tableau

Transform Restaurant Operations with QSR Analytics

POS data coupled with AI-based capabilities enables a new model as operations shift to e-commerce channels and the restaurant perimeter.

Reimagining the QSR experience

History teaches that economic crises tend to precipitate lasting change. And although it remains to be seen how fallout from the COVID-19 pandemic will permanently alter the fast-food industry, industry watchers think it's unlikely quick-service restaurants (QSRs) will return to the normal that characterized pre-pandemic operations.

Gone, at least for the foreseeable future, is a customer preference for dining in. Instead, most QSR activity has shifted to e-commerce channels—smartphone apps and the internet—and to the perimeter of the restaurant, which includes curbside delivery and drive-through lanes. This change entails different mechanisms for customer engagement, different customer conveniences, and a new understanding of the customer experience.

Another development is the surge in popularity of third-party delivery services like DoorDash and Uber Eats, a trend that heightens concerns around control over the customer experience, food quality, and profitability. These services take a cut from both the customer and the restaurant, eating into already thin margins.

The upside is that customers now have more ways to interact with the restaurant, and restaurants have more ways to fill up the order queue. The downside is greater pressure on kitchen staff to fill orders in a timely manner and at quality levels that meet customer expectations. This pressure is only amplified by an industry-wide labor shortage.

As a result, thousands of smaller QSRs were forced to shutter their operations because they couldn't meet the throughput demands of today's situation. The more established brands are scrambling to accommodate this new normal and on the lookout for ways to accelerate and drive efficiencies in their processes.

40% of QSRs report a problem with curbside orders

Source: "2021 State of the Restaurant Industry Mid-Year Update," National Restaurant Association, September 2021

Meeting challenges with technology

From ground level in this unsettled new QSR world, critical questions arise: How can restaurants relieve the overwhelming pressure on kitchen staff as they struggle to keep up with rising demand? What changes can they make to ensure the product they deliver is always of the highest quality? How can they correlate input from across all channels in real time and translate it into actionable information?

What can they do to make sure every customer experience is safe and meets expectations—for timeliness, quality, and order accuracy—to retain customer loyalty? And, ultimately, what new models can they consider as they seek to preserve and grow the business? As the restaurant industry continues to grapple with one of the most disruptive events in memory, there are some encouraging signals. But the end is not yet in sight.

Today's shifting QSR dynamics challenge operators to drive new efficiencies across every facet of every process. Restaurant automation holds the key.

Changing customer behavior

6 in 10   Six in 10 adults have changed their restaurant use due to the COVID

19 %   19% of adults said they completely stopped going out to

37 %   37% of adults said they ordered delivery or takeout instead of dining

32 %   32% of adults said that if asked to wear a mask and/or show proof of vaccination to dine indoors again, they would be less likely to dine in

Ongoing labor shortage

- Despite a steady increase in job creation in the first half of 2021, employment at eating and drinking places is still nearly 1 million jobs, or 8%, below pre-pandemic levels; the restaurant and accommodations sector has one of the highest levels of unfulfilled job openings in any industry

- 75% of restaurant operators reported that, as of June 2021, recruiting employees was their top challenge—the highest level ever recorded

Cautious industry rebound Food and beverage sales in the restaurant and food-service industry are projected to total $789 billion in 2021, up 19.7% from 2020

52%
of adults would like to see restaurants incorporate more technology to make ordering and payment easier.

Source: "2021 Mid-Year State of the Restaurant Industry Update," National Restaurant Association, September 2021

The path forward: A smarter, connected restaurant

The extraordinary challenges QSR operators face today call for innovative new solutions. Brands are looking for mechanisms to automate their operations as they seek to drive new efficiencies, cope with significantly increased traffic on the perimeter, and overcome industry-wide labor shortages that show no sign of abating.

When restaurants can automate mundane, repetitive tasks through smart technology—artificial intelligence (AI), machine learning (ML), and IoT (Internet of Things) data analytics—they free up their team members to focus on duties that require human interaction, such as engaging with customers.

