Looking Forward

- We have just begun to get our feet wet with Service Processes
- Very soon we are going to begin looking at the operation of Service Processes and Systems
- Later in the term – we will examine the Design of SPS – but so that the design idea is not completely forgotten – we will talk about it briefly today.
Classic Phases of Mechanical Design

1. Recognition of Need
2. Definition of Problem
3. Synthesis
4. Analysis and optimization
5. Evaluation
6. Presentation
Design Factors

- Strength
- Reliability
- Thermal issues
- Corrosion
- Wear
- Friction
- Processing
- Utility
- Cost
- Safety
- Weight
- Noise
- Styling
- Shape
- Size
- Flexibility
- Control
- Stiffness
- Surface finish
- Lubrication
- Maintenance
- Volume
Our thoughts on the classic view

- Overall design process...
- Role of the customer...
- Design Factors...
Services Design - Innovation Background

✓ Radical Innovations

- Major Innovation: new service driven by information and computer based technology
- Start-up Business: new service for existing market
- New Services for the Market Presently Served: new services to customers of an organization
Services Design - Innovation

Background

✓ Incremental Innovations

$q$ Service Line Extensions: augmentation of existing service line (e.g. new menu items)

$q$ Service Improvements: changes in features of currently offered service

$q$ Style Changes: modest visible changes in appearances
Service Design Elements

- Elements to be engineered to create a consistent service offering that achieves the strategic service vision, these elements become a blueprint.
Service Design Elements

- **Structural**
  - Delivery system. Front and back office, automation, customer participation
  - Facility design. Size, aesthetics, layout
  - Location. Customer demographics, single or multiple sites, competition, site characteristics
  - Capacity planning. Managing queues, number of servers, peak demand, etc.
Service Design Elements

- **Managerial**
  - Service encounter. Service culture, motivation, training, employee empowerment
  - Quality. Measurement, monitoring, methods, service guarantee
  - Managing capacity and demand. Strategies for altering demand and controlling supply
  - Information. Competitive resource, data collection.
New Service Development Cycle

**Full Launch**
- Full-scale launch
- Post-launch review

**Development**
- Full-scale launch
- Post-launch review

**Planning phase**
- Business analysis
- Project authorization

**Analysis**
- Business analysis
- Project authorization

**Design**
- Service design and testing
- Process and system design and testing
- Marketing program design and testing
- Personnel training
- Service testing and pilot run
- Test marketing

**Enablers**
- Organizational Context
- People
- Technology Systems
- Tools
- Design
- Development
- Analysis
- Full Launch

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Strategic Positioning Through Process Structure

- **Degree of Complexity:** Measured by the number of steps in the service blueprint. For example, a clinic is less complex than a general hospital.

- **Degree of Divergence:** Amount of discretion permitted the server to customize the service. For example, the activities of an attorney contrasted with those of a paralegal.
Strategic Positioning Through Process Structure

- Complexity
  - High
  - Low

- Divergence
  - Low
  - High

- Discount brokerage
- Investment banking
- Financial planner
- Real estate
- Life insurance
## Structural Alternatives for a Restaurant

<table>
<thead>
<tr>
<th>LOWER COMPLEXITY/DIVERGENCE</th>
<th>CURRENT PROCESS</th>
<th>HIGHER COMPLEXITY/DIVERGENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>No reservations</td>
<td>Take reservation</td>
<td>Specific Table Selection</td>
</tr>
<tr>
<td>Self-seating. Menu on blackboard</td>
<td>Seat guests, give menus</td>
<td>Recite menu: Describe entrees &amp; specials</td>
</tr>
<tr>
<td>Eliminate</td>
<td>Serve water and bread</td>
<td>Assortment of hot breads and hors d’oevres</td>
</tr>
<tr>
<td>Customer fills out form</td>
<td>Take orders prepare orders</td>
<td>At table. Taken personally</td>
</tr>
<tr>
<td>Pre-prepared: No choice</td>
<td>Salad (4 choices)</td>
<td>Individually prepared at table</td>
</tr>
<tr>
<td>Limit to four choices</td>
<td>Entrée (15 choices)</td>
<td>Expand to 20 choices: add flaming dishes; bone fish at table; prepare sauces at table</td>
</tr>
<tr>
<td>Sundae bar: Self-service</td>
<td>Dessert (6 choices)</td>
<td>Expand to 12 choices</td>
</tr>
<tr>
<td>Coffee, tea, milk only</td>
<td>Beverage (6 choices)</td>
<td>Add exotic coffees; sherbet between</td>
</tr>
<tr>
<td>Serve salad &amp; entrée together: Bill and beverage together</td>
<td>Serve Orders</td>
<td>Courses; Hand grind pepper</td>
</tr>
<tr>
<td>Cash only: Pay when leaving</td>
<td>Collect Payment</td>
<td>Choice of payment. Including house accounts. Serve mints.</td>
</tr>
</tbody>
</table>

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Generic Approaches to Service Design

Production-line

Translate a successful manufacturing concept into the service sector.

- Limit Discretion of Personnel (employees without freedom)
- Division of Labor (job broken down into simple tasks)
- Substitute Technology for People
- Standardize the Service (limits service options, uniformity in service quality).

Example: McDonald’s

- The entire system is engineered from beginning to end, from prepackaged hamburgers to highly visible trash cans.
- Every detail is accounted for through careful planning and design.
Generic Approaches to Service Design

Customer as Co-producer

- Shifting some service activities onto the customer.
- Customer participation can increase degree of customization.
- Spectrum of delivery systems, from self-service to complete dependence on provider -- real estate agent
  - Self Service (reduces operating costs, e.g. automatic check-in at airports).
- Smoothing Service Demand - permanent loss to service provider of capacity when server is idle though lack of customer demand (uniform utilization of capacity, improves productivity)
  - Appointments and reservations
  - Service during off-peak hours by price incentives
- Example: Pizza Hut’s lunch buffet
Generic Approaches to Service Design

Customer Contact

✓ Degree of Customer Contact.- physical presence of the customer in the system.
  Measured by the % of time that the customer is in the system relative to the total service time (run even as factory, e.g. laundry in a hospital).

✓ Separation of High and Low Contact Operations
Generic Approaches to Service Design

Information Empowerment -- IT is fundamental to succeed

- **Employee Empowerment**
  - (IT) Record keeping, databases
  - Relational databases (all aspects information access by anybody)
  - Now also across different organizations to give better service (airlines)

- **Customer Empowerment**
  - Internet – Medical forums
  - Fedex – tracking packages
  - Expedia – travel reservations
  - Walmart – check-out
Service Design Challenges

Four Risks Inherent to Describing Services

- **Oversimplification**
  - “To say that ‘portfolio management’ means ‘buying and selling stocks’ is like describing the space shuttle as ‘something that flies.’”

- **Incompleteness**
  - Customers are able to describe only the parts of the services with which they are familiar and with which they have direct contact.

- **Subjectivity**
  - Lots of variation from person to person

- **Biased Interpretation**
  - People are biased by their own experiences with services.
  - In describing services to others, people add another bias in the way they use words, which are open to the interpretation of the listener.