement and had adopted cloud and SaaS as ways to hold down costs.

Many QSRs understand they need to spend more on loyalty and hyper-personalizing the customer experience, but brands and their franchisees are leery without proof of hard returns. They are eager for change but adoption is often slow due to the need to engage a broader group of stakeholders than businesses that do not operate on a franchise model.

Many QSRs understand they need to spend more on loyalty and hyper-personalizing the customer experience, but brands and their franchisees are leery without proof of hard returns.

As with other types of franchisee investment requests made by franchisors, franchisees want to know exactly *why* they should invest and exactly *how* it will pay off. This is hardly surprising, given that many franchisees struggle to eke out profits. Asking them to spend a few thousand dollars to implement a digital menu board in a small town, for example, might eat up six months or a year of profits. Franchisors need to help their franchisees arrive at a digital investment model that works for them by demonstrating ROI, crafting an effective shared strategy and investing in change management.

In any case, QSRs that did not embark on digital initiatives before the pandemic are now playing catch-up. And those that have spent already may be wondering where to allocate their next round of capital. Here are the three best areas to invest in digital technologies to capture opportunities over the near- and long-term:



### AI-infused drive-thru

Drive-thrus took on critical importance for QSRs during the pandemic for obvious reasons, and it appears their primacy will continue for the foreseeable future. In fact, customer expectations are rising inexorably in this area. More than 60% of consumers want **automated check-in on arrival and for staff to bring orders out to them**, but only 30% are getting this experience.

Chipotle added **Chipotlanes** starting in 2019 and will accelerate building out its drive-thru operation, adding a whole army of employees to fulfill digital and mobile orders. But Chipotle, while still a newcomer to drive-thru, has no doubt already learned that as traffic increases, so does the average order delivery time — a problem not easily solved. You can always add lanes to increase capacity and customer convenience, but that puts pressure on the make-lines. It's the fulfillment, stupid.

During the pandemic, **Chick-fil-A** led with its drive-thru innovations, including order takers armed with iPads stationed outside during busy times. The chain aimed to reduce the burden on its drive-thru order fulfillment (average wait times during the pandemic reached an unacceptably high average of eight minutes and eight seconds) by experimenting with **ghost kitchens** (outposts where food is made to be delivered) and home-based workers taking orders via FaceTime. But despite all the new equipment to protect both customers and employees from the elements, Chick-fil-A's drive thru is still largely dumb. The challenge now, which applies across the QSR landscape, is this: How can technology like AI make the drive-thru intelligent?

The task at hand: How to create the order, customize it, aggregate it and get it ready to hand to the customer faster? Organizing the kitchen in stations is one idea to speed order fulfillment. But the key invest-

# AI will play a critical role helping QSRs personalize customer experience. This use case will be huge, but the tools require tuning and experimentation to get right.

ment here, not surprisingly, is in AI technology. There are unlimited uses: Conversational AI bots can take orders, upselling customers and presenting personalized menu options according to preferences gleaned from past orders. Machine learning (ML) systems can predict which items will be most in demand on a particular day and time at a specific place, helping to ensure the kitchen has a head start when gearing up to execute. AI can also help QSRs turn potential food waste into cash. For example, if it knows it will have leftover jalapeño poppers, the system could push a mobile offer of \$2 jalapeño poppers to the

customers most likely to try them as their cars appear in the drive-thru. The price could fluctuate down to zero, potentially, depending on the amount of waste forecasted and the loyalty of the customer.

AI will play a critical role helping QSRs personalize customer experience. This use case will be huge, but the tools require tuning and experimentation to get right. There will be a period of understanding what customers in general and specific customers in particular prefer, and engineering the system to deliver accordingly.

## The smart QSR digital delivery system

At all stages of the QSR production and order-delivery process, AI/ML can be deployed for numerous applications: order-taking, upselling, personalizing offers, trimming preparation times, calibrating supplies, repurposing potential waste and more. Infusing this sequence of activities with intelligence is a game-changer offering competitive advantage and strong ROI.