They can accelerate restaurant throughput, for example, by deploying "line busters" armed with tablets to take orders and payment from cars in the drive-thru queue, then wirelessly send that information to kitchen systems that initiate food preparation. And they can ensure order quality by instrumenting kitchen equipment programmed to prepare food to precise metrics.

The Retail Intelligence Solution, jointly delivered by partners Tableau, Vistry AI, and Snowflake, fuses restaurant-management systems, audio and visual data from cameras and edge sensors, AI and ML, and data-visualization technology to help restaurants measure and improve the speed and quality of service.
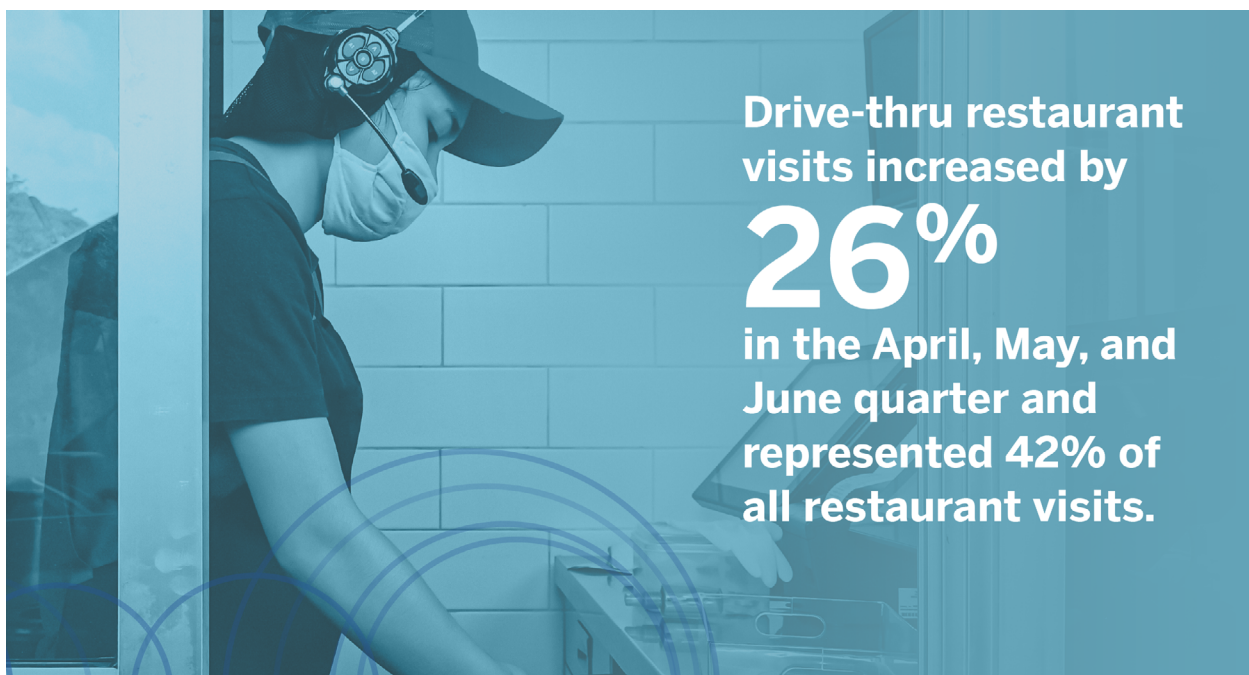
Optimizing the drive-thru

Traditionally, drive-thru operations have accounted for 50–70 percent of QSR business. Since the pandemic, this number has ballooned to 80–85 percent—increasing wait times, pressure on kitchen staff, and customer impatience. The people-centered process wherein team members take orders and payment and pass handwritten pieces of paper to the kitchen staff, who then prepare and package the food for delivery, is error prone and rife with inefficiency.

