

PAS QUICKNOTES

Ghost Kitchens

Ghost kitchens (also known as dark, cloud, shadow, zombie, or virtual kitchens) are spaces equipped to prepare meals for one or more delivery-only restaurants. A growing number of established and startup restaurateurs are embracing the ghost-kitchen concept to meet the rising demand for food delivery. Just as transportation network companies (e.g., Uber and Lyft) have disrupted the taxi industry, ghost kitchens are disrupting the restaurant industry.

Many communities already host one or more ghost kitchens, and many more should expect to receive applications for this use in the coming months and years—whether from existing restaurateurs hoping to convert seating areas to kitchen space, or from entrepreneurs interested in launching new businesses at the intersection of food and technology. Planners and local officials can help the communities they serve respond to this trend by developing a regulatory strategy that removes unintentional barriers to ghost kitchens while minimizing potential land-use conflicts.

BACKGROUND

Commercial kitchens that prepare food for offsite consumption are not a new land use. Caterers, small-batch bakers, food truck operators, and other food production businesses routinely use private or shared commercial kitchens, often located behind commercial storefronts or in nondescript industrial buildings.

Ghost kitchens require the same food preparation and storage equipment—and are subject to the same state and local food safety regulations—as other commercial kitchens. However, unlike traditional commercial kitchens, ghost kitchens depend on on-demand food couriers to get their products to consumers.

Ghost kitchens have grown up alongside, and in partnership with, platform-based food delivery services, such as DoorDash, GrubHub, and Uber Eats. They provide the physical infrastructure for restaurants that diners “visit” online or through an application on their mobile device. Consequently, ghost kitchens can help entrepreneurs leverage technology to launch and grow food-based businesses.

BUSINESS MODELS

Some ghost kitchens serve a single restaurateur or corporate restaurant brand. More commonly, though, multiple restaurateurs or corporate brands share a single ghost kitchen. Ghost kitchen users may prepare the same menu as an existing dine-in restaurant or chain, or they may function as a distinct virtual restaurant. Furthermore, users may market themselves to customers as standalone brands or concepts or as components of a virtual food hall.

New restaurateurs can use ghost kitchens to launch new business ideas and test concepts without investing in a branded food truck or dine-in or takeout restaurant space. Established brands can use ghost kitchens to meet high demand for delivery in existing markets or test new markets before opening additional dine-in restaurants. In some cases, the ghost kitchen operator or user may be a platform-based delivery service. These services can use their customer data to court existing restaurant brands or to generate and commission new virtual restaurant concepts, based on ordering patterns in specific areas.

Ghost kitchens allow restaurateurs to save money on space, furnishings, decor, and signage, as well as front-of-house staff like hosts, servers, bussers, and cashiers. For shared ghost kitchens, restaurateurs can also save on kitchen equipment and, potentially, kitchen staff. In some cases, kitchen staffers work for the restaurateur. In others, they work for the ghost kitchen owner or as independent contractors.

This PAS QuickNotes was prepared by David Morley, AICP, research program and QA manager at the American Planning Association.



Ghost kitchens provide the physical infrastructure for restaurants that diners “visit” online or through an application on their mobile device. Designed by Freepik.



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USE DEFINITIONS

Planners and local officials can start removing unintentional barriers to ghost kitchens by evaluating whether the existing zoning code defines a use that clearly encompasses the ghost kitchen concept. If it does not, they can discuss whether to update an existing definition or to define a new use. In either case, the goal should be to acknowledge ghost kitchens without placing unnecessary limits on innovation or evolution of the concept. Without a clearly applicable defined use, prospective ghost kitchen operators must apply to the local zoning jurisdiction for a use determination or a discretionary use permit.

Few cities and counties have defined ghost kitchens (or some closely analogous term) as a distinct use in their zoning or public health codes. It is more common for jurisdictions to have defined commercial kitchens, shared-use kitchens, or some broader term, which explicitly covers both private and shared commercial kitchens, but may or may not extend to ghost kitchens.

Because ghost kitchens combine characteristics of traditional commercial kitchens and conventional takeout and delivery-only restaurants, some communities may decide they merit a distinct use definition. If so, this definition should focus on a combination of physical and operational characteristics that neither other types of commercial food production facilities nor other types of restaurants, collectively, possess. For example, a definition may reference meal preparation for offsite consumption, a dependence on on-demand food couriers, and a lack of signage or branded exterior decor.

ZONING CONSIDERATIONS

Once planners and local officials have defined a use that encompasses ghost kitchens, they can turn their attention to adjusting existing or adopting new zoning standards to help ghost kitchens fit into the community. Ghost kitchens do not need high-visibility locations, but they do need locations that make it practical and efficient to deliver to a large population of potential customers within a reasonable amount of time. They are a natural fit for existing vacant or underutilized commercial kitchens in light industrial districts or vacant restaurant spaces along auto-oriented commercial corridors. However, in pedestrian-oriented business districts or in residential areas, there is a real tension between efficient delivery operations and pedestrian safety and comfort, especially during periods of peak meal demand.

Ghost kitchens range in size from a few hundred to a few thousand square feet. They need either onsite or safe, reliable access to on-street short-term parking and loading spaces for commercial vehicles bringing supplies and, perhaps more importantly, for the personal vehicles of couriers picking up meals. Depending on the availability and convenience of transportation alternatives, ghost kitchens may also need onsite or nearby automobile and bicycle parking spaces for cooks, dishwashers, expeditors, and managers.

Some shopping mall owners have already announced ambitious plans to convert vacant restaurant tenant spaces to ghost kitchens. Meanwhile, supermarket chains are exploring partnerships with ghost kitchen operators, and parking facility owners have even set up ghost kitchens in mobile trailers in underutilized lots and garages. If delivery habits formed during the COVID-19 pandemic stick, entrepreneurs and developers may ramp up investments in purpose-built ghost kitchen facilities.

CONCLUSIONS

Ghost kitchens are one facet of the wider e-commerce trend. As with e-commerce fulfillment centers, ghost kitchens may be well positioned to give new life to vacant or underutilized restaurants and other commercial and light industrial spaces. People are growing increasingly accustomed to interacting with restaurants through third-party platform-based delivery services. And ghost kitchens provide a more efficient model for satisfying the demand for the delivery of prepared meals than restaurants that need to balance delivery demand with the dine-in experience. Planners and local officials can help make space for ghost kitchens and mitigate potential negative impacts by updating use definitions and adopting appropriate zoning standards.

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FURTHER READING

Published by the American Planning Association

Alt, Alyssa, Donald Elliott, and Lauren Harper. 2021. "Spotlight Session: Planning for Restaurant Conversions." APA Learn. <https://bit.ly/3hwQiv9>

Elliott, Donald. 2020. "Zoning for a Post-COVID World." *Zoning Practice*, October. <https://bit.ly/2Rr0UdH>

Strungys, Arista. 2020. "The Industrial Evolution." *Zoning Practice*, June. <https://bit.ly/3bzCdCS>

Other Resources

Hardin, Brandon. 2020. "Deliveries: Ghost Kitchens." *Commercial Market Insights*, June. Chicago: National Association of Realtors. <https://bit.ly/3eWEvXT>

Knarr, Christopher. 2020. "Don't Be Afraid of Ghost or Zombie...Kitchens." *McNees Land Use Blog*, March 2. <https://bit.ly/2Rkt8qE>