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## **Kitchen Organization in Full-Service Restaurants: Reducing Heat and Stress**

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The restaurant industry is a dynamic ever changing business. The concepts change every day, the trends come and go but at the industries core it is about giving the guest an experience within each of the restaurants respected segmentation. Specifically, in how is an experience delivered to the guest. By breaking down the dynamics of a restaurant to front of house (FOH) versus back of house (BOH) we can isolate aspects that cater to delivering an experience to the guest. The FOH is everything the guest sees and interacts within the guest experience. Industry observers comprehensibly concentrating on front of house management issues, service delivery analyses largely disregard back-of-the house challenges.

The real brain to any restaurant operation and the organization of the kitchen. How the kitchen is organized directly correlates to how the guest receives an experience. The organization of a kitchen is critical in how the food is prepared; which relies on which segment a full-service restaurant concept falls roughly in casual, upscale and fine dining. Each segment offers unique insight in how the kitchen organization reiterating that this is one of the most important factors in delivering the service expected within the segments. Understanding the fundamentals of kitchen design is a complex endeavor. Therefore we decided to investigate and answer a few simple questions. What's happening when a ticket arrives to the kitchen? How kitchen work is orchestrate and flow is managed? To fully grasp the importance and scope of kitchen design concepts we interviewed restaurant designers and experienced chefs in Boston.

## The Kitchen Designer's Perspective

Our investigation started at TriMark United East; that is the largest distributor in the Northeast offering commercial kitchen equipment and supplies to local restaurants and national chains.

According to kitchen designers when restaurateur shows up with the menu and advice on any standard list of equipment. Regardless of their segment from a design standpoint, every restaurant has a prep area, a dish room, dry storage, walk-in cooler or reach-in coolers, and potentially a walk-in freezer. In addition, a main cooking line, a chef's line. At the same time every restaurant concept is different and has different style of configuration. A classic diner has a very basic structure; you are cooking off griddles often without any pans. Whereas in a fine dining establishment you may use a utility distribution system which gives a lot of flexibility to facilitate menu changes. This system allows chefs to take pieces of equipment out that hinders productivity and exchange it for a more practical modular and flexible pieces.

Fundamentally, they would need to understand the flow of the back of the house. Restaurant designers need to know where the receiving door, where all the products coming in, and where is the front door etc. Designers use many tools to coordinate the kitchen organization and (space word). A common tool used is the bubble diagram. This diagram conveys conceptual information about building spaces, their functionality, relationships and flow patterns.

### Kitchen design - costing guidelines

- Basic Kitchen Equipment for 100 seats fast food restaurant ranges between \$135,000-\$150,000.
- Basic Kitchen Equipment for 150 seats full service restaurant ranges between \$185,000 - \$225,000.

Many other exploratory questions are considered such as; is the restaurant open for lunch and dinner? If the restaurant is only open for dinner, the entire kitchen can be used as a preparation area. Other considerations include is there a private dining space or event space? A large private dining area cannot be executed of the traditional line while serving the dining room. However with proper planning small scale events up to 12-14 people can be served off the line. Proper kitchen design helps management to keep labor within budgetary guidelines.

Trends in technology allow designers to make decisions based on food service safety requirement and offer process solutions that lends efficiency to the system.

### Boston Area Kitchen with Great Design – The Designers' Pick

According to TriMark United East experts there are many great kitchens in Boston. The best ones are probably hotel kitchens, such as the Henrietta's table at the Charles Hotel in

Cambridge. No other restaurant is able to serve breakfast faster than them and the quality is outstanding.

## Kitchen flow patterns

Our interviewees differentiated between two basic types of food flow patterns.

### American Line

Typically used by high volume operations. The items are prepared and finished by the line cooks, then are handed over to the expediter. All cooking lines flow centrally through to the expediter. The expediter will check the finished product and the food will go out for service.

### European Line

It is a slower way of production used typically in fine dining establishments. Different parts of the dish are distributed among the line chefs and prepared separately. Then each of the components of the dish are assembled and finished by expediter.

