FUTURISTIC FOODSERVICE: HOW TECH IS REVOLUTIONIZING RESTAURANTS

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NEWSLETTER SIGN-UP

Using automation and artificial intelligence, tech-savvy restaurants satisfy consumers' cravings for speed, quality and convenience.

What does technology taste like? Is it a slightly metallic flavor, like the tinny tang of circuitry and switches? Or is it actually steamed Asian buns? At a new highly-automated restaurant, technology doesn't smack of silicon — it tastes like hot dumplings.

At Wow Bao, Chicago's first automated restaurant chain, customers don't place orders with humans at a counter. Instead, they use their smartphones or a self-ordering kiosk. When their order is ready, one of 12 cubbies with an animated LCD screen lights up, displaying the customer's name. A double-tap on the screen opens the cubby, which has been filled by kitchen staff never seen by guests out front.

"You never need to talk to someone," said Wow Bao president Geoff Alexander. "You walk in the door, order what you want, pick up your food and leave."

This isn't the first time the need to quickly please has transformed foodservice innovation. In the early 1950s, McDonald's broke new ground in service speed by applying to hamburgers the same assembly line concept that Henry Ford used for automobiles. Its consistency and quality changed foodservice forever.

"People want good food, and they want it to be affordable and available very quickly," said Amanda Topper, associate director of foodservice research at Mintel, a Chicago-based market research firm.

"That's the biggest driver in the industry."

Customers like the convenience of a kiosk and the sense of hassle-free privacy that comes with it. For retailers, self-service kiosks can really boost business growth. Humans can forget to upsell, but a kiosk never does. Kiosk maker Zivelo reports that customers are 200 percent more likely to get dessert when ordering from a kiosk.

"There's a psychological component to it," said Christie Rice, Intel's director of partner management for the Americas. "It's easier to tell a kiosk we want a chocolate shake than it is to tell a waiter."

Rice said the technology that enables kiosks can help quick-service restaurants understand customer behavior — everything from how many touches it takes to complete a purchase, to what men buy versus women.

"The analytics can really help with business insights and meet the ever-changing customer demands," said Rice.

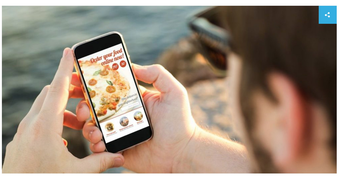
What's On the Menu?

If technology were a meal, self-ordering kiosks would be just appetizers. There are many more courses to come.

One promising technology is voice ordering, said Erik Thoresen, principal at Chicago-based foodservice consulting firm Technomic.

Chains like Wingstop, Pizza Hut and Taco Bell employ artificially intelligent (AI) chatbots to power "conversational ordering" via social media. Eventually, Thoresen predicts, these platforms will be voice-activated and highly accurate as restaurants build archives of historical ordering data.

Proximity sensing will also be influential in placing food orders, according to Perry Quinn, senior vice president for innovation and business development at the National Restaurant Association.



Customers can use chatbots on social media to order food.

"Imagine you're rushing for lunch. Your phone knows you're next to Restaurant X, so it asks you, 'Do you want to order the usual?' You say 'yes,' pick up your food and leave. That's eventually where we're going," he said.

One sign of that future is Amazon Go, the new brick-and-mortar grocer that uses proximity sensing to let customers shop without having to go through the checkout.

Some restaurants are working on automating the kitchen, too. In Las Vegas, for instance, Planet Hollywood boasts a bar where robotic arms take drink orders, then mix and pour cocktails. It's not hard to imagine a future where similar machines flip burgers or top pizzas.

Automated Ordering

Online ordering has already given way to new business models like "virtual restaurants," that lack physical storefronts and prepare delivery food in shared commercial kitchens.

"Opening up a restaurant is very expensive," said Mintel's Topper. "Thanks to technology, virtual restaurants are able to produce high quality, high-level food for the consumer without having to worry about expensive overhead costs."

A startup called Roosterspot aims to create 10-by-10-foot containers that would be completely autonomous and make nothing but chicken sandwiches, said Quinn of the National Restaurant Association.

These restaurants-in-a-box could easily be "dropped into" malls, airports, college campuses and other high-traffic areas.

Virtual restaurants can offer a wide variety of food at one location.

"These aren't going to replace traditional restaurants, but they can be tremendous extensions of existing brands in places where space is limited," he said.

Similarly, virtual restaurants can dynamically change their menus in response to consumer demand.

"Imagine serving Asian food on Monday, Italian food on Tuesday and burgers on Wednesday," said Wow Bao's Alexander. "Instead of building six different restaurants, you can have one location and do something different every day."

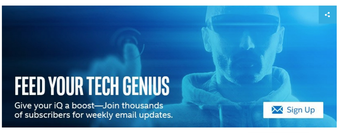
Even the definition of food quality could evolve under the auspices of technology, said Quinn, who noted that companies like Habit create personalized nutrition profiles for consumers based on their DNA and physiology. In the future, restaurants could plug into those profiles to prepare personalized meals based on their dietary needs and restrictions, he said.

Connection Cravings

Whether all these technological choices will promote connection or isolation is an open question, according to Rachel Black, a food anthropologist at Connecticut College.

Streamlined service, increased personalization and choice are changing the food-service industry, but human connection remains an important part of how cultures engage around food.

"I think people still want to be together, and I think food will continue to drive that," said Black.



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