

KITCHEN: LAYOUT AND DESIGN

People in management often complain that kitchen seem to be added to hotels, hospitals, and other institutions as an afterthought without receiving sufficient attention during early planning. A kitchen plan or layout should be determined on the basis of catering policy when the establishment's overall plan is first being developed. This policy is affected by many factors, including the type of food to be served, the establishment's location, the type of customer anticipated, seasonal pressures, and the possibility of expansion.

INFORMATION REQUIRED

Before kitchen planning can begin, answers to various questions about catering policy are needed. For example:

1. What types of meals will be offered?
2. How many persons will be served?
3. When will these meals be required? Will the main meal be A M or P M that is, will it be a lunch or dinner service or day long and/or night long?
4. What will be the extent of beverage service requirements - that is how much tea and coffee for lounge as well as restaurant will be required?
5. Is allowance to be made for special functions?
6. To what extent will "convenience" foods be used?
7. What area of floor space is available?

8. What is the position of windows, ventilation, drainage, water supply, and so on?
9. What type of service is proposed - self -service, cafeteria, or waiter/waitress service?

Area Required

Kitchens are sometimes designed in a reduced size in order to provide more space and increased seating in the restaurant. This reduction does not necessarily increase a restaurant's trade, however, because cramped kitchens lead to delays and other faults in service that discourage customers from returning. A reduction in kitchen size must, therefore, be accompanied by plans to maintain (or even increase) productivity while still presenting a satisfactory workplace for employees. Calculating in advance the kitchen area needed is difficult for many reasons. Generally speaking, as the number of patrons increases, the kitchen area needed per person tends to decrease; but information about numbers alone is not sufficient. Knowledge of peak loads (based on experience or intelligent forecasting) is essential. In addition, the nature of the establishment plays a role. The dining room (including tables and passageways) at a coffee shop may have as little as 0.93 square meters (10 square feet) of space per person, while a luxury hotel restaurant may have 1.67 square meters (18 square feet) of space per person. Some experts believe that kitchen space per customer should be about one-half that of the dining room. Very small places serving less than

fifty people may need about 0.84 to 0.93 square meters (9 or 10 square feet) of kitchen space per person.

Influencing factors on Kitchen Design

- Size and extent of menu
- Service
- Labour and skill level
- Amount of capital expenditure
- Use of proper convenience food
- Type of equipment available
- Hygiene
- Design and décor
- Multi-usage requirement

Size and extent of menu

Management must know its goal and objectives in terms of its market strategies

What market are you aiming at?

What style of operation you are going to operate?

You must know the no. of meals you are going to produce.

Services

The designer must know where the services are situated and how efficient use of them can be made.

Amount of Capital Expenditure

Finance will very often determine the overall design and acceptability

Use of Prepared convenience food

A fast food menu using prepared convenience food will influence the planning and equipping very differently from a la carte or cook-chill kitchen.

We must know the extent of outsourcing.

Type of equipment available

The type, amount and size of the equipment will depend on the type of the menu being offered.

The equipment must be suitably sited

Hygiene

Hygiene aspect must be kept in mind while planning floor, ceiling and designing the equipment.

The equipment must be easy to clean, maintain and free of creves

Design and décor

The trend of providing more attractive eating places.

Bringing the kitchen area partially or wholly in the eating area

Kitchen Design

Kitchens must be designed so that they can be easily managed Management must have an easy access to the areas under their span of control Good visibility in the areas which are to be supervised Large operations must be on a separate floor for reasons of efficiency

Kitchen design must keep in mind :

- Product flow
- work flow
- Work space
- Working sections
- Access to ancillary areas

Product Flow

The product must move from raw material to finished product Sections must be divided into high risk and contaminated areas Backtracking or crossover of materials and products must be avoided

Work Flow

Food should be processed from the point of view of the delivery to the point of sale or the service with the minimum of obstructions The overall sequence of receiving, storing, preparing, holding, serving and clearing is achieved by: Minimum movement, minimum backtracking, maximum use of space, maximum use of equipment with minimum expenditure of time and effort

Work Space

Approximately 15 sq. ft. is required per person for safety reasons. A space of 4.5 ft. from equipment is desired. Aisles must be adequate to enable staff to move safely.

Working Section

The size and style of the menu and the ability of the staff will determine the number of sections and layout that is necessary. A straight setup is suitable for snack bar and an island layout is suitable to hotel restaurant.

Access to Ancillary Areas

A good receiving area needs to be designed for easy receipt of supplies. Storage facility suitably sited for distribution of food to preparation and production areas.

Hygiene

Still room, Pot wash, dish wash, should be conveniently located. Floors- kota, non-absorbent, smooth but not slippery. Walls- tiled, 40 inches from ground. Kota stone Ceiling- not flaking.

Food production areas

The kitchen must be divided into sections based on processes:

1. **Dry Areas** ----- Stores.

2. **Wet areas** ----- Fish Mongery , Meat Fabrication , Cold Preparation, Vegetable Preparation
3. **Hot wet areas** --- All the areas for boiling, poaching, steaming . Equipment will include bratt pans, steamers, pressure steamers etc.
4. **Hot dry areas** --- Frying, roasting, grilling areas .Equipment will include salamanders, deep fat fryers, ovens, charcoal grills, microwaves.
5. **Dirty areas.**

Planning and layout of cooking areas

Island grouping: The equipment is packed in the center of the kitchen back to back. More space is required in this type of layout as the space is required for gangway around the equipment and space to place other items along the wall.

Wall siting : An alternative arrangement involves fitting equipment along the walls of the kitchen. The arrangement is possible where travel distances are reduced and normally occurs in smaller premises.

LorU shaped Layouts: This type of arrangement creates self-contained sections that discourage entry of non- authorized staff. Can improve and promote efficient and independent working.

The Kitchen Environment

- Space: Height 10 ft. and 400 cubic ft. per person
- Humidity: Less than 60%
- Temperature: 20-26Deg. C
- Noise: Conversation should be possible within 4 m
- Light: 500 lux
- Ventilation: Air change of 30 times an hour
- Greater use of buffet in hotels
- Move towards plated service from silver service
- Fast food with more choice
- Ethnic food with themes
- Food courts with all day menu.
- Less emphasis on 5 star experiences.
- Theme restaurants will improve and multiply
- More convenience food usage and outsourcing of food.
- More snack Bars and coffee shops.
- Refrigeration: CFC free equipment
- Energy conservation, heat recovery systems, re circulated air systems, improved lighting
- Use more of induction units, microwave units, combination ovens.
- More decorative units being used
- Greater economy of water