

Lecture #14

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Service Processes & Systems
Dept. of Mechanical Engineering - Engineering Mechanics
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Performance

- ❖ How do we judge this?
 - Efficiency, Profitability, Perceived Value, etc.????
- ❖ Two ways to think about performance...
 - How does a customer judge the performance of our service process?
 - How do we judge the performance of our service process?
- ❖ Let's first consider the customer viewpoint...

Moment of Truth

- ❖ Each interaction with a customer – “a moment of truth” – we have one shot at this interaction.
- ❖ Either satisfy or dissatisfy the customer through the interaction.
- ❖ Service recovery: satisfying a previously dissatisfied customer and transforming them into a loyal customer.

Customer Perception & Satisfaction

- ❖ Quality
- ❖ Satisfaction
- ❖ Aesthetics - surroundings
- ❖ Customizability
- ❖ Convenience
 - ❑ Availability
 - ❑ Accessibility
- ❖ Robustness
 - ❑ Comprehensiveness
 - ❑ Adaptability
 - ❑ Flexibility
- ❖ Measures of Performance Specific to the Service Process - Features
 - ❑ Restaurant
 - Waiting time
 - Food taste
 - Food temperature
 - ❑ Insurance agency
 - Responsiveness to claims
 - Availability
 - ❑ CAD company
 - Processing time