### History of the European Line

In the late 19th century, a renowned French chef Escoffier understood the value in creating a kitchen that moved efficiently and with military like precision. He effectively created a brand new kitchen system called the French Brigade. Below is the classic French break down of the brigade system.

Diagram 1. Key Culinary Positions in a Traditional French Brigade

	Typical Positions	Explanation
<b>MANAGEMENT</b>	<i>Chef exécutif</i>	Executive chef. Responsible for all kitchen/culinary operations.
	<i>Chef de cuisine</i>	Runs the kitchen of a restaurant.
	<i>Sous chef(s)</i>	Chef(s) second in command
<b>COORDINATION BETWEEN THE KITCHEN AND THE DINING ROOM</b>	<i>Aboyeur</i>	Announcer or expediter. Accepts orders from the dining room and relays them to the various station chefs. Checks each plate before it leaves the kitchen.
<b>EXECUTION</b>	<i>Chefs de partie</i>	Station Chefs (number of stations vary)
	<i>Saucier</i>	Sauté and sauce station chef.
	<i>Rôtisseur</i>	Roast station chef. Responsible for roasted and braised items. An additional ' <i>grillardin</i> ' may be assigned for grilled and broiled items only.
	<i>Poissonier</i>	Fish station chef. Responsible for all fish and shellfish items.
	<i>Entremétier</i>	Hot vegetable chef (hot appetizers, vegetables dishes and often soups.) An additional ' <i>potager</i> ' (soup cook) may be assigned to prepare stocks and soups only.
	<i>Garde manger</i>	Pantry chef (Responsible for cold pantry items. The pantry chef may also oversee the ' <i>boucher</i> ,' (butcher) who is responsible for meat, fish and fish fabrication.
	<i>Pâtissier</i>	Pastry chef
	<i>Tournant</i>	Relief cook. Fills in at any position where she or he is needed.

The diagram above shows how Escoffier designed his kitchens traditionally. We'll see the application of his method in a few present-day restaurants.

## The Suite Style Kitchen

Kitchen designers pointed out that many chefs trend towards the Suite Style Kitchen. The kitchen includes all the components of a traditional European line ergonomically centralized equipment layout.

## Who is orchestrating the kitchen?

To achieve maximum kitchen efficiency an internal decision on how to manage the process flow has to be made. Experts typically encounter three basic solutions. The chef may hold the tickets as they are coming in and call out *menu items* to the line cooks and there are no tickets in front of the cooks. The Chef is orchestrating everything. Another alternative is when the line cook receives the tickets and the chef/expediter calls out the *table numbers* and cooks have to organize themselves. Many streamlined operations now use a *no expediter*, where line cooks entirely rely on ordering information from the point of sale system.

We had a chance to discuss with chefs running different types of operations; none of which was using an American Line.

## The Chef's Perspective

We had a chance to discuss with chefs running different types of operations; none of which was using an American Line.



### Champions Sports Bar, Boston, MA

### Restaurant Segment: Casual Dining

Within the many options of the restaurant industry the most popular segment is casual. These restaurants are serving simple fare and the key focus is achieving high volume. The menu has few customizable options which allows the restaurant to turn orders quickly and efficiently. The Champion's sports bar located at the Marriott Copley Place in Boston is serving hundreds of people on regular day, due to its location in a strip mall and in the heart of the city. Champions really does well during specialty sport nights such as the super bowl where it may serve thousands of covers. Champions uses a modified European Line The back line has everything that will be needed for hot preparations, for example ranges, salamanders/broilers and other equipment. Parallel to the hot area another line is designated for preparation and assembly of cold items. The operation is orchestrated by the chef on duty, however the tickets are rung in by the service staff and are printed directly at each cooking station. Food is prepared, dropped on an island pass and checked by the chef before it goes out

to the dining room. The island pass is located in the back of house between the kitchen and the service stations.



Champions - The second line is designated for preparation and assembly of cold items.

