


Enterprise Intelligence:

The key to enhancing guest experiences and improving operational efficiency



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 RESTAURANT DIVE

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The events of the past two years have challenged the restaurant industry in ways that have been far-reaching and long-lasting. While demand for dining out has finally returned to—and even begun to exceed—pre-pandemic levels, restaurants are still confronted with disruptive market forces, including elevated digital-engagement expectations, labor shortages, supply chain issues and rising food costs.

These forces are testing restaurateurs in new ways, but they are also creating new opportunities for forward-thinking industry leaders to adopt innovative technologies. Not only will restaurants that embrace automation be able to deliver better guest experiences with leaner staffing levels, but they'll also be poised to create greater operational efficiencies in what will become an increasingly technology-enabled industry.

Challenging times

In the current economic climate, it is continually challenging for restaurants to maintain their margins.

Higher costs are just one of the issues that the restaurant industry faces. The restaurant industry has not yet seen a full return to employment since the pandemic's outbreak. As many as 78% of restaurant operators say that they simply cannot find enough workers to handle all the business that's available to them. In the wake of soaring inflation, they're also facing higher wholesale food costs.

Widespread supply chain disruptions have also made it difficult for restaurants to obtain the items that they need to maintain everyday operations. As many as 95% of restaurants in the U.S. have experienced significant supply chain shortages or delays.

Given these ongoing constraints, it's becoming increasingly critical for restaurant operators to leverage automation to alleviate labor and supply chain issues. The efficiencies that automation creates can make it possible for restaurants to achieve higher guest satisfaction levels with fewer staff, all while increasing operational agility and supply chain visibility. These efficiencies can help mitigate the eroding margins restaurants are experiencing as a result of current market conditions.

Furthermore, the right automated systems can also enhance guest experiences, particularly as consumers increasingly expect digital services like online ordering and mobile app-enabled features, such as drive-thru ordering or ordering and payment at the table.

In this playbook, we'll take a closer look at how the right technology foundation can enhance guest experiences and boost operational efficiency — all of which will help enable restaurants to not just survive but thrive in tomorrow's digital-first world.

Enhancing guest experiences

When it comes to guests' expectations for personalized and convenient dining experiences, the bar just seems to be getting higher. [OpenTable](#) reports that 98% of diners are more likely to visit a restaurant where they're welcomed by name, and 94% will keep coming back to a place where they receive individualized menu recommendations. To keep up with the never-ending march of consumer expectations, restaurants need to find more and more ways to streamline and personalize the dining experience. Leveraging technology is often the best way to achieve this. Technology can improve order and payment processes, personalize dining experiences, entertain guests, and improve the order pickup process.

Improving order and payment processes

Consumers have become accustomed to using self-service technology across many industries — from airline check-in to mobile banking to retail self-checkout. Now they're gravitating to mobile apps, tablets and kiosks to order and pay for their restaurant meals. In quick-service restaurants (QSRs), it has become common to see self-ordering kiosks in the lobby with limited or no cashiers. Self-ordering is well-received in restaurants, with [70% of consumers preferring to order digitally instead of in-person](#).

In QSRs and full-service restaurants, frequent diners often have the restaurant's app on their mobile phone so that they can benefit from loyalty points when they place a mobile order. In full-service restaurants, some tables are furnished with a table-mounted tablet for ordering and payment or offer a QR code at the table that can be used for ordering and payment.





Personalizing dining experiences

Integrating mobile ordering and payment processes with loyalty programs creates more marketing opportunities for restaurants to personalize the dining experience. When guests opt in, restaurants can leverage a wealth of data on their preferences, previous purchases and loyalty status to engage them and provide personalized recommendations that encourage larger orders and repeat visits.

Entertaining guests

Offering speedy Wi-Fi makes it possible for guests to play their favorite games or share their experiences on social media while they're waiting for their orders — or enjoying an Instagrammable dessert. If the guests aren't members of the restaurant's loyalty program, the restaurant can still send them special offers if they provided their email to gain access to the Wi-Fi. While they're on the Wi-Fi, restaurants can offer promotions and encourage guests to provide feedback on a survey or submit an online review. In fact, 96% of consumers prefer businesses that offer them free Wi-Fi.

Streamlining order pickup processes

With the growth of online and mobile ordering for takeout, it's essential that restaurants provide a quick and easy pickup process. Whether this means convenient curbside pickup, self-service lockers or a dedicated space for order pickup within the lobby, it is imperative that restaurants accurately time the order so that it's ready when the customer arrives and send updates to keep the customer informed. Some restaurants use GPS to keep tabs on how far away customers are, while others are deploying sensors in the curbside pickup area to let them know when customers arrive.