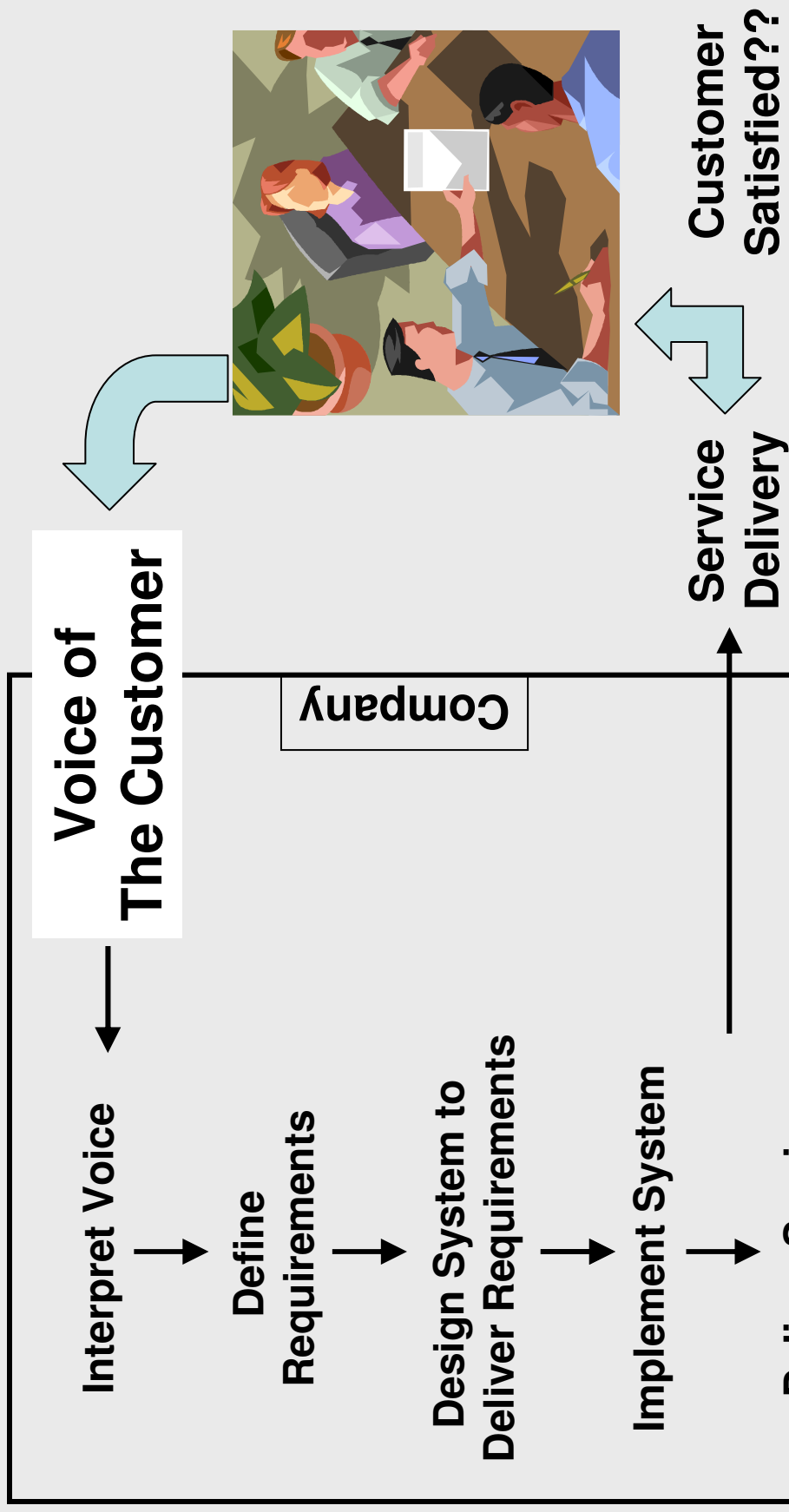
Quality

- ❖ **Quality: distinctive characteristics or properties of a person, process, or thing. The characteristics that make a subject distinctive. "The qualities of the classroom include a projection system and tables." – Not useful – we call these "features"**