The Retail Intelligence Solution merges operational analytics and data from sensors to increase drive-thru throughput and velocity by revealing how cars are stacking in the queue and flagging the kitchen to produce, for example, more fries if they are typically included in orders—speeding the process. The solution can further improve Net Promoter Score (NPS) by using visual data to recognize loyalty customers—by license plate or facial-recognition technology—and recommending selections based on their preferences via an AI-powered digital menu board.

Restaurants can track cars from the minute they arrive on the lot until they leave, helping uncover blind spots and giving operators better data so they can make smarter decisions and achieve greater velocity, more accurate car counts, and a superior customer experience.

The solution features a fully conversational, automated order taker—think Alexa for the drive-thru—that can increase speed of service and improve order accuracy to drive CSAT while helping compensate for the labor shortage.

Drive-thru restaurant visits increased by 26% in the April, May, and June quarter and represented 42% of all restaurant visits.

Source: ""U.S. Restaurant Drive-Thrus Are Proving Their Value During the Pandemic and Will Be Key to the Industry's Future," The NPD Group, September 2020

Enabling new business models

In today's new normal, every strategic advantage counts. By automating the restaurant and introducing vision, voice, IoT analytics, and data-visualization technology to their operations, QSRs can expect to:

- Control food production and minimize waste through predictive analytics
- Improve customer satisfaction by increasing speed of service through the automation of curbside and drive-thru experiences
- Increase food quality and safety through production optimization based on available labor

Moreover, restaurants can begin to explore new business models such as virtual brands and ghost kitchens that let them leverage existing infrastructure and delivery channels to spin off new brands that are solely for off-premises customers and exist only on third-party delivery apps. They can get creative by offering new menus that target diverse market segments—expanding their reach and generating new revenue streams.

The current market disruptions affect everyone in the QSR space, but brands that empower their operations with automation and smart technology can seize the opportunity to improve restaurant performance from end to end.

Only **24%** of retailers say they're using predictive analytics for demand forecasting and inventory management

Source: "Meeting Adversity with Data," Retail and Consumer Goods Analytics Study 2020

Dive deeper into data-driven solutions for retail operations.

Additional resources

Learn more about the Retail Intelligence Solution

Snowflake for Retail

Salesforce Retail Solutions

Vistry

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About

As the business intelligence platform for more than 90% of Fortune 500 financial services companies, Tableau is the proven solution for organizations that are focused on leading with data. Tableau provides a complete, integrated analytics platform that enables teams to work collaboratively and gain deep insights from their data using machine learning, statistics, natural language, and smart data prep. With enablement resources, including training, certifications, and Tableau Blueprint, not to mention inspiration and support from the passionate Tableau Community, organizations who choose Tableau can be confident their deployment will be a success and lead them to data-driven culture.

Snowflake delivers the Data Cloud—a global network where thousands of organizations mobilize data with near-unlimited scale, concurrency, and performance. Inside the Data Cloud, organizations unite their siloed data, easily discover and securely share governed data, and execute diverse analytic workloads. Wherever data or users live, Snowflake delivers a single and seamless experience across multiple public clouds. Snowflake's platform is the engine that powers and provides access to the Data Cloud, creating a solution for data warehousing, data lakes, data engineering, data science, data application development, and data sharing. Join Snowflake customers, partners, and data providers already taking their businesses to new frontiers in the Data Cloud. Snowflake.com.

Salesforce is the world's #1 CRM platform—integrating every part of a company's interactions with customers including marketing, sales, service, commerce, HR, and much more. As part of the Salesforce family, Tableau is designed to connect seamlessly with products across the Customer 360 platform. This allows you to use Tableau to blend Salesforce data from any cloud with your other business data for a complete view of your customers. Put customers at the center of everything you do, and deliver the connected experiences they expect.

The Vistry Discrn Platform uses predictive analytics to help control costs by optimizing food production and minimizing waste through its kitchen production control system. It also helps understand and optimize team member deployments based on available labor and helps tackle labor-related quality and food safety issues. The Discrn Platform's available automation services create a more agile customer experience through automated curbside guest check-in and drive-thru ordering assistance, helping to improve Net Promoter Score (NPS) and overall revenue.