Welcome To

THROUGHPUT CAPACITY MANAGEMENT

There must be a better way to gage throughput and match it to demand. One consultant says he’s finding new answers in industrial design techniques.

By Emily Pacifico, Contributing Editor

If you’re like most people in facilities design, you already have the general idea on throughput: Match up the kitchen, the menu, the service system and the seating capacity. Nothing exactly new there.

And if you’re with one of the really big quick-service outfits, maybe you’ve refined that idea to a near-science. But for most of the industry, throughput analysis remains, shall we say, imprecise. So even if you have a smooth-running facility, you know it’s, well, smooth. But you still don’t know how smooth and fast it could be.

Or how about your service system? Think through how you coordinate your basser-server-runner routine in the context of your layout, and figure out how that system influences not only sales but speed of table turns. You get the idea. The factors impacting your throughput are far too numerous to list here.

Say Yes, I Want More...Or Less

But what if you could get hold of a set of tools that would let you measure and analyze every aspect of your operation, from production workload to service delivery to equipment placement? And what if the results led to increased peak period table turns by as much as, say, 25%, and, without adding staff, increased kitchen throughput speed by hundreds of dollars per hour?

Those are just two of the potential benefits of applying a rigorous, systematic approach to “tuning” design and oper-
SHORT REPORT

Throughput Capacity Management

Ponderosa Steakhouse

- Kitchen throughput increased by $120/hr. without adding staff
- Increased buffet service speed by 28%
- Decreased table-turn times by 15%
- Redeployed kitchen and service workloads, achieving a major reduction in labor savings
- Right-sized facility and equipment, saving thousands of dollars in up-front costs
- Improved food and service consistency

Better Work, Better Retention

Once you've measured your true potential, the next step is to take a close look at how work is performed via "Work Study Technique," which enables an operation to control its service variation. "The study of work in the TCM discipline serves to clarify the purpose of work, or the lack thereof," Sill says.

One of the many measurable benefits of TCM has been the reduction of employee turnover, which Sill attributes to reducing divisions of labor and redesigning work assignments and stations to encourage employees to connect with what they do. The Work Study Technique's a simple process that doesn't have to require a huge investment of time, but can open your eyes to wasted time and motion.

As for back-of-house specifics, smooth kitchen flow is critical to success. The finest cooks and the best equipment won't offset the potential profit killers of poor design and too much (or too little) labor.

On to cook deployment. Sill says his software calculates cook deployment at back of the house, and enables the operator to, among other things, explore alternatives to relieve congestion at peak times, more convenient equipment placement, and changes to the facility design itself. In fact, innovative equipment changes can include right sizing of chargrills, expo areas, server stations, buffet stations, fryer and microwave cooking batteries, as well as simplifying tabletop designs. In summary, Sill says, "If you put deploy-
ment modeling into the hands of those who control design decisions, TCM is the connection between innovation and implementation. He points out that this tactic can cost money if it reveals that reconfiguring foodservice equipment could maximize the use of floor space, or even conclude that some equipment may need to be added, deleted or changed. However, in the long run, the investment in making the necessary changes will be recouped rapidly with the resulting new throughput.

**Big Customers, Big Names**

Cook deployment modeling, a core technique of TCM, can profoundly impact back-of-house operations—as found when Metromedia decided to reinvent Ponderosa from the oversaturated mid-scale budget steakhouse segment to the fast family casual segment. A new prototype in Johnstown, Pa., came under review. A capacity analysis of the new design revealed that ovens shared by the buffet cooks and line cooks caused considerable cross trafficking in production areas. Access to the single walk-in also resulted in extensive walk time as cooks gathered their raw ingredients for production. Bottlenecks occurred frequently at the buffet fryer area, while the cookline fryers were under-utilized.

After studying the cook deployment model of the new prototype, the ovens were consolidated into the highest-use area and undercounter refrigerated and frozen storage was added to reduce steps and save worker time. All fryers were consolidated into a single station with improved worker and equipment utilization.

These three relatively simple changes, indicated by the TCM cook deployment model, resulted in a 33% reduction in cook labor in the prototype kitchen. No need to elaborate on the impact in reducing worker stress, not to mention the obvious plus-profit implications.

It’s not always possible to rearrange ovens and fryers, tear out walls or buy different equipment, of course. TCM advocates taking a holistic approach to any foodservice operation and, rather than “thinking outside the box,” Sill suggests looking at what’s happening inside the box. The TCM discipline teaches you to look at all the possible solutions, from menu to method. There’s usually more than one way to fix a bottleneck.

**Sauté-Less In Seattle**

A perfect example of benefits reaped through TCM is the Seattle Space Needle restaurant, a popular stop for tourists and locals alike. Sill was brought in to solve a problem bottleneck at the sauté position there during peak periods. Applying the TCM discipline, he determined that 17% of all guests ordered items prepared at the sauté station, which greatly exceeded the daily capacity of the station. This impacted everything from recipe integrity to delivery speed and, ultimately, guest satisfaction.

If you’re familiar with this famous Seattle landmark, you can guess that adding more space to the kitchen to accommodate another sauté station was definitely *not* an option. So with no room at the inn, so to speak, TCM showed that by reworking the menu, the demand for sauté was reduced, and as an added bonus, the new menu increased the use of the broiler station which was previously underutilized.

**More With Less**

With the powerful tools that TCM techniques exert on design and equipment placement, what facility designer—operator or consultant—wouldn’t adopt them in the design process?

“The real beauty of TCM is the leverage it affords the whole organization,” Sill says. “Once you know your workload distribution from a menu and facility design standpoint, this is the same information used in your daily labor scheduling process that assures your payback in design efficiencies are realized.”

The challenge for the future is clear, says Sill. “With thousands of oversized and tired kitchens out there, the new launching pad is to measure existing workflows and devise design strategies that improve your throughput and reduce equipment, square footage and personnel requirements—to do more with less.”