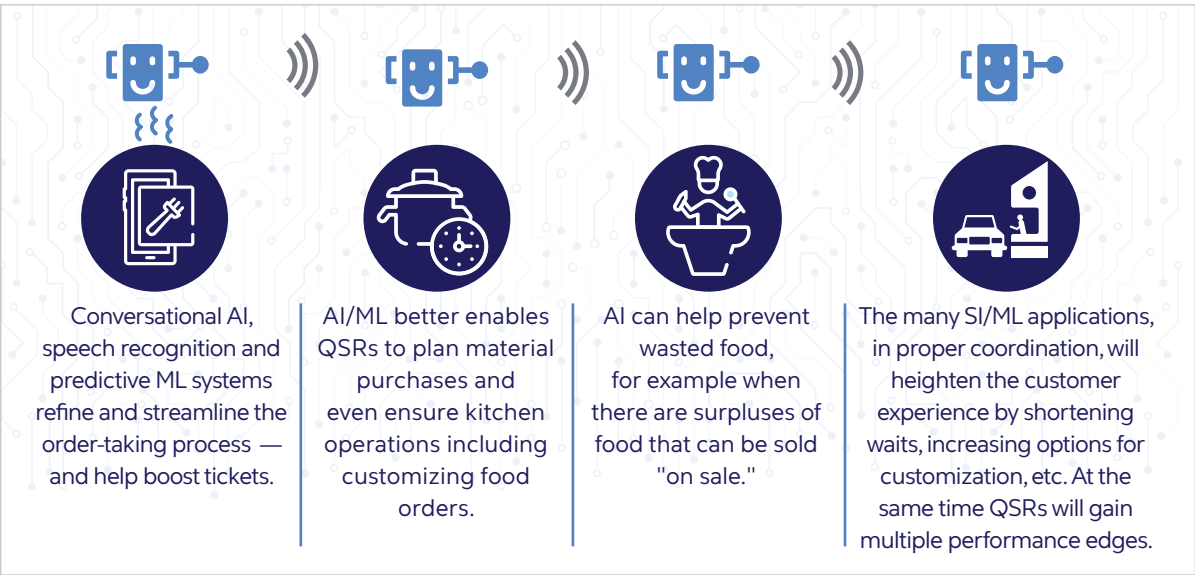


Figure 1



# Quick Take

## QSR Serves Up Near-Perfect Offer Accuracy With AI

In the QSR space, loyal customers are hungry for the offers they get from their favorite fast-food purveyors. But developing offers is usually a manual, noncreative effort largely based on old data. And offers are typically blasted out to large groups of customers without distinguishing for their tastes and preferences. When it comes to increasing customer engagement and loyalty, this one-to-many model leaves a lot to be desired.

We worked with a well-known QSR to provide [Evolutionary AI](#) capability to prescribe the best offers on a one-to-one basis for each individual customer. Leveraging historic data and AI enabled them to generate personalized offers to boost response rates and drive sales. The offer-management program was easy and lightweight to use. Just one marketing person was needed to transform the offers from generic to individualized. Automated ML capabilities refine the model in real time based on how the offer performs. Building off its knowledge, the system creates new offer types (such as percent-off or buy-one-get-one deals) according to personal preferences to maximize response rates and profitability.

The QSR was able to increase the accuracy of its offers by 94.7%, meaning that the system could predict the offer that the recipient was most likely to respond to with almost perfect accuracy. The solution drove customer loyalty and increased sales.

There is zero chance customers will give up the ability to order with a couple of taps and then just answer the door. And that puts QSRs in a bind.



## Revamp off-premises, mobile and delivery options

During the pandemic, QSRs racked up increased revenues not just from drive-thru, but off-premises as well. However, the returns were tempered (see Figure 2). That's because the madly popular order aggregators like Uber Eats, DoorDash and Grubhub cut grievously into the QSR's per-order profits — **to the tune of 20% to 30% per order**. Many consumers were confused by the situation (“Why does the restaurant owner ask me to call in an order directly as opposed to using an app?”), but it did not slow their use of delivery apps. There is zero chance customers will give up the ability to order with a couple of taps and then just answer the door. And that puts QSRs in a bind: Build their own delivery infrastructure (similar to what most pizza places offer)? Or, figure out how to minimize the aggregators' vampiric effect on profits?

There are different theories on how to handle the situation. Subway, McDonald's, Wendy's and Taco Bell are using third-party services, giving them more control than they would have with the order aggregator apps, without having to go through the work of building out delivery. Chick-fil-A elected to play ball with the apps, temporarily relaunching its meal kits, which could be ordered via the Chick-fil-A app for drive-thru pickup or delivery through DoorDash, Grubhub and Uber Eats.

