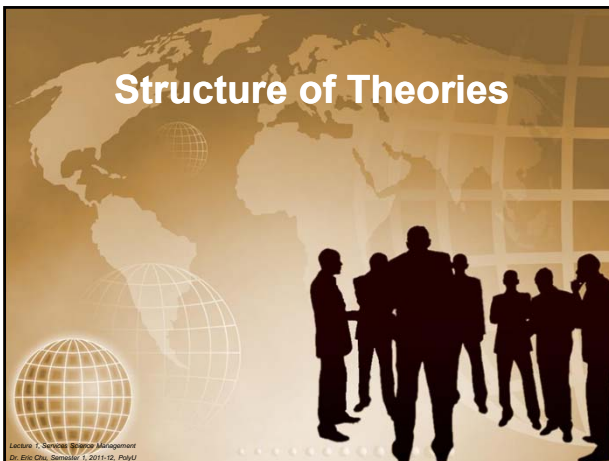


Structure of Theories



Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

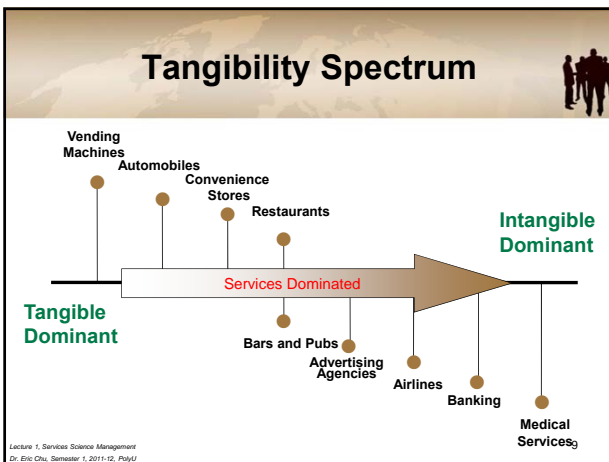
Service Definitions

- Services are deeds, processes, and performances (Zeithaml et al., 2008).
- A service is a time-perishable, intangible experience performed for a customer acting in the role of a co-producer (Fitzsimmons et al., 2008).

