Learning Objectives

- To introduce servicescape and facility design factors
- To discuss various service facility layouts for a good organization of facility
In services where customer physically participates in service delivery system, facility design issues need to be addressed with more care. Facility design comprised of physical environment, space requirements, aesthetic factors and flexibility aligned with the service concept. It is important to understand the physical environment under which any service is performed, also called servicescape, before discussing other design related issues.

**Examples**

1. In airline service, we can have servicescape elements like Airline gate area, Airplane exterior and airplane interior like seats, scent, air, quality. We can also have other tangible elements related to service design like tickets, food and uniforms of crew members.

2. The servicescape of hospital comprised of building, parking, care room, medical equipment. Other tangible design related elements are uniforms of doctors and nurses, patient information records, billing statements etc.

**6.1 Servicescape**

The term servicescape was coined by Bitner (1992) to describe the physical surroundings of the service system. As soon as the customer enters the service system, he or she perceives the physical surroundings that lead to cognitive, emotional and physiological responses in them which effects customer’s behavior. Servicescape also influence the employees’ behavior. The physical environment or surroundings have the following dimensions

- Ambient conditions
- Space/ functions
- Signs, symbols and artefacts
6.1.1 Ambient Conditions

Ambient conditions refer to the atmospheric or environmental conditions of a service place such as temperature, air quality or scent, noise, lighting and music which effects all five senses of human being. We can compare the ambience of railway station with that of airport. We can feel a different ambience in Barbeque Nation restaurants than other restaurants. In some studies on supermarkets have illustrated that the music tempo can effect the pace of shopping, length of stay and money spent by the customer.

6.1.2 Space or functions

This aspect refers to the organization and arrangement of facility layout equipments and furnishings. Many times we see that a customer goes to the same grocery retail mall frequently. The reason could be the comfort of space, easiness in locating the necessary buying items and acquaintance with layout and billing location. High ceilings in movie-theaters convey feeling of spaciousness.

6.1.3 Signs, Symbols and artefacts

We see different signals in any service systems that are meant to communicate acceptance norms or rules of behavior. Sign like “no smoking”, “Keep silence” are common to represent rules of behavior. Artwork and furnishings creates aesthetic impression and enhances professional images with visitor as well as presents pleasant workplace for employees. Management of servicescape depends on the type of service as shown in the figure 6.1.
• In interpersonal services both customers and employees are present for interaction such as hospitals and banks. The needs and requirements of customers and employees should be facilitated by servicescape to enhance the social interaction.

• In the self-service type services employees are absent and customer has to perform all operations on his or her own like operating ATMs and vending machines. Servicescapes should guide the customers properly using signage (Arrow or light against selected button), initiative design (hot tea cup for hot and ice for cold drinks) and display of steps and other information (like the denomination a vending machine can accept)

• In remote services, the customers are served from a distance and only employees perform the actions in the servicescape such as telephone and utilities related services.
The servicescape should suit to the employee’s requirements their satisfaction with primary objectives of motivating employees and improving operational efficiency.

6.1.4 Servicescape to e-servicescape or cyberscape

Nowadays most of the service encounter occurs over the internet. The customers like to visit the websites for buying the things or services which eliminate their travel time. It is also convenient to access the website from anywhere. The important elements under the e-servicescape environment are given below.

- Visual appeal of website in terms of aesthetics and graphics
- User friendly (easy navigation)
- Relevance of visual and technical information
- Interactivity and financial security

6.2 Service Design Factors

A) Service Concept or Objectives of service

The nature of the core service should drive the parameters of service design aligned with service concept. The emergency ward of any hospital should be free from traffic and easy to approach. A petrol pump can be painted with bright color so that the customers driving on highway can prepare to take turn well in advance.

B) Space Requirement based on location of service site

The location of site whether in rural and urban area impacts on design factor. The cost of land is usually more in urban area than in rural area. The cost constraints drive the service organization to utilize the small space efficiently. The other constraints can be of strict zoning laws and ordinances which are important to consider while designing facility. The scope of expansion is again governed by
some ordinances. Many KFC outlets have expanded vertically and have provided seating arrangements on the first floor.

C) Security

For any service organization it is important to protect the assets. Proper security arrangement should be incorporated while designing facility to control and reduce the losses of products and human lives. Installation of surveillance cameras and related control systems are very common in banks and supermarkets. Biometric devices to detect the identity of passenger are another type of tools mostly used in immigration sections at airports.

D) Flexibility

Service facility design must be adaptable to changing customer and environment conditions. It addresses the capability of either expanding the service or introducing new types of services. Ability to introduce new equipment or automated systems with new technology advances must be captured while designing service facility.

Example: Facility Design Factors important for any food service organization

- Size of the facility in terms of average numbers of guests per day and time they spent in the service system
- Size of parking lot
- Size of waiting room
- Size of kitchen
- Ration of kitchen space to dining area space
- Type of seating
- The colors and lighting in the dining room
- Space between the dining tables
- Interior design or décor of dining area
Type of music and sound of music should be selected such as the guest does not feel uncomfortable or disturbed.

Location of rest rooms

6.3 Service Facility Layout

Layout is the way or arrangement in which service facility is organized. The arrangement could be of service facility area, equipment, workstations or any physical entity.

It is important to design a proper facility layout to have smooth flow of work and efficient flow of information, material and people. Layouts are also designed to maximize the space utilization to eliminate waste or redundant movement. It increases the capacity of service facility and hence reduces the customer waiting and service time. Proper facility layouts also facilitate entry, exit and placement of products which is mostly seen in big super markets.