- ❖ **ISO 9000 defines quality as "degree to which a set of inherent characteristics fulfill requirements" .**
- ❖ **"Level of variability", "compliance with specifications", etc.**

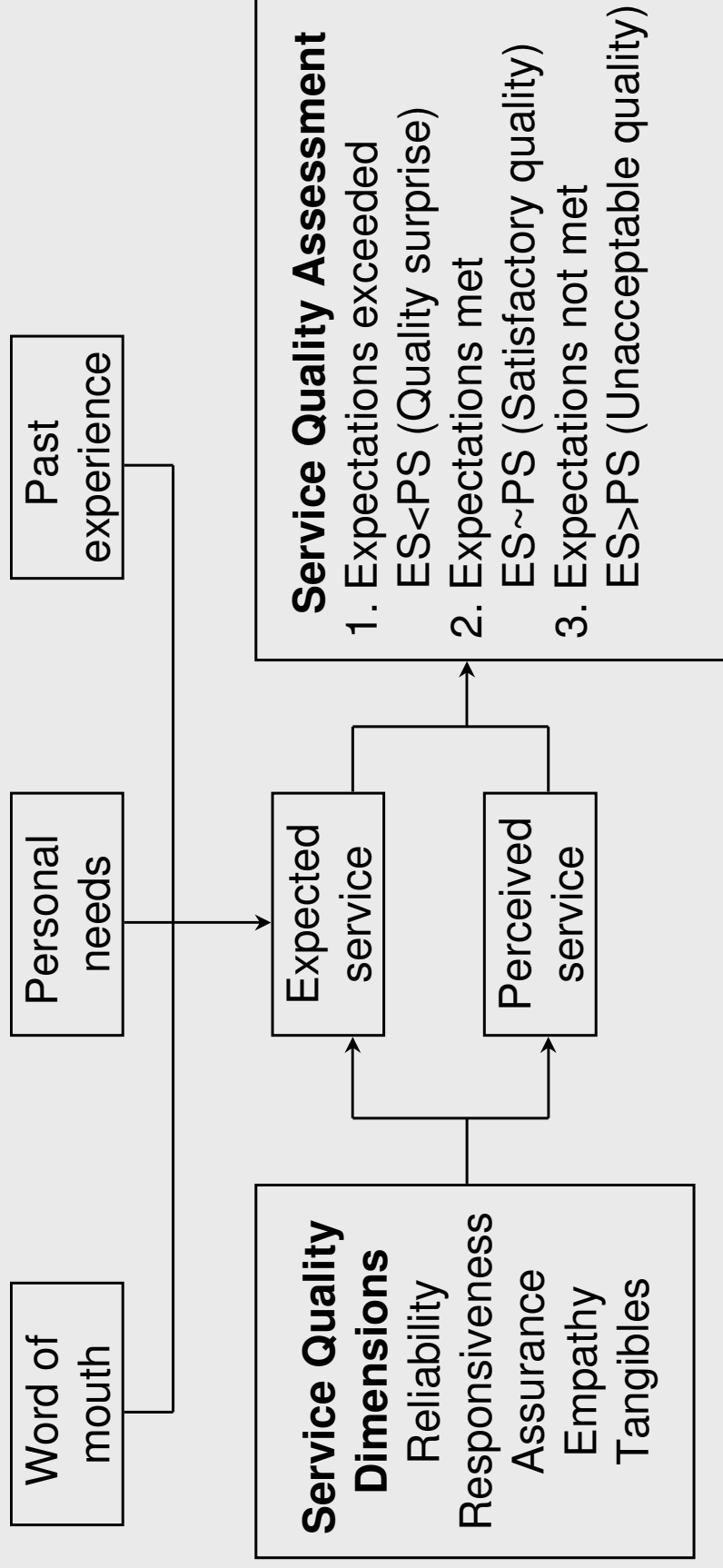
Quality continued...