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

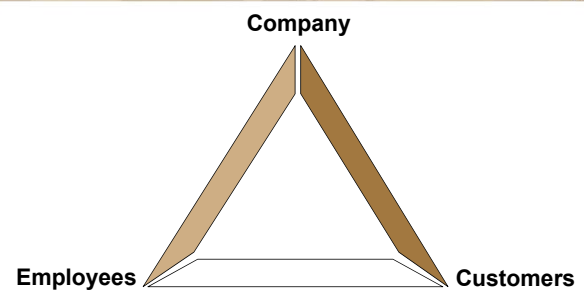
8

Tangibility Spectrum



Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

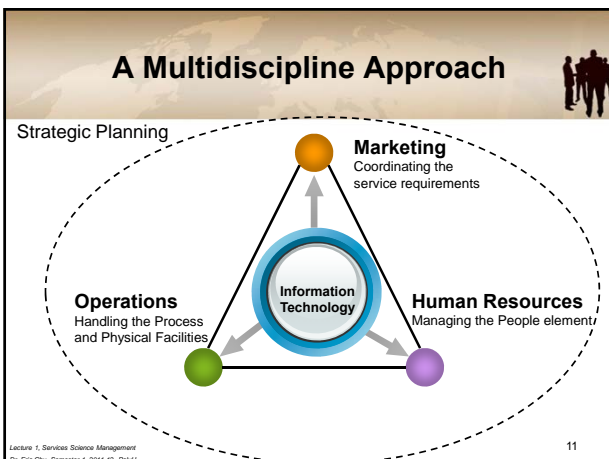
The Services Triangle



Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

10

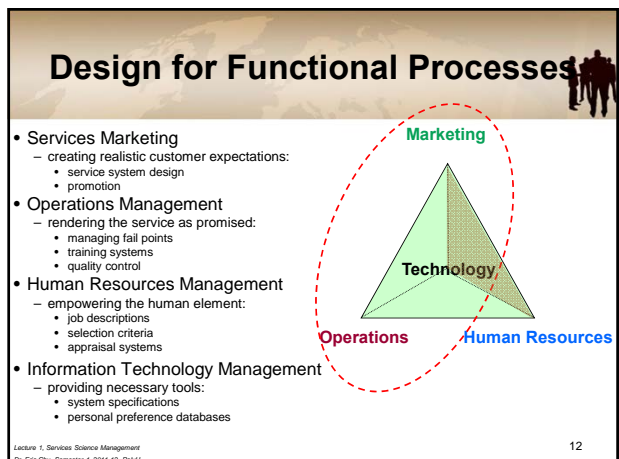
A Multidiscipline Approach



Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

11

Design for Functional Processes

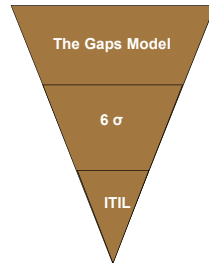


Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

12

Frameworks to Service Design

- Identify a customer problem with a service process (Marketing Management)
- Design and planning of the new process through operational tools (Operations Management)
- Evaluate the opportunities for innovation and enhancement through IT services (IT Management)



Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

13

Services Science, Management, and Engineering (SSME)

- Aiming at improvement of service systems (esp. in IT services), IBM launched the initiative to establish the discipline of SSME to promote productivity, quality, performance, compliance, growth, and learning improvements through a multi-disciplinary approach

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

14

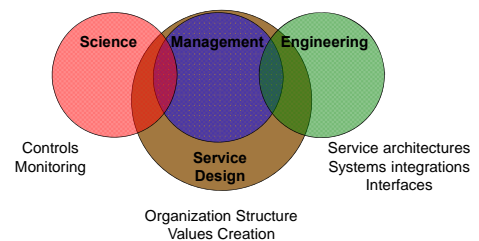
Defining SSME

- Current SSME programs generally involve:
- Behavioral and Social Sciences
- Computer Science and Engineering
- Industrial and Service Design
- Information Systems
- Knowledge discovery/Data Mining
- Operations Research and Operations Management
- Security of Information and Technology
- Systems Engineering and Software Engineering

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

15

A Designer's View on SSME



Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

16

Services and Our Economy



Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

Importance of the Service Sector

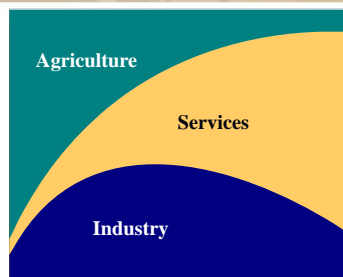
- The size of the service sector is increasing in almost all economies around the world and also account for most of the growth in new jobs
- Service output is growing rapidly and often accounts for half or more of Gross Domestic Product in all developed countries
- Service organizations can be any size: from huge global corporations to local 'one-man' businesses
- Service in conjunction with the advancement of information technology creates growing opportunities for businesses

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

18

Structural Changes of Economies

Share of Employment



Time, per Capita Income

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

19

National Accounts Value Added in Service Sector

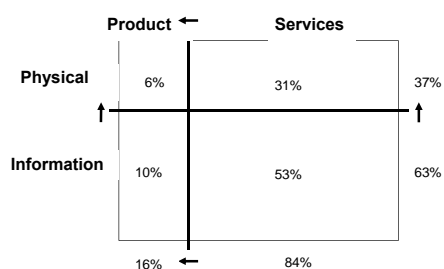
	1990 (%)	2000 (%)	2009 (%)
East Asia			
China	31	39	43
Hong Kong	75	86	92 (2008)
South Korea	51	57	60
Taiwan	55	66	68
South East Asia			
Indonesia	41	38	38
Malaysia	45	44	47
Singapore	68	65	73
Thailand	50	49	45
South Asia			
India	44	50	54

Source: Key Indicators of Developing Asian and Pacific Countries, Asian Development Bank;
http://www.adb.org/Documents/Books/Key_Indicators/2010/default.asp, accessed in Jan 2011

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

20

Distribution of GDP in the US Economy

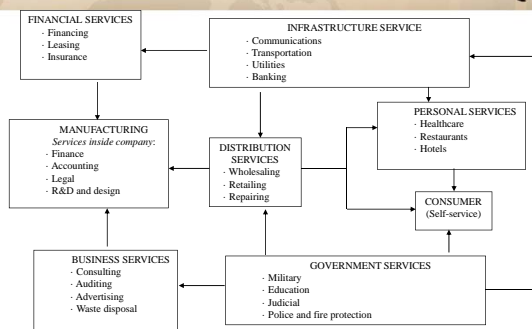


Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

Source: Uday et al. "Operations Management in the Information Economy"
Journal of Operations Management, 25, no. 2, p.440, March 2007

