

Your New Chef May Be a Robot!

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"There is more and more emphasis on technology in many of these large restaurant chains. And we believe this trend will only continue to explode." Alger Senior Analyst Vikram Khullar discusses how pervasive tech innovations have become within the restaurant industry.

ALEX BERNSTEIN: Hello, I'm Alex Bernstein and you're listening to The Alger Podcast: Investing in Growth and Change. For decades now, Alger analysts have been tracking the dramatic impact of innovation across sectors and companies. But today's investors are now seeing innovative advancements in some surprising new places, including restaurants and their kitchens. Here to explain what that means is Alger Senior Analyst Vikram Khullar, who focuses on the technology sector. Vikram, thanks so much for joining me this afternoon.

VIKRAM KHULLAR: Thanks.

ALEX: Vikram, some of the innovations we're seeing with restaurants seem like a reaction to the pandemic. But you believe a lot of companies were moving toward these changes before that. Is that accurate?

VIKRAM: Yes. Restaurants have been on the path of adopting technology for the let's say the past five to seven years even before COVID, but I think the last 12 months or 16 months now have seen a sea change in how they adopt technology. That acceleration of tech adoption has come by simply from restaurants observing how their revenues really changed in a lot of cases for the better when certain adoption trends accelerated in COVID. So big picture, I would say restaurants ended up serving a lot of customers outside their premises, which means whether the restaurant was delivering food or having more of a drive-through or offering curbside, they developed different types of delivery mechanisms

that thrived and that was an eyeopener for these restaurants. So, they really started to believe that instead of technology just being a back-office type of item, here technology was a revenue enhancer for them.

ALEX: You also mentioned that many restaurants were taking advantage of "ghost kitchens," What are ghost kitchens?

VIKRAM: Ghost kitchens are a really interesting concept of using real estate that has been unfavorably impacted. It could be a variety of reasons. It could be COVID. It could be simply something that's going on in the mall industry where, for example, a lot of suburban areas, shopping centers that lose an anchor tenant end up pretty much having the entire complex vacated. So, you have this real estate with buildings with a very good infrastructure that is lying unused. Ghost kitchens means you end up taking that large space, putting kitchen infrastructure there, so developing basically a kitchen inside that complex with no front and that is important, meaning that kitchen does not have an associated restaurant next to it. So that kitchen simply prepares the food and then the business model is delivery. In some cases, it could be pickup too, but by and large these kitchens are being made and then serviced for either regular brands that you and I know or sometimes even new boutique types of food brands. So, it's a great way to utilize fallow, if you will, real estate to be able to deliver food and increase restaurant productivity.

ALEX: And so, a single ghost kitchen can be preparing food to represent multiple restaurants? That is, they could be preparing food for different restaurant franchises at one time?

VIKRAM: Absolutely. Yes. Again, this concept was in the making even before COVID. But with COVID, like you said, there was a lot of overflow from restaurants who literally couldn't fulfill the demand that was created for delivery. So then, there was a relevant sense of outsourcing, if you will, from these restaurants where they couldn't prepare enough food in their front-attached kitchens. They outsourced some of it to these ghost kitchens, assuming that the brand and quality was sustained.

ALEX: Vikram, you mentioned to me that restaurant kitchens are now leveraging technology in other new ways. Is that right?

VIKRAM: That is right. Think about the simple concept of cooking your burger in the kitchen. At this point, you have a human being that is flipping the burger, making sure that the burger is cooked to the right amount of rareness as per the customer taste. You have to be able to be precise about whether it's rare, medium rare, well done, whether it's not too dry or maybe too juicy. So by and large a human being has been supervising this action. We are now hearing of actually robots doing this exact functionality and that is mindboggling at this time because literally up until two years ago you could have never thought that such a human-intertwined action could be replaced by a robot, but it is happening, and in some sense a robot can be taught what amount of time this burger needs to be flipped over for and that is based on the weight of the burger and the command from the customer, which itself is tech-enabled, the command of, okay, I want the burger to this type of intensity. So, combining all the inputs as well as the judgment, it can be fully automated. So that's one example of automating a very simple task. It's taking some of the more mundane tasks off of the cooks or the people that help them.

