Coronavirus Careers: Cloud Kitchens Are Now Serving

by Lena Ye and Geoffrey Jones

Cloud kitchens are restaurants built around food delivery rather than sit-down service, and they are increasing in popularity as COVID-19 disrupts the industry, write **Lena Ye** and **Geoffrey Jones**.

The restaurant industry is one of those most devastated by COVID-19, and social distancing will continue to make many small restaurants unviable. Reduced revenue flows will never cover the rent.

But not all is lost. In our research, one area of the restaurant industry offers hope and even growth. As restaurants shuttered during social lockdowns in March and April, food delivery soared. An increasing number of those deliveries originated from recently established "cloud kitchens." More remarkable, most of the restaurants left standing became virtual cloud kitchens themselves, literally overnight.

What is a cloud kitchen?

Cloud kitchens are commercial facilities purpose-built to produce food specifically for delivery. They do not have brick-and-mortar dine-in areas and consist of shared kitchen space with culinary staff preparing meals that are then delivered to customers at home or at work, typically through online delivery companies such as Uber Eats, Postmates, Grubhub, and DoorDash. (Delivery services are not new, of course. In 2018, American consumers used third-party delivery services to place $10.2 billion in food orders.)

It's an interesting turnabout. Delivery services started out supplying a service to restaurants; now cloud kitchens are supplying a service to delivery firms.

The appearance of cloud kitchens as suppliers for these delivery services has been sudden and dramatic, so much so that they are still an emergent category with a confusing array of alternative names—including virtual kitchens, ghost kitchens, shared kitchens, dark kitchens, and shadow kitchens.

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Whatever their name, it has been widely perceived as a cool phenomenon with a ton of money to be earned if the model can be made to work. Nothing made the point better than former Uber CEO Travis Kalanick's founding of the startup CloudKitchens.

The economics are appetizing

Cloud kitchens are much cheaper to set up than brick-and-mortar restaurants; there's no need for them to be in prime locations, no need for cool designs, and no need for seating space. One estimate we heard was that a brick-and-mortar restaurant in New York City costs $1 million to $1.5 million to set up, while a cloud kitchen can get up and running for $100,000.

There are other cost savings, too, including no need for front-of-house staff such as servers, cashiers, hosts, and bartenders. Restaurant operators simply provide their own culinary staff while the cloud kitchen provider typically offers shared labor support such as cleaning and security.

Cloud kitchens can test new restaurant concepts, menu items, and seasonal brands (for example, a salad brand in the summer) more easily without costly investments.

It is still an emergent business model with lots of variations. Cloud kitchen operators such as New York's Zuul Kitchens and Pasadena's Kitchen United act like landlords, renting kitchen spaces to multiple third-party restaurant brands. There are also pure play virtual restaurants in the category that exist solely as cloud kitchens that deliver via online delivery platforms. Some virtual restaurants can run multiple brands completely virtually. Rebel Foods in India runs separate virtual-only brands out of the same facility, with each brand focused on a specialized cuisine such as North-Indian, Chinese, biryani, and burgers. Some national chains, including Sweetgreen, operate both bricks-and-mortar and cloud kitchens.

Although the concept has raised both excitement and significant funding, building a successful cloud kitchen has proved easier said than done. In dozens of interviews, we learned that even the most sophisticated data users like Uber Eats have struggled to predict, using algorithms, which virtual brands would be the most successful on their platform.

Chief Business Officer Atul Sood at Kitchen United told us that companies like Kitchen United work hard to help cloud kitchens get the delivery side right. There can be high variation in how long it takes delivery drivers to arrive at the kitchen, and how long it takes delivery drivers to hand off the food to consumers.

Another barrier: Competition for attention on food delivery apps can be intense, a challenge especially for cloud kitchens that are completely reliant on these apps for customers.

Establishing emotional connections with consumers has proven even tougher, especially when there is no opportunity for in-person interactions.

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Emerging trends

Before the onset of COVID-19, a number of trends were becoming clear. It was apparent that cloud kitchens were more effective as an expansion strategy rather than a market-entry strategy for first-time restaurateurs. Kitchen United has pivoted away from new food entrepreneurs toward providing cloud kitchens for regional and national chains. Zuul Kitchens has flourished serving Sweetgreen and other restaurant operators who already have a strong fan base and brand clout.

Restaurants also discovered the benefits of operating multiple virtual restaurants: They gained more visibility on food delivery apps at little additional cost or effort to them.

Meanwhile, cloud kitchen operators have themselves been challenged by food delivery platforms creating their own cloud kitchens, analogous to retailers creating their own private labels. DoorDash, Uber Eats, Deliveroo, and Swiggy have already entered the cloud kitchen space by partnering directly with restaurants.

Cloud kitchens and the new normal

Even before COVID-19, food delivery was reimagining the restaurant experience, allowing consumers to enjoy restaurant-quality food from the comfort and convenience of their homes, and allowing restaurants to increase their customer base beyond their physical locations. Cloud kitchens were part of this trend, but still experimental in many respects.

"MANY CONVENTIONAL RESTAURANTS HAVE BECOME CLOUD KITCHENS BY NECESSITY."

Now, like so many things, the pandemic is accelerating existing trends. Online delivery sales have soared, and, while previously heavily biased toward younger demographics, a very large number of people have become exposed to the ease of online delivery using sophisticated apps. A very large number of people have also become aware of the health risks of eating in packed restaurants. Even in the unlikely event that an effective vaccine for COVID-19 is developed quickly, it's likely that there will be a new caution when seasonal flu and colds happen. The pandemic has offered a crash course in how viruses spread.

Meanwhile, many conventional restaurants have become cloud kitchens by necessity. This unwanted experience might now prove valuable, at least in the short term and maybe longer. Restaurants will likely need to continue to limit their capacities to allow for better physical distancing. Future diners might well put more of a premium on space than on white tablecloths and candles. Employing a cloud kitchen model can give restaurants the ability to expand their delivery business in a cheaper and faster way.

Cloud kitchens are socially distanced by definition and are potentially safer for staff and for consumers. They generate no jobs (or tips) for wait staff, but other types of jobs, including delivery, are created. If they are located offsite, rents can be dramatically reduced.

There is no upside to a virus that kills 100,000 in the United States alone and creates unimaginable unemployment. However, cloud kitchens show how we might leverage innovative ways of doing business to create new opportunities and jobs, while bringing some variety into all our lives by providing choices beyond home cooking.

About the Authors

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