## Brasserie Jo, Boston, MA



### Restaurant Segment: Upscale Casual

According to the executive chef; Brasserie Joe's is an upscale casual restaurant serving French cuisine in a traditional Brasserie setting. Similarly to Champion's, the European line is adjusted to their upscale casual concept. In a 199 seat restaurant, busy Saturday night can be hectic. When the tickets comes in the Chef on duty will call out verbal instructions to the line chefs and effectively pacing food production and service.

Upon our visit we overheard the chef expediting orders as follows *"Picking-up two Brasserie Steaks, Duck Confit, Roast Salmon."* It is also up to the line chefs to communicate amongst each other. Based on the tables menu choices, the person who is e.g. in charge of cooking a salmon knows it takes only a minute to get the dish ready, and coordinates the times for synchronized service.

Food is prepared at different stations such as Grill (all grilled items and duck confit) and Sauté (For example: Chicken, short ribs, fish). Prepared food is then dropped on an island pass and checked by the chef before it goes out to the dining room.



Brasserie Joe – The island pass is located in the middle of the kitchen (Hidden by pole).



## Le Grand Vefour – Paris, France

### Restaurant Segment: Fine Dining

Le Grand Vefour is a legendary Michelin starred restaurant in France, which uses the traditional European Line. The entire French Brigade is working as a team to create and produce a dish. This means that one person will most work on one aspect of the dish and not the dish in its entirety. An advantage is that the stations chefs are experts within their own area. The contrasting disadvantage is that the chef working on the parts is unable to see the product finished and understand how the components of the dish work together to create a dish. The executive chef acts as a real “Maestro of the orchestra”.



Le Grand Vefour - Stations (above) are designed to produce towards the pass (Photo credit: Peter Ungár)



Le Grand Vefour – The ‘Maestro’ stands behind the pass (Photo credit: Peter Ungár)

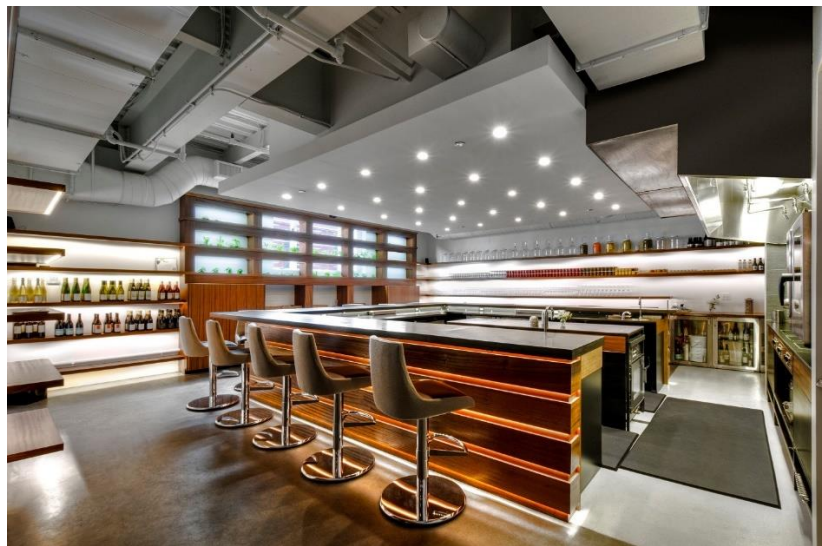




## Tasting Counter, Somerville, MA

### Restaurant Segment: Fine Dining

Tasting Counter offers a multi-sensory dining experience. The concept is to bring the guests as close to the origin of the food items as possible. This is accomplished by the sourcing and the preparation. Tasting Counter distinguishes itself by the reservation system. Guest purchase a ticket that entitles them to experience a surprise tasting menu. At dinner service guests may arrive in two seatings. Although guest arrivals and departures are slightly staggered, the bulk of the courses are presented simultaneously. Instead of traditional station assignments chef's responsibilities are broken down into specific tasks during the service time. E.g. Mise-en-place, cooking, finishing, service and guest interactions.



Tasting Counter – Guests experience the tasting menu in a communal setting (Photo credit: Peter Ungár)



Tasting Counter - The kitchen is not organized by stations but rather around specific tasks (Photo credit: Peter Ungár)



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