- ❖ **Quality - "degree to which characteristics fulfill requirements"**
- ❖ **Species – Is a red car of better quality than a blue car? Not if the red car is supposed to be red and the blue one blue.**
- ❖ **This definition means that we need to define the requirements and then measure our ability to satisfy them.**

Requirements & Satisfaction



Perceived Service Quality



Service Quality Dimensions

- ❖ **Reliability:** Perform promised service dependably and accurately.
 - ❑ **Example:** receive mail at same time each day
- ❖ **Responsiveness:** Promptness in serving customers.
 - ❑ **Example:** limit customer wait time in restaurant
- ❖ **Assurance:** Conveying trust and confidence.
 - ❑ **Example:** being polite and showing respect for customer.
- ❖ **Empathy:** Ability to be approachable.
 - ❑ **Example:** being a good listener.
- ❖ **Tangibles:** Physical facilities and goods.
 - ❑ **Example:** cleanliness.

Reliability

- ❖ Reliability may be defined in several ways:
 - The ability of a device or system to perform as designed.
 - The resistance to failure of a device or system.
 - The ability of a device/system to perform its required function for specified period of time.

Service Process Requirements

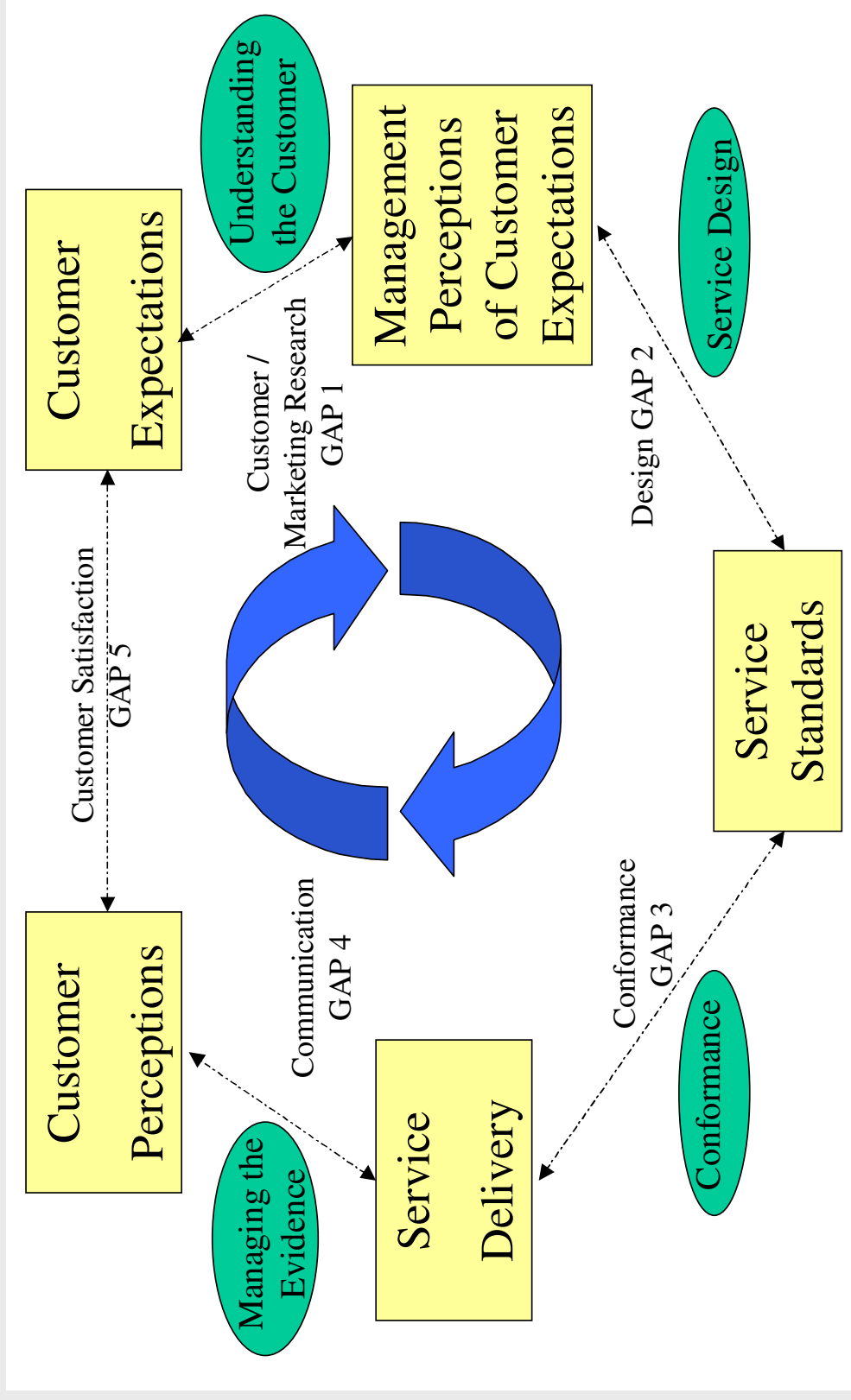
❖ Discussion...