21

Role of Services in an Economy



Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

22

Implications from the Service Sector

- Services are different from physical products
 - The characteristic of 'tangibility' distinguish services from the traditional product manufacturing
- Service equals profits
 - Keeping the product offerings as constant, customers prefer better services
- Service innovation is accelerating
 - With the assistance of advancement in information technology (esp. internet), services' growth are exponential

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

23

Characteristics of Services



Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

Service as a Process

- In a service process, a customer is actually put into a production line of service, the process in which the customer experience through the service production will affect the customer's satisfaction from the service company

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

25

Implications of Service Design

- Seeking Efficiency May Lower Satisfaction
- Designing the Service Factory
- Evaluating Alternative Delivery Channels
- Balancing Demand and Capacity
- Including People as Part of the Product
- Applying Information Technology

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

26

Approaches for Improving Service

- Labour interactions
- Service customization
- Modifying tangibility of service
- Human relationships
- Service flexibility
- Regulating service demand

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

27

The Service Package

- Supporting Facility: The physical resources that must be in place before a service can be sold
- Facilitating Goods: The material consumed by the buyer or items provided by the consumer
- Information: Operations data or information that is provided by the customer to enable efficient and customized service
- Explicit Services: Benefits readily observable by the senses. The essential or intrinsic features
- Implicit Services: Psychological benefits or extrinsic features which the consumer may sense only vaguely

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

28

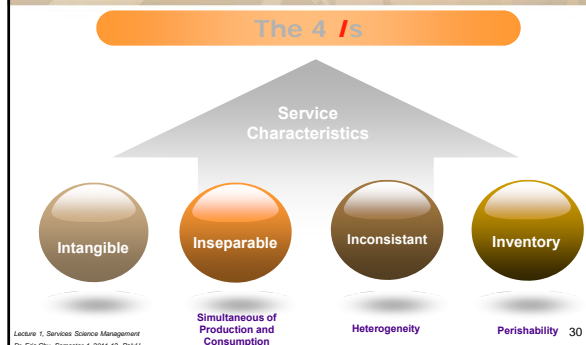
The Essence of a Service

- An act or performance offered by one party to another
- An economic activity that does not result in ownership
- A process that creates benefits by facilitating a desired change in:
 - customers themselves
 - physical possessions
 - intangible assets

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

29

Characteristics of Services



Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

30

Implications of Intangibility



- Services are performances rather than physical objects and cannot be seen, felt tasted in the same manner as products.
- Services cannot be inventoried
- Services cannot be easily patented
- Services cannot be readily displayed or communicated
- Pricing is difficult

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

31

Implications of Inconsistent



- Performance from the same service employee or different service employees rarely be the same in every service episode
- Service delivery and customer satisfaction depend on employee and customer actions
- Service quality depends on many uncontrollable factors
- There is no sure knowledge that the service delivered matches what was planned and promoted

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

32

Implications of Inseparable



- As services are produced in front of the customers, the performance cannot be stored or produced ahead of the requirements
- Customers participate in and affect the transaction
- Customers affect each other
- Employees affect the service outcome
- Mass production is difficult

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

33

Implications of Inventory



- As service cannot be stored, once it is idle, it is a waste or expenditure for the service organization
- It is difficult to synchronize supply and demand with services
- Services cannot be returned or resold

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

34

Challenges for Services



- Defining and improving quality
- Designing and testing new services
- Communicating and maintaining a consistent image
- Accommodating fluctuating demand
- Motivating and sustaining employee commitment
- Coordinating marketing, operations, and human resource efforts
- Setting prices
- Finding a balance between standardization versus personalization
- Ensuring the delivery of consistent quality