Winning at delivery is a factor of time and cost. The question is, “How do I go from having a few large locations to many smaller locations and get the food there faster than the competition?” Due to franchise agreements and capital restraints, QSRs often can't just take existing stores and reallocate kitchen space and change the back of house to meet local demand.

## Off-premises demand has rocketed, but customer relationships remain vital



**300%**

higher growth in off-premises ordering and delivery versus dine-in traffic since 2014



**70%**

of consumers say they would prefer to order directly from a brand than a third party



**57%**

of guests who order directly from a brand still prefer to do so by phone

Source: Verified Market Research, Upserve, Mintel.  
Figure 2

# Quick Take

## Papa John's Serves Up Agility & Efficiency via Next-Generation Order-Management System

For a pizza restaurant, two of the most important ways to increase customer satisfaction are to reduce order wait times and eliminate call abandonment. Papa John's Pizza needed an omni-channel order-management system that would accomplish both goals. We worked with the food services giant to transform its ordering operations and designed an end-to-end, intelligent, cloud-based solution named "PapaCall," powered by advanced analytics. This solution helped the pizza icon thrive during the pandemic as service moved to virtually all delivery.

The centralized ordering system enabled hyper-personalized, analytics-based offers for customers, and also improved employee experience by allowing them to focus on pizza-making operations. The project translated into increased revenue of 15% per order, as well as a significant reduction in operating costs (see Figure 3). PapaCall also resulted in up to a 50% improvement of Papa John's "out-of-door" metrics — the time it takes from receipt of an order until it is delivered.

The solution provided operational agility, enabling Papa John's to quickly and smoothly ramp up off-premises dining during the pandemic, a move that is not expected to change back any time soon.

### We design new off-premises operations

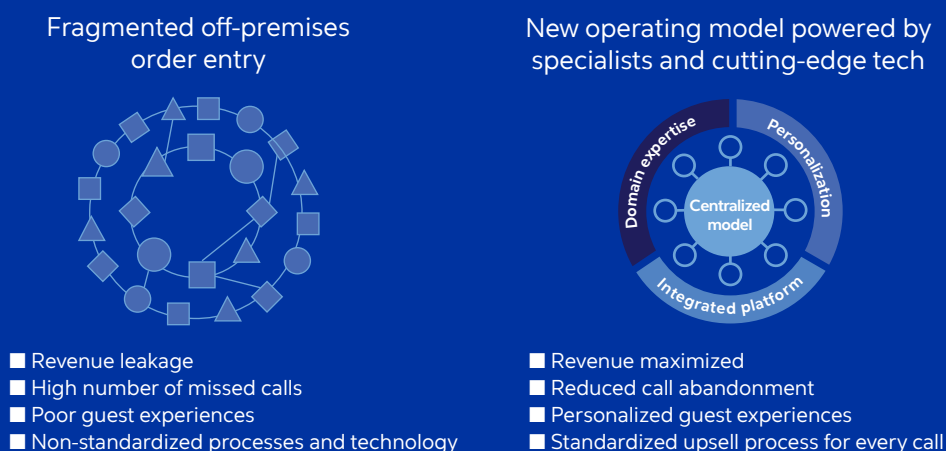


Figure 3

QSRs need to deploy digital technologies that enable them to keep offering more options and new ways to interact, and they need to start targeting consumers higher in the funnel.



### Increase customer touchpoints and appeal to emotions

There is no question: Coming out of the pandemic, new types of competitors are turning up the heat in the QSR kitchen. Competition comes from different directions: convenience stores (7-11, RaceTrac and Wawa, which now offer quick, [quality dinners](#) that far surpass the usual rolling hotdogs and frozen drinks) and grocery stores (many of which now sell meal kits and a legion of tempting prepared foods). There is less reason than ever to try to cook a “real” meal at home. The new players will continue to try to eat QSRs’ lunch ... and dinner!

And traditional players leveraged digital technology to interact in new ways with customers. For example,

Burger King began [giving free Whoppers](#) to consumers who spotted the company’s interactive QR code in TV commercials, using that medium as a playful two-way channel.

QSRs need to deploy digital technologies that enable them to keep offering more options and new ways to interact, and they need to start targeting consumers higher in the funnel (not just 10 minutes before they want dinner). It’s not enough anymore to offer a bunch of \$2 coupons at the point of purchase — that won’t excite every customer. The task today is to create brand awareness and stickiness by appealing to a higher emotional value. The focus now is to bring in more data and more AI to design more personalized offers.