ALEX: If the stove gets too hot, does the robot say: "Danger! Danger! Will Robinson!"

VIKRAM: That's right. That's a good point. The good news is the robot doesn't have to worry about its hands being singed or burned.

ALEX: Vikram, how else is artificial intelligence now coming into play in the restaurant industry?

VIKRAM: AI is enabling. There's a portion of technology called conversational AI where at the time this is more relevant for drive-throughs. Typically, it's a single-lane drive-through. I drive up to the kiosk. Order it through the microphone and there's a human being on the other side, and they take the order and then they relay it to the kitchen.

This process is being automated in several ways. The most basic way is in the other side of the microphone is a computer, not a real human being, that is recognizing the tone of your voice, converting the voice into text, and that text is being transmitted either back to voice that barks out the order in the kitchen, or there's a supervisor that reads the order. So, there is an element of order taking that is AI-enabled.

The second nuance to this could be even more sophisticated where if the person who is ordering is willing, they essentially would share their details in terms of their age, their driver's license number, so on and so forth, and there is an element of pattern where if that restaurant drive-through knows that this person orders this particular thing for the most part, it can automate and it can spit back an order. "Do you want the usual fries with extra cheese?" and the person would say, "Yes." So again, that would be reducing time just for order intake. These are examples of simple AI that would make the drive-through process much more seamless.

ALEX: Vikram, even though a lot of these advancements ramped up during the pandemic, I'm assuming that many of these changes are here to stay. Where do you think this type of restaurant innovation goes next?

VIKRAM: I think it just continues. There is more and more emphasis on technology and I have been observing how headcount growth in IT has been exploding in some of these large restaurant chains. I took part in a panel that had a lot of consultants as well as CTOs and ex-CTOs of large restaurant chains and they have been talking about how just headcount hiring, which is the biggest variable cost, has gone up in some cases as much as tenfold in the last three to five years within the IT department.

These are not your traditional back-office IT people. Some of these are data scientists. Some of these are GPS experts and they are forward-thinking, technical people that are enabling new modes of call it curbside, for example, using GPS to figure out how close you are to the restaurant and therefore they will start heating your food just in time for you to arrive there. Using GPS to say, "Oh, you come for curbside? You should park at this particular place. We have a spot for you," so there's no congestion at the restaurant.

All of this requires, like we said, AI, Computer Vision, GPS technology. So, I think this trend in various segments within tech is only going to continue to explode in restaurants. Seeing the results in the topline, they'll be more and more open to adopting this.

ALEX: Vikram, with so many companies adopting new technology as the economy reopens has it been difficult to sort out which ones appear to have long-term legs versus the ones that seem to be struggling?

VIKRAM: Yes. It has been somewhat challenging to sort of separate the wheat from the chaff because in a big picture context there was a lot of growth and there was a lot of stocks in companies that did well last year. This year as we look out, we have to use our investment expertise to figure out which of these companies has a

more permanent element of COVID altering and improving their business models versus which of the companies were flameout so to speak that had a one-year benefit and now are going to go back. In some cases, we think it is easy to take out those one-time beneficiaries, but in others it's not because we have to keep observing the results of those companies and we have to keep also observing the environment and how the overall industry has changed. So, I think it depends a lot on, A) the underlying market; but B) how the managements are dealing with this, what their strategy is. How quickly have they pivoted to the new type of business model and jettisoned the old ones? So, at the end of the day, yes, there are some challenges in trying to pick the winners from the temporary winners if you will, but that's what we are here for.

ALEX: Vikram, thanks so much for joining me this afternoon.

VIKRAM: Thanks, Alex. Great talking to you.

ALEX: And thank you for listening. For more information on how Alger views innovation, and our latest insights, please visit www.alger.com.

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