



Designing the Modern Quick-Service Restaurant Kitchen

When considering the design on a modern limited-service restaurant kitchen, there's one axiom that holds true: Modern is a moving target. In this era of heightened food-safety expectations, increased demand for quality cuisine, rising labor costs and rental rates, improved technology, and the growing use of pickup and delivery options, today's kitchen will need to be built with tomorrow in mind.

"The only thing we know about the future is we don't know about the future," says Juan Martinez, a principal at Profitability, a Miami-based industrial engineering consulting firm. "Brands need to embrace continuous improvement."

Change comes increasingly quickly nowadays. Take delivery, for example. Mainly offered by the pizza and Chinese food businesses just a few years ago, it suddenly has become an integral part of many quick-service and fast-casual operations, applying added pressure to the kitchens.

"Everybody is going through a seismic shift in terms of designing space," says Matt Harding, director of culinary for Columbus, Ohio-based Piada Italian Street Food. "In just the last three years, as we track delivery, it has exploded."

For some companies, the ability to adapt quickly may mean having extra space built into the kitchen; for others, it could be having equipment, technology, and ergonomics that can be updated easily and cost-effectively. These and other factors require a design plan.

While it seems easy to view the kitchen as a stand-alone entity that may not have much to do with operating the front of the house or other segments of a restaurant, it needs to be seen in terms of the whole business and the direction it is going.

"No. 1 is taking this holistic approach of the kitchen and menu along with the customer experience," says Robert Seely, director of operations and planning for WD Partners, a major restaurant design firm. "I can get a kitchen to fit in a tight box, but if the client wants a more open environment allowing customers to view the food being prepped, that's something different. We need to understand what the engagement piece is and the value of it."

There are plenty of priorities to consider in designing a kitchen, Martinez says. "Quality and food safety are non-negotiables," he says. "Food safety is the most non-negotiable, but quality is close behind." The downside of food-safety issues is obvious. Not only can these result in legal issues, but they also create a severe negative perception problem for a restaurant. Quality, meanwhile, is a differentiator for an operator that helps shape consumer perception of their brand.

There are, of course, cost factors that come into play in kitchen design. Capital costs refer to the one-time expenditures for construction or buying equipment, and ongoing costs allude to ongoing spending, including labor, food, and utilities. Not surprisingly, it is easier for larger, more established companies to invest in new equipment than smaller ones.

"Concepts should be willing to invest in initial capital costs," Martinez says, but that is a hard sell for smaller players.

Labor should also play a significant role in kitchen design. Seely says it's important for companies to be more efficient with labor to help drive down workforce costs. Even cutting the time of half a person a day through equipment efficiencies can mean huge cost savings for both large and small companies.

Updated equipment can certainly help with labor, especially devices that are easy for staff to use and maintain—all the way down to keeping the equipment clean.

"Think of the fryer and how hard it is to change the oil," says Charlie Souhrada, vice president of regulatory and technical affairs for the North American Association of Food

Equipment Manufacturers. “No one wants to do that, so how can we make that as simple and self-contained as possible?”

In addition to making chores simpler, new technology can make work less stressful, both physically and mentally—a plus for workforce retention. Some newer equipment not only cooks more consistently and efficiently, but also features buttons with icons of the menu items being cooked—avoiding language barriers—and allows for remote diagnostics.

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Restaurants are increasingly seeking equipment with multiple uses. “Years ago, it was OK for a dedicated piece of equipment to, say, warm tortillas,” Souhrada says. “That’s not enough anymore. As multiple dayparts and menu items get added, equipment needs to perform tasks to serve multiple menus at different times of the day.”

And then there are efforts by an increasing number of restaurants to have a greener image, syncing with many of their customers’ demands, particularly millennials. That also may mean a balancing act between upfront costs and energy savings down the road.

Some green kitchen items have become readily accepted, like efficient spray valves and LED lighting, says Michael Oshman, chief executive of the Boston-based Green Restaurant Association. For some other equipment, however, the upfront cost may take years to recover through utility cost savings. “There’s a pressure many [operators] feel of long-term versus short-term costs,” he says.

Even those businesses that think going green is too cost prohibitive can start with small tweaks, Oshman adds. “We say maybe there are X things you can do,” he says. “You shouldn’t just throw in the towel.”

The whole concept of sustainability, including the growing focus on handling kitchen waste effectively—separating trash, compost, and recyclables—not only helps a restaurant do good, but also gives them another arrow in the marketing quiver, Seely says, which can pay dividends through traffic.

At the same time, planning for the future also can mean considering utility needs that come with growth, such as electrical boxes and gas lines with more capacity, Seely adds.

Designing a modern kitchen, then, involves a process that takes time to find efficiencies and cost savings while also building in the ability to adapt to changing dining trends.

