

The Robots Are Coming!

Robots and other forms of automation are slowly invading the restaurant industry. What's at question is what they will accomplish.

This month McKinsey & Company published a report, "Where machines could replace humans—and where they can't (yet)," based on an analysis of 2,000 work activities performed in more than 800 occupations. Activities most susceptible to automation are those that require predictable physical work. One sector most "readily automatable," according to McKinsey is food service: Workers involved in food prep and service spend 48% of their time on predictable tasks, 94% of which could be automated.

This should cheer fast food executives who rail against minimum wage increases by threatening to replace employees with machines. While touring the National Restaurant Show in May, McDonald's former CEO Ed Rensi told FOX news "it's cheaper to buy a \$35,000 robotic arm to bag French fries than to hire an inefficient employee making \$15 an hour."

John Gordon, founder of the Pacific Management Consulting Group agrees, "back-of-the-house prep work like cutting up lettuce could be a potential candidate for robot treatments. But back-of-the-house employees have to do a lot of different things like put away food orders, take out the trash and wash dishes. I'm not sure technology can do all those things."

Today, technology does two things well: speed up ordering and provide food where it was not available before. Carole Ergas, VP of sales for Casabots, introduced Sally the Salad Robot at the NRA Show. Operators fill it with pre-chopped lettuce and vegetables; credit card-swiping customers select their toppings and Sally dispenses their customized meals.

Sally is in the testing stages, but should be available early next year, Ergas said. "We haven't set a price, but we have many pre-orders from providers like universities and hospitals that want to make healthy meals available 24/7. Supermarkets and fast casual restaurant chains are also interested."

According to his website, Denis Koci of Los Angeles designed his orange Burritobox after the 'replicator' food machines in Star Trek. What Koci calls "fully automated Mexican restaurants" are vending machines that heat and dispense steak, chicken or egg burritos, plus chips and guacamole. Burritos are made ahead, flash frozen and delivered to machines each day. So far, 25 Burritoboxes are serve students in California and Madison, Wis.; by year end they should be available in most major cities.

But even vending robots have ailments. Koci spent years designing a Pizzabox machine still not ready to market. In 2013, Briggo Inc. in Austin, Texas, installed the automated Briggo Coffee Haus on the University of Texas campus. Sleep-deprived students ordered their customized caffeine fix by cell phone and picked it up from an automatic dispenser. But during spring break the following year, the machine disappeared. "It was like losing a friend," one coed wrote on Yelp.

Briggo CEO Kevin Nater said, "We moved the machine to the Dell Corporation for further testing...Demand is high, but we are not at the point where we can sell one of these."

Instead of replacing workers, robotic vending machines can actually create human jobs. When Sprinkles Cupcakes, of

Beverly Hills, Calif., added Cupcake ATMs to 12 of their 20 locations, the chain needed more people to bake cupcakes and place them into the self-service locations, VP of marketing Nicole Schwartz told QSR Magazine.

So far, the question of whether automated ordering kiosks in limited-service and tableside ordering tablets in casual dining locations will reduce labor costs is still open. Panera Bread began to install iPad ordering and payment kiosks in corporate stores in 2013, at a cost of \$65,000 or \$125,000, depending on the restaurant's design. By the third quarter of 2015, sales at the early adopting cafes, called Panera 2.0, were up 10% a year, but labor costs had also risen. Founder and CEO Ron Shaich attributed that to increased labor costs in general and to the new practice of delivering customers' food to their tables.

A Panera spokeswoman said, to date, 452 corporate cafes had converted to kiosk ordering, and 13% of the chain's franchise groups had begun the change, with 100 Panera 2.0 franchises expected by the end of 2016. In most cases, employee hours increased after the conversion. The goal of Panera 2.0, she said, was never to replace workers but to "decrease guest friction."

According to the NRA, average employee counts in quickservice restaurants increased from 16.7 in 2011 to 18 in 2016, while annual productivity per worker in restaurants is stagnant at \$56,000, compared to \$226,000 for supermarket workers.

The Cornerstone Capital Group in New York reported last fall rising wages and the falling cost of computers is driving more companies to consider automated ordering. Several chains, including Wendy's, recently announced they are rolling out digital ordering kiosks to reduce labor costs.

Those savings will not come immediately, if at all. Cornerstone Capital reports Domino's Pizza, an early adopter of digital ordering, realized no reduction of operations expenses until digital sales reached 50%. "Automation is currently complementing labor, particularly in the ordering process," Cornerstone's analysts report. McDonald's installed digital ordering kiosks in Asia and France, Gordon noted, but have "dialed back expectations on kiosks and labor reduction."

Gordon added kiosk ordering is most viable in restaurants with high volumes and younger customers. "You will always need human employees in the front of the house because you will never be able to move all customers to kiosks," he said.

Except at eatsa, a San Francisco-based restaurant chain with locations there and in Los Angeles, that has no front of the house workers at all. Customers order and pay for eatsa's only entree, \$6.95 quinoa bowls with a variety of toppings, on mobile apps or kiosks. They quickly find their food in little compartments in the wall, with their names on the glass doors.

It's impossible to analyze eatsa's labor costs, however. The restaurants, designed by tech geeks and funded by venture capital, provide no information about how many back-of-the-house workers are required to create all those healthy meals.

Next month we'll look at Mr. Rensi's robotic French fry arm and machines that make pizzas and cook burgers with little or no human intervention. And we'll meet Pepper, an adorable robot that doesn't cook, but greets Pizza Huts customers in Asia.

—Julie Bennett