## How to proceed

As discussed above, many QSRs increased their spending in key customer-facing areas such as drive-thru and mobile channels during the pandemic. But this often came at the cost of important areas of investment, such as data modernization and other back-office-focused initiatives. As the economy opens in full, QSRs must now shift to a different operating playbook, by rewiring back-end systems at the core with a focus on these aims:

**I Increase resilience by boosting speed and scale.** During the lockdown period, QSRs had no choice but to abruptly shift from high-touch processes to no-touch. Under extreme time pressure, many QSRs rushed decisions on how to enable new ordering channels (such as via table-top menus, mobile takeout, in-car dashboards, voice-assistance, wearables, social media and third-party platforms, as well as two-lane drive-thrus, curbside pickup, outside order takers and kiosks). If that wasn’t enough, marketers at brands

including Domino’s, Starbucks and Jack in the Box introduced [real-time, personalized upselling](#) and dynamic pricing on digital menu boards.

These accomplishments are impressive (and necessary!) but, given the vast increases in drive-thru traffic, many QSRs’ in-store POS/back-of-house and above-store systems were stretched too far, too fast. Not surprisingly, system latency can slow order processing. When you have 20 cars in the drive-thru and 100 orders per minute hitting the POS, every millisecond matters.

To further improve resilience, adopting predictive monitoring for critical applications will allow QSRs to identify patterns before an actual failure. They also should embrace self-healing systems by automating tasks commonly performed by technical support based on pattern analysis. Also essential is a proper incident/change management policy that is reinforced over time. Addressing these areas will fortify much-needed



resilience. Of course, the ongoing question will be how to continue such digital acceleration to reduce latency without compromising resilience and in ways that are cheaper, faster and better.

- I Modernize the technical architecture.** As always, the food industry is being buffeted by change. In QSR, this is true across the value chain. As the business environment evolves, the technology architecture must evolve along with it. Technology architectures need to adapt and modernize to handle the growing number of orders from a multitude of digital touchpoints. Many existing architectures struggle to handle orders from new channels and those fulfilled by third-party partners. The retail industry went through a similar metamorphosis with the impact of omnichannel commerce, which caused seismic changes to businesses and technology architectures. Monolithic architectures morphed into highly distributed but loosely coupled, modular, cloud-native and microservices-driven architectures that furnish the ability to orchestrate customer experiences.
- I Build orchestrated customer experiences.** Most QSR brands today have created disparate user

experiences (websites, mobile apps, dining in, etc.) that for the most part do not work together seamlessly. Traditionally, QSRs have not viewed these siloed experiences as nodes in an overall customer journey. But it is time for them to seize the opportunity to “orchestrate” these multiple products to deliver a holistic experience.

Take curbside pickup, for example. For curbside to be an optimal experience, employees need to know not just the items ordered, but the customer’s estimated arrival time (based on their distance from the store and how long it will take for them to get there) and their car color and model. Then, there needs to be communication between the guest and the employee to let the employee know the customer arrived so they can bring the right order to the right car. This connected process requires an orchestrated experience that bridges digital and the store for all customer journeys. The first step is to map each customer journey and then create a vision of the overall customer experience to be tied together via orchestrated channels and processes.

## Looking Ahead

As we begin to come out of the pandemic, QSRs need to be skillful in a number of areas in order to stand out from an ever-increasing pack. Investing in advanced technologies like AI and analytics will enable the personalized, no-touch, ultraconvenient experiences customers crave, while renovating data and back-end systems will position QSRs to make the operating model changes that will lift them ahead of the competition.

But before reaching for those advanced technologies and experiences, it is critical to first gain a clear understanding of the customer. This work consists of focusing on foundational pieces of [customer data and customer insight](#), enabling a 360-degree view of each customer. To get there, QSRs will first have to [modernize their data architectures](#). With

that covered, QSRs are freed to embrace advanced technologies such as analytics and AI that will propel them into the future.

But these initiatives have often evaded companies in this space because they are expensive and time consuming. Many have been unwilling to invest in modernizing their systems of record and engagement to make this happen. Doing this requires modern data and the ability to make sense of structured and unstructured data. There are [creative ways to sidestep the capital constraints](#) that many QSRs face in order to make the needed investments to emerge from the pandemic — whatever form that may take — stronger and ready to meet quickly changing market demands with ease.