Mark Richardson is managing director of FIT Kitchen, the design arm of equipment manufacturer Welbilt (FIT stands for Food Inspiring Technology). He says FIT Kitchen employs a four-phase plan when consulting with clients on their kitchen design: research, analysis, synthesis, and realization.

Research is a key starting point. “We can’t help our customers’ kitchen operations if we don’t understand their business,” Richardson says. That phase, which typically takes a month, looks at all parts of a client’s business, including time and motion studies of the kitchen.

The analysis of that data helps put the plan in focus. “You look at the ‘what ifs,’” says Michael Anderson, director of FIT Global Systems Integration, pointing to how changes might affect labor, equipment, and productivity. “Will a new product stress out the fryer or the grill? Or maybe we find there’s an existing item that doesn’t sell much but we see it disrupts the [kitchen].”

The next stage in the process is “where we really start to formulate ways to turn ideas into reality,” says Carol Davis, FIT Kitchen’s director of business development. This includes workshops, discussions, and even mockups of equipment for systems and solutions that must “maintain or enhance the food quality and maintain the speed” of the kitchen.

Finally, the team creates a full-size replica of the kitchen—using wood and foam core on wheels—at a secret, offsite locale dubbed FIT 51, a humorous take on the Air Force’s highly classified Area 51. “It’s a really efficient way to look at a kitchen model and move things around easily,” Richardson says.

One company nearing the completion of this process is Tampa-based Checkers/Rally's, which launched its last kitchen design nearly a decade ago.

"That kitchen has continued to evolve," says Adam Noyes, the company's chief restaurant operations and supply chain officer. He says the brands have added new processes and technology to deal with stronger sales and new menu items, like their successful slushy line.

The redesign's research phase includes putting cameras in the restaurants' kitchens to view the activity there, including at the fry station, which is a particular "pain point" during busy dayparts, Noyes says. "What can we do to reduce the pressure there?"

Like many other limited-service restaurants, Checkers/Rally's recently launched delivery—another pressure on the kitchen. "That is all new and it changes [the quick-service industry] significantly," Noyes says. "We need a place to handle that efficiently, so the design is not just a traditional one."

The kitchen redesign process forces operators to "put a value on everything you're doing," he adds, noting there are ways to improve revenue in certain spaces, either through technological advances, better work flow, or even menu sacrifices. "We found things on our menu that take a lot of time and require a lot of SKUs," Noyes says. "You have to make tough decisions."

Costs for kitchen upgrades are a balancing act. The result of a redesign often results in higher costs to the operators, both by changing the kitchen layout and by adding new equipment with improved technology. Checkers/Rally's is looking at adding clamshell grills, which would save labor while improving consistency.

"You've got all these franchisees, and why are they going to invest all this money?" Noyes asks. "You have to be able to tell them that we have a model and equipment that will save time here and allow you to sell more drinks, so you can do a return on that investment."

Throughout the limited-service restaurant industry, the increase in off-premises dining, particularly pickup and delivery, is not a trend that's likely to go away. In fact, "in three to five years, it will be the expectation," WD Partners' Seely says.

And customer expectations for quality and convenience are only likely to rise. “Once there are so many orders into your systems, you have to be able to tell the customer or delivery service it will be 15 minutes or 20 minutes before pickup,” Seely says. Operators need to retain as much quality control as possible, something increasingly difficult with delivery by outside entities. Some companies may choose to handle their own store-to-door service for this reason.

For Piada, delivery has meant a big change for the eight-year-old business, not only in the kitchen, but also in how the kitchen interacts with both the front of the house and its customers. The 42-unit fast-casual concept already had been edging away from its original build-you-own-dish model when the off-premises trend started to take off.

“We ended up almost building a mini line, so the food leaves the building in a quick and efficient manner,” Harding says. “Because that business has grown so quickly, we have focused on making sure the lines are the same.”

The packaging is the same for dine-in or dine-out, but more cooking space in the kitchen has been allotted to off-premises consumption. Larger coolers are being added, and rather than one small cooking surface for piada dough, there are now two larger ones.

Piada also upgraded its ordering technology. Harding says off-site orders often came into the kitchen “mumble-jumbled,” with the sequence of ingredients out of order for the particular menu items being built.

Having the food correct when it leaves the door is critical. “If you forget something or make a mistake, the guest can’t tell you immediately like they could in the store,” he says. For the diner, it becomes “a mini-crisis,” and guest recovery for the operator is “darn near impossible when the food is 15 miles away.”

Piada was fortunate to have enough wiggle room in its kitchen to accommodate its increased business. Still, it looked to open even more space, seeking partners who could provide ingredients previously made in-house, like chopped lettuce. The triple-washed lettuce saved labor and eliminated the need for a big sink in the kitchen.

It’s also tested for contaminants, “and that helps me sleep at night,” Harding says.