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Service Quality Gap Model



Judging Service Process Performance

- ❖ **Cost**
- ❖ **Process**
 - ❑ Performance (Speed, Throughput)
 - ❑ Productivity (Efficiency, Effectiveness)
 - ❑ Safeguards (Privacy, Security, Safety)
- ❖ **System**
 - ❑ Consistency - repeatability
 - ❑ Equity
 - ❑ Reproducibility
- ❖ **Serviceability**
- ❖ **Reliability**
- ❖ **Demand**
- ❖ **Process**
 - ❑ Talked about "time" – more later
- ❖ **System**
 - ❑ **Reproducibility**
 - Repeatability – large variability across trials
 - Reproducibility – large variability across situations (store to store)
 - ❑ **Equity – freedom from bias – fair**
- ❖ **We can affect the demand!!**

Organization Performance Measures

❖ Measures of Efficiency

- ❑ Examples: i) percent of time equipment is being used, and ii) worker output
- ❑ Doing things right

❖ Measures of Effectiveness

- ❑ Examples: Stakeholder satisfaction level, profitability, and rate of return.
- ❑ Doing the right things

Measures of Efficiency

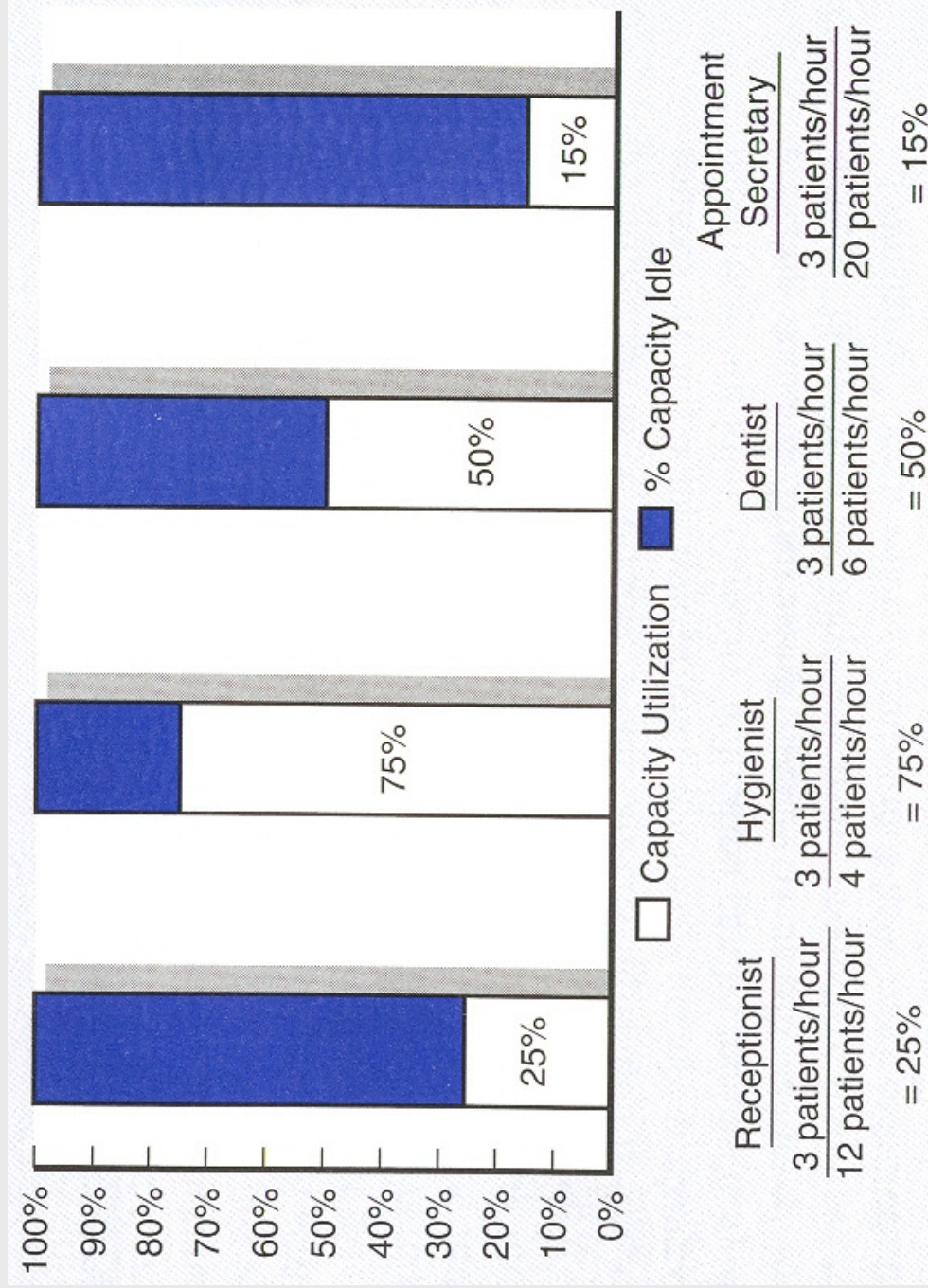
❖ Process Efficiency

- Examples: How much of the available time a resource is used, efficiency in outcome, the amount of work that is done by each resource.

❖ Capacity Utilization = $\frac{\text{Capacity required}}{\text{Capacity available}}$

- Examples: How much of the available capacity is being used, expressed as a percentage.

Dentist's Office



Capacity Utilization

❖ Three Ways to Change Capacity Utilization (efficiency approach):

- ❑ Change the Capacity Required (Demand)
- ❑ Change the Time Available
- ❑ Change the Processing Time

❖ Effectiveness approach

More Org. Performance Measures

❖ Customer Satisfaction

- ❑ Customer Retention/Loss
- ❑ New Customers
- ❑ Sales Volume and Market Share
- ❑ Complaints
- ❑ ?????? – good measures??

❖ Sears study – customer complaints

More Org. Performance Measures

- ❖ Customer Cancellation and No-Show Rates
- ❖ Employee Satisfaction
- ❖ Flexibility/Bandwidth of the Organization – Agility
- ❖ Surveys

Measuring Yield

$$\text{Yield}(\%) = \frac{\text{Good Outputs}}{\text{Total Outputs}}$$

$$\text{Yield}(\%) = \frac{\text{Number of Sales}}{\text{Number of Calls}}$$

$$\text{Yield}(\%) = \frac{\text{Number of Sales}}{\text{Number of People Who Visit Website}}$$

More Measures

- ❖ Dependable Delivery
- ❖ Waiting Time
- ❖ Financial Measures
- ❖ ???