Facility layouts are designed so as to encourage proper and convenient maintenance activities and to incorporate safety and security measures.

6.3.1 Different types of facility layouts

1) Product layout
2) Process layout
3) Fixed-position layout
4) Office layout
5) Retail layout

6.3.2 Product Layout

In product layout the workstations are located according to the processing sequence for the service. The whole service system is divided into an inflexible
sequence of steps or operations and all customers move from one workstation to
adjacent workstation covering all steps in a sequence. This is also known as
assembly-line layout where product is assembled in a fixed sequence of steps like
cars. Product layouts are arranged for service organization which provides limited
number of services or standard services to a large number of customers. The
objectives of having product layout in place are

- To maintain a smooth flow of customers or work through workstations or
  servers
- To avoid bottleneck, where bottleneck is the job or activity that requires
  most time per customer
- To equalize the time needed by each server by balancing the service line.
  Service line can be balanced by moving tasks from one server to another.

We can summarize that the product layout planning problem is to find the ideal
balance so a continuous flow of customers is maintained along the service line with
a minimum of idle time at each server.

**Example**

We see in a cafeteria with standard menu, the customers enter into a service line to
be served through set of activities as shown in figure 6.2.
In figure 6.2, we can see that there are 6 servers and the bottleneck activity, the activity taking maximum time, is to serve main course which takes 40 seconds to serve a customer.

**6.3.3 Process Layout**

In process layout, similar activities are grouped together according to the process or function they perform. Such layout is appropriate to implement when there exist many, low-volume and different customer requests. In process layout, customers need and specifications are different hence provide some degree of customization. Some examples of process layout are professional services such as health clinics or hospitals and consulting. The advantages of process layout are the simultaneous handling of wide variety of services and flexibility in assigning employees to the servers. At the same time there are some difficulties in managing process layout. The customers with different needs may choose different sequence of activities. The service provider sees the flow of customers to be intermittent. At any point of time, any functional department may face fluctuating demand. After arriving into
next functional department from the previous functional department the customers may join new queue and hence waiting must be evolved. The service provider has to plan for waiting area in each functional department and also consider the travel time between the departments.

The objective of process layout is to arrange department or service centers in the most convenient locations, which can be achieved by placing departments with large inter-departmental flow of people or paperwork next to one another.

**Example:**

When we go to a apparel, accessories and home furnishings retail shop we see the layout in a manner presented in figure 6.3.

<table>
<thead>
<tr>
<th>Jewelry &amp; Cosmetics</th>
<th>Kid’s Wear</th>
<th>Home Furnishings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women’s Formal</td>
<td>Kid’s Play Area</td>
<td>Shoes &amp; Bags</td>
</tr>
<tr>
<td>Women’s Casual</td>
<td>Entrance</td>
<td>Men’s Apparel</td>
</tr>
</tbody>
</table>

**FIGURE 6.3: A PROCESS LAYOUT OF RETAIL SHOP**

After entering any retail, ladies may like to explore dresses and jewelry so there will be maximum flow of ladies between three departments; women’s casual, women’s formal and jewelry and cosmetics. The customers who will visit retail shop with their kids would like to have kid’s play area approachable from all other departments, hence it should be located at the center of retail area. The layout must incorporate the inputs like, the type of customers (boys, girls, married couples, and couples with kids), intermittent flow between department and demand requirements.
6.3.4 Fixed position Layout

In fixed position layout, the service is performed around a customer that remains stationary while the work is being done. For example a surgery is performed on a patient, where patient remains stationary in operation theatre. Different doctors or specialist perform different activities in a sequence on a stationary patients like an Anesthetist will give anesthesia, doctors will start operation, surgeon will perform surgery, radiologist will monitor other health measures, and then the team of doctors may perform stitches and complete the whole process.

6.3.5 Office Layout

Office layout is an arrangement of departments, people or workers and their equipment so as to maximize the flow of information among people, effectively utilize the space and maximize employee or worker productivity. The decision factors for office layout are given below.

1. Smooth flow of work

   The office layout can be a straight line, circle or U-shaped to ensure steady & unhindered flow of work. The floor space should be free from partitions and columns.

2. Space Utilization and Uniformity

   Office layout should make fullest utilization of space. Proper aisles should be provided. The furniture and other equipment’s should be of uniform size and appearance with greater flexibility.

3. Working environment

   Office layout must consider comfort, safety, and ventilation and light requirements.
4. Location of departments

The employees performing similar functions can be grouped together. Interrelated departments with maximum flow of people or information should be placed together. Common facilities like canteen, printing facilities, client meeting room should be easily accessible.

6.3.6 Retail Store Layout

The retail store layout emphasize on maximizing the net profit per square of display space. More of the customers have exposure to the products greater the sales and hence revenues. The retail stores can have strategy of focusing only a segment of customers and accordingly plan the layout. For example, the grocery stores can place daily routine items like bread, milk and eggs at the entrance of stores so that the working couples can quickly buy the goods.

Any retail store outlet can consider two factors

1) The overall arrangement or flow pattern for the store.

2) Allocation of space within that arrangement to various products

To increase the profitability the retail store layout can consider the following points

- To encourage impulse buying the daily necessity products can be stored far away from the clear vision of the customers. In such manner the customer will view other products also which are not in the customer’s buying on the way to the necessity products.

- Sufficient aisle space should be provided for free movement of customers

- Convey the mission of the store by carefully selecting the position of the lead – off department.