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

35

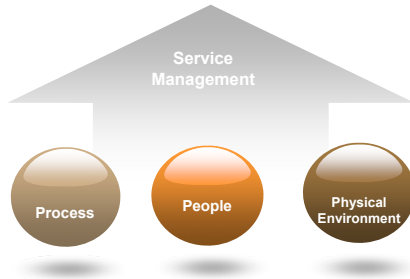
Managing Services



Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

Managing Services

The 3 Ps



Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

37

Process

- Method and Sequence in Service Creation and Delivery
- Design of activity flows
- Number and sequence of actions for customers
- Providers of value chain components
- Nature of customer involvement
- Role of contact personnel
- Role of technology, degree of automation

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

38

Physical Environment

- Designing the Service environment and providing tangible evidence of service performances
- Create and maintaining physical appearances
 - Buildings/landscaping
 - Interior design/furnishings
 - Vehicles/equipment
 - Staff grooming/clothing
 - Sounds and smells
 - Other tangibles

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

39

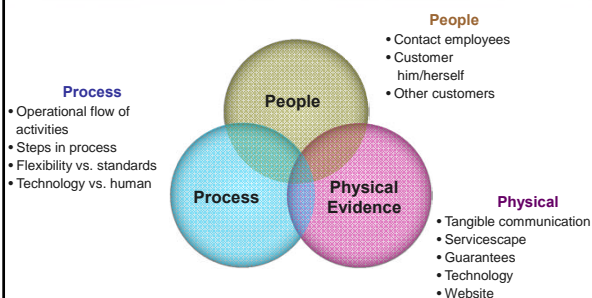
People

- Managing the Human Side of the Enterprise
- The right customers for the firm's mission
 - fit well with product/processes/corporate goals
 - appreciate benefits and value offered
 - possess (or can be educated to have) needed skills (co-production)
 - firm is able to manage customer behavior
- The right customer-contact employees performing tasks well
 - job design
 - recruiting/selection
 - training
 - motivation
 - evaluation/rewards
 - empowerment/teamwork

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

40

Service from Customers' Point of Views



Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

41

The Role of Strategic Management

- Begins with an entrepreneurs' idea on unmet needs in the market
- A visionary direction to compete in the market place
- Coordinating the entire system of functions within an business organization

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

42

Competitive Service Strategies

- Cost Leadership
 - Seeking out low-cost customers
 - Standardizing custom services
 - Reducing the people element in service delivery
 - Reducing the network costs
 - Taking service operations offline
- Differentiation
 - Making the intangible tangible
 - Customizing the standard product
 - Reducing the perceived risk
 - Giving attention to personnel training
 - Controlling quality
- Focus
 - Addressing specific customers' needs

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

43

Strategic Role of Information in Services

		Competitive Use of Information	
		On-line (Real time)	Off-line (Analysis)
Strategic Focus	External (Customer)	<u>Creating barriers to entry:</u> Reservation system Frequent user club Switching costs	<u>Data base asset:</u> Selling information Development of services Micro-marketing
	Internal (Operations)	<u>Revenue generation:</u> Yield management Point of sale Expert systems	<u>Productivity enhancement:</u> Inventory status Data envelopment analysis (DEA)

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

44

Summary

- Structure of Theories
 - Service as a process
 - Involves different triangles
 - Company – Employee – Customer
 - Marketing – Operations – Human Resources
 - Physical – Process – People
 - Gaps Model – Six Sigma – ITIL
- Characteristics of Services
 - Intangible, Inconsistent, Inventory, Inseparable (4Is)
- Managing Services
 - Physical, Process, People (3Ps)

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

45

Reference List

- Fitzsimmons, J. and Fitzsimmons M., Service Management: Operations, Strategy, Information Technology, McGraw-Hill/Irwin, 6th edition, 2008.
- In Hefley, B and Murphy, W. (Eds), Service Science, Management and Engineering: Education for the 21st Century, Springer, 2008.
 - Siegel et al., Legitimizing SSME in Academia: Critical Considerations and Essential Actions
 - Evenson, S., A Designer's View in SSME
- IBM, Service Science Worldwide community [Online] Available at <http://www.ibm.com/developerworks/spaces/ssme>, September 2011.
- Zeithaml, V.A., Bitner, M.J., and Gremler, D.D., Services Marketing: Integrating Customer Focus across the Firm, 5th edition, McGraw-Hill, 2008.

Lecture 1, Services Science Management
Dr. Eric Chu, Semester 1, 2011-12, PolyU

46