Boosting operational efficiency

As labor shortages and higher wages continue to impact the restaurant industry, restaurant operators are looking for ways to leverage technology to improve productivity and retain staff. When used in restaurants, automation can make workers' jobs better and more fulfilling. That's because it can free employees from the need to perform repetitive manual tasks, giving them more time for things that are more fun (and less frustrating), like serving guests.

Key ways that restaurants can leverage technology to improve labor productivity and operations include turning to mobile apps to create efficiencies and making use of robotics, drive-thru automation and computer vision. These tools can play roles in kitchen operations and automated inventory management, but they can also help to reduce bottlenecks in drive-thrus and food-prep workflows.

Mobile apps

While mobile ordering and payment is a guest convenience, it also saves labor by reducing the number of manual tasks employees need to perform. There's a role for mobile apps in nearly every type of restaurant: fast-casual chains and QSRs can benefit from shorter drive-thru lanes, increased order accuracy and reduced waiting times. Even the most upscale fine-dining restaurants can provide training to employees via apps and delight guests by making mobile POS-enabled payment-at-table a reality. Mobile apps can also be used for video training for food prep or kitchen cleanup procedures.

Robotics

In today's future-forward fast-food kitchens, robots are helping with repetitive food-prep tasks, while diners in sit-down restaurants might have their meal delivered by a robot server. Chains like White Castle and Jack in the Box are using an advanced robotic system to man the fryer station, traditionally one of the hottest and fastest-paced parts of the kitchen, and the one where most workplace accidents occur. At the popular casual family chain Chili's, robots are being piloted in dining rooms, taking over some of the more physically difficult tasks, like delivering meals to tables and carrying heavy loads of dirty dishes back to the kitchen.

From keeping track of inventory on kitchen shelves to scrubbing floors after hours, robots can take over some of the monotonous work that has to be done to keep restaurants running efficiently. And when robots perform these sorts of tasks, employees can spend more time on hospitality — connecting with guests and building relationships. At least for now, robots can also serve as an entertaining novelty for guests, who often enjoy seeing them in action.

Drive-thru automation

Drive-thru for QSRs has accelerated to the point that it now accounts for about 75% of restaurant revenues. With the increased reliance on drive-thru operations and consumers' lack of tolerance for slow lines, restaurants are focused on leveraging technology to speed the throughput. According to a study by Oracle, 55% of consumers become annoyed after waiting just five minutes in drive-thru lines. To reduce wait times, restaurants can use systems powered by conversational artificial intelligence (AI) as voice assistants to take orders. They're often more accurate than humans, and their use can reduce labor costs while increasing guest satisfaction.

Some QSRs are also piloting the use of an AI-powered solution that uses license plate recognition to identify customers as they enter the drive-thru to recommend orders based on previous purchases or process mobile orders that were placed earlier.





Computer vision for kitchen operations

In a busy restaurant with a broad array of menu items and portion sizes, innovative technologies are helping to reduce error rates and improve customer satisfaction. AI-driven computer vision solutions can monitor food preparation and plating to improve order accuracy, monitor for sanitation and safety issues, and identify areas where staff could benefit from more training. Computer vision can also be used to streamline process efficiency, by helping kitchen staff find better ways of working, and improve drive-thru performance.

Automated inventory management

Improving supply chain visibility can help restaurants to better manage food inventories to meet demand, while reducing spoilage and waste. Visibility of inventory across the supply chain and accurate shipment arrival date and time information can also help restaurants improve worker scheduling. They can adjust staffing levels by scheduling the right number of employees to receive inventory and stock shelves.

Restaurants are beginning to deploy Internet of Things (IoT) devices and AI-enabled inventory and asset-tracking systems across supply chains, particularly for perishables and refrigerated ingredients. Such systems can greatly enhance inventory efficiency and predictability while reducing food waste. Better inventory management is critical since restaurant kitchens have only limited space for food storage, and since ingredients can be kept fresh only for a limited time. With tracking devices such as radio-frequency identification (RFID) tags or IoT sensors attached to assets and fleets, restaurant operators can monitor the condition and location of incoming inventory in real time. This can help restaurants realize significant cost savings while improving ingredient freshness and availability.

Further evolutions of this technology will use AI applications to automatically submit an order for any item whose stock falls below a threshold level based on predicted demand.

Enterprise Intelligence enables the restaurant of the future

Emerging technologies promise to create new efficiencies, enable new connected guest experiences and make it possible for restaurants to communicate with guests in entirely new ways. Success will be achieved by those restaurants that prioritize digital innovation to build smarter, more efficient and more agile enterprises. Transformation starts by bringing together disconnected systems to create powerful, modular and intelligent solutions that can enable new functionalities, smarter insights and faster decision-making. The result is Enterprise Intelligence.

To create a platform that can do all this, you need more than secure, reliable connectivity. Such connectivity must be paired with industry expertise and cutting-edge partner solutions designed to take advantage of 5G and multiaccess edge computing (MEC) to deliver transformative results.