## About the authors

### Joseph Rajadurai

Vice President, Travel & Hospitality, Cognizant

Joseph leads Cognizant's Travel & Hospitality business unit. He has over 20 years of experience in enabling clients on the transformation of their digital channels, modernizing core systems and improving technology execution models. His team serves clients across the entire T&H value chain — online travel agencies (OTAs), global distribution systems (GDS), airlines, hotels, restaurants and car rental companies. He has a proven track record of developing high performing teams that lead clients through successful technology enabled transformation of their business. He can be reached at [Joseph.Rajadurai@cognizant.com](mailto:Joseph.Rajadurai@cognizant.com) | [www.linkedin.com/in/joseph-rajadurai/](https://www.linkedin.com/in/joseph-rajadurai/).

### Scott Headington

Vice President, Retail, Consumer Goods, Travel & Hospitality Industry Solutions Group, Cognizant

Scott has more than 25 years of combined retail, consulting and systems integration experience spanning key functional areas of retail operations. His experience and background in retail includes: multi-channel commerce, merchandise and assortment planning, merchandise and revenue optimization, category management, space planning, demand forecasting, allocation and replenishment, inventory planning and optimization, vendor management and store operations. He can be reached at [Scott.Headington@cognizant.com](mailto:Scott.Headington@cognizant.com) | [www.linkedin.com/in/scottheadington/](https://www.linkedin.com/in/scottheadington/).

### Girish Dhaneshwar

Consulting Practice Leader, Retail, Consumer Goods, Travel & Hospitality, Cognizant

Girish is an experienced professional in the Retail, CPG and Travel & Hospitality industry, with deep experience across the business value chain. In a career spanning over 25 years, he has handled key leadership roles in the industry as well as in the consulting industry across North America, the Middle East and Asia. After joining Cognizant in 2008, Girish has led large transformational programs for some of the world's largest companies. In recent years, he has built a strong transformation practice, helping customers adapt to the rapid changes driven by the new digital economy. He has been working with customers on transformational programs in the area of Omni-channel commerce. Girish is also spearheading Cognizant's efforts in consumer transparency and helping food service players realize the associated benefits across the value chain. He can be reached at [Girish.Dhaneshwar@cognizant.com](mailto:Girish.Dhaneshwar@cognizant.com) | [www.linkedin.com/in/girish-dhaneshwar-8149a34/](https://www.linkedin.com/in/girish-dhaneshwar-8149a34/).

### Matthew Robinett

Strategic Digital Solutions Offering & GTM Leader, Retail, Consumer Goods, Travel & Hospitality, Cognizant

Matt leads Digital Offerings across e-commerce, CX, AI and MarTech for Cognizant's Retail, Consumer Goods, Travel & Hospitality business. Having focused on these industries his entire career, he uses his background in analytics/statistics and digital strategy to help clients answer the question, "If we started this business today, how would we compete and win at scale?" Matt went to Case Western Reserve Univ., and graduated with degrees in marketing and finance. He can be reached at [Matthew.Robinett@cognizant.com](mailto:Matthew.Robinett@cognizant.com) | [www.linkedin.com/in/matt-robinett-8491826/](https://www.linkedin.com/in/matt-robinett-8491826/).

---

## About Cognizant

Cognizant (Nasdaq-100: CTSH) engineers modern businesses. We help our clients modernize technology, reimagine processes and transform experiences so they can stay ahead in our fast-changing world. Together, we're improving everyday life. See how at [www.cognizant.com](http://www.cognizant.com) or @cognizant.

---

## Cognizant

### World Headquarters

300 Frank W. Burr Blvd., Suite 600  
Teaneck, NJ 07666 USA  
Phone: +1 201 801 0233  
Fax: +1 201 801 0243  
Toll Free: +1 888 937 3277

### European Headquarters

1 Kingdom Street  
Paddington Central  
London W2 6BD England  
Phone: +44 (0) 20 7297 7600  
Fax: +44 (0) 20 7121 0102

### India Operations Headquarters

#5/535 Old Mahabalipuram Road  
Okkiyam Pettai, Thoraipakkam  
Chennai, 600 096 India  
Phone: +91 (0) 44 4209 6000  
Fax: +91 (0) 44 4209 6060

### APAC Headquarters

1 Changi Business Park Crescent,  
Plaza 8@CBP # 07-04/05/06,  
Tower A, Singapore 486025  
Phone: + 65 6812 4051  
Fax: + 65 6324 4051