15.778 Summer 2004
Management of Supply Networks for Products and Services:
Concepts, Design, and Delivery

Management of Supply Networks for Products and Services:
Course Review
Services as a Foundation for Emerging Value Networks

- Globalization
- Competition
- Redefinition of Business Model & Customers
- Productivity
- Customer Satisfaction

Service Excellence
Based on the Framework of Service Operations
Competition and Differentiation based on services (Strategy)

Service Excellence
Based on the Framework of Service Operations
Characteristics of Services

Understand drivers for productivity and customer satisfaction (quality) well for traditional supply chain settings....

But what happens when we start to measure productivity and service quality for services? Need to understand service characteristics.....

ATTRIBUTES OF SERVICES

- **Intangibility** - explicit and implicit intangibles
- **Perishability** - an hour of non-production is an hour lost
- **Heterogeneity** - inherent variability of service
- **Simultaneity** - services are simultaneously produced and consumed

- Based on Consumer Perception
- Value Added Concept
- Main Services Versus Facilitating Services

Service Excellence Based on the Framework of Service Operations
A Basic Service Operations Framework

- Globalization
- Competition
- Redefinition of Business Model & Customers
- Productivity
- Customer Satisfaction
- Financial Analysis
- Strategic Analysis
- Competitive Analysis

Manager

Server

Backroom

Customer

Marketing

Orders

Resources

Service Performance

External Environment

Concept design

Information about needs

Service Management

Decoupling

Service Excellence
Based on the Framework of Service Operations
Understanding the dynamics of customer satisfaction

Globalization

Competition

Redefinition of Business Model & Customers

Productivity

Customer Satisfaction

Loyalty, Feedback and Opportunities for Continuous Improvement

Fair Treatment (Pay, Benefits, Respect), Training, Support of Internal Environment Personnel

Products and Policies that Satisfy Needs and Desires

Customer Feedback and Opportunities for Continuous Improvement

Effort, Skill, Respect, Positive Attitude

Requirements for Service Guarantees

Requirements for Customer Satisfaction / Loyalty

Service Excellence Based on the Framework of Service Operations

PEOPLE SERVICE PROFIT

Ritz-Carlton Case

British Airways Case
Defining measures for customer satisfaction

GAP MODEL FOR SERVICE QUALITY

Ritz-Carlton Case

British Airways Case

Service Excellence Based on the Framework of Service Operations

Intangibility, perishability, heterogeneity, simultaneity → How to define quality performance measures? → How to distinguish between and address quality issues?

GAP MODEL FOR SERVICE QUALITY

Globalization → Competition

Redefinition of Business Model & Customers → Customer Satisfaction

Productivity → Customer Satisfaction

GAP 1: How to define quality performance measures?

GAP 2: How to distinguish between and address quality issues?

GAP 3: Management Perceptions of Consumer Expectations

GAP 4: External Communications To Consumers

GAP 5: Translation of Perceptions into Service Quality Specifications

Expected Service → Personal Needs → Past Experience

Service Delivery (including contacts)

Source: Zarabadi and Tritsch
Understanding the productivity side of the equation

**MATCHING SUPPLY AND DEMAND**

- Merrill Lynch Case
- Call Center Case

- Recall the physics of dynamic systems that point to the lack of managerial control at high levels of utilization.
- **Best-in-class** firms strive for superior mechanisms for matching supply and demand to reduce utilization levels.

**Service Excellence Based on the Framework of Service Operations**
Understanding the productivity side of the equation

- Best-in-class firms further understand that reducing uncertainty can alter the fundamental dynamics of their systems and strive towards this.
- Please recall the consequences of uncertainty in operational processes, and the benefits from mitigating them from the Key Takeaways Part IV document.
- JIT systems are a limit (ideal) state of dynamic systems when we eliminate all uncertainty in operations.
- Hence in practice, JIT requires a Just-in-case approach as well...

**Mechanisms for Reducing Uncertainty**

- Waiting Time / Unsatisfied customers / Operating costs

**Service Excellence Based on the Framework of Service Operations**
Focus on Value Networks and the Role of Information

From linear to buyer-centric value network (VN)

Service Excellence Based on the Framework of Service (Oriented) Operations
Evolving and changing needs of customers

Service Excellence Based on the Framework of Service (Oriented) Operations

<table>
<thead>
<tr>
<th>Needs</th>
<th>Opportunities</th>
</tr>
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<tbody>
<tr>
<td>• Sell excess production capacity</td>
<td>CS</td>
</tr>
<tr>
<td>• Incidental sales force</td>
<td>CM</td>
</tr>
<tr>
<td>• Financing</td>
<td>OEM</td>
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<tr>
<td>• Increased sourcing scope</td>
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</tbody>
</table>

CS: Component Supplier  
CM: Contract Manufacturers  
OEM: Original Equipment Manufacturer
What we learnt from guest speakers

• Yossi Sheffi (MIT)
  • Emerging trends in supply chain technology
  • Technology supports services and business models, and not the other way around...

• Carmen Baez (Omnicom)
  • Managing autonomous service organizations
  • PSP Example

• Jim Walker (Merrill Lynch)
  • Managing change
  • Managing distributed services provided by independent agents

• Val Fiegenbaum (General Systems Co.)
  • Innovation in Management

• Charlie Fine (MIT)
  • Industry dynamics and evolution
  • Age of temporary advantage

• Adriana Pereira (CVRD Brazil)
  • IT as an enabler of productivity
  • Managing change

• Jake Barr (P&G)
  • Services play a critical role in P&G supply chain—P&G does not provide any service to customers, but recall that P&G sells $0 out of $51 Billion, directly to the customer...
A few things to remember…

• In services, our imagination and creativity are the limit to our success

• Please don’t forget to **materialize** your services

• There are no mature businesses but **only mature ways of doing business**

• Supply chains that deliver superior service services efficiently can offer to their customers a differentiated and superior product. P&G is a prime example of such a supply chain...

• **Just-In-Time** cannot exist without **Just-In-Case**

• **People-Service-Profit**