Amid the waves of accelerating digitization that are sweeping across nearly all industries, restaurant operators expect to deploy growing numbers of new technologies in their kitchens, dining rooms and drive-thru lanes over the next few years. As the restaurant industry's digital transformation progresses, most new software will be hosted in the cloud. It'll primarily be accessed through mobile devices,

enabling restaurants to better leverage data to provide guests with personalized experiences.

Taken together, these increases in restaurant technologies will test networks' ability to handle additional traffic, particularly when it comes from devices that require low latency and process bandwidth-heavy files. As the number of mobile and connected devices continues to grow, there will be increasing need for faster speeds, less network downtime and improved abilities to manage peak traffic.

“Over the next two or three years, the number of network-connected devices will grow to be more than two and a half times greater than the world's population,” said Danny Johnson, director of product marketing for 5G, MEC, SDN, IoT and network services at Verizon. “This will exponentially increase the number of interactions that consumers have with technology on an ongoing basis. Neuroscience also teaches us that we as humans learn more and remember information better when more of our senses are engaged. For each digital interaction, customers expect a responsive and quality experience, and the restaurants that can enable that quality experience where the consumer is will create a competitive advantage while keeping and attracting customers.”

5G networks are capable of delivering the required performance. 5G offers restaurant operators the higher speed, greater bandwidth, lower latency and enhanced real-time connectivity that are needed to make cutting-edge guest experiences a reality. In conjunction with edge computing platforms, 5G connectivity can enable restaurateurs to extract business value from massive amounts of data gathered in dining rooms, across supply chains and from guests and industrywide trends.

While 5G adoption can enable restaurants to offer guests better experiences and expanded capabilities, it's possible to begin what will ultimately become an ambitious digital transformation program on a smaller scale. Depending on the use cases that a restaurant operator wants to prioritize, it might make sense to begin by upgrading the restaurant's network bandwidth and management infrastructure while deploying 4G fixed wireless access (FWA) points. Once 5G mobile network coverage becomes available in your area, it'll be simple to migrate to the more advanced technology.

The key is to build a network architecture that will give in-restaurant applications access to the right bandwidth at the right time and enable them to scale up or down as needed. Today's Network-as-a-Service (NaaS) subscription-based consumption model enables restaurants to make use of as much — or as little — network infrastructure as they require, to create a “living” network that can be changed quickly to keep pace with seasonal dining trends or unexpected surges in demand. This model makes it easy to maintain a secure, high-performing and efficient network without the need to buy additional networking equipment that runs the risk of becoming outdated as technology advances.

5G technology has the potential to enable an ever-expanding array of use cases that tomorrow's consumers will expect, but that today's appreciate and value. In a world where restaurants are doing everything they can to win the lasting loyalty of their guests while maintaining their margins, the efficiencies that these technologies can enable will become an increasingly important business advantage.





Managing the transition to 5G: Expert tips

Have a plan

Your 5G journey won't be completed overnight. The process requires investment, strategic innovation and change management. Even if you're thinking big, it's smart to start small, with simple use cases that can generate meaningful outcomes. You can scale up as you build momentum.

Identify the right partners

Partnerships are crucial. You won't be able to create an innovation strategy and implement the right technologies without them. Look for someone with industry-leading expertise, with experience using the technology in their own operating environment and with an enduring commitment to investing in infrastructure.

Future-proof your investments by leveraging commercial models that support innovation

Once you begin to move from proof-of-concept to production, you'll begin to see how connectivity enables you to improve guest experience by leaps and bounds. Look for solutions that will make it easy (and cost-effective) to upgrade beyond the framework you've initially established as technologies continue to evolve and your business strategy matures.

Conclusion

Driven by an economy and labor market that are multiplying the need for efficiencies, the restaurant industry is on the brink of a sweeping digital transformation. Amid the current challenges, the restaurants that thrive will be those that embrace technological advances to enhance guest experience, improve operational efficiency and optimize supply chain visibility. To achieve these aims, restaurants will need to invest in creating unique experiences and greater automation, demanding more of their networks.

Now is the perfect time to take action to future-ready your network, even if 5G is not yet available for all your restaurant locations. Verizon has network solutions that provide the ability to scale, adopt the latest technology and remain agile to meet ever-changing customer

demands. With these new solutions, enterprises can leverage Verizon's 4G LTE FWA today and easily upgrade to 5G when it becomes available in the future.

Verizon also offers a NaaS platform that can provide restaurants with a cloud-based, flexible, resilient and agile infrastructure. NaaS can help future-proof your network by enabling it to become flexible, scalable, resilient and secure, and, in so doing, turn it into a platform for business growth.

When 5G, NaaS, MEC and more all come together to give you a platform for the future, it's not just digital transformation — it's Enterprise Intelligence.





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