ISM 50 - Business Information Systems

Lecture 5

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Announcements

- **Read**
  - *Messerschmitt* Ch 2.3 (38-50)
  - *Messerschmitt* Ch 3.1-3.3 (59-82)

- **News Folio 1 due Tuesday**
  - (for those of you not assigned a presentation)

- **Homework assignment 2 due Thursday next week**

- **Class Forum Operational**
  - Go to [http://ic.ucsc.edu/webct](http://ic.ucsc.edu/webct)
Announcements

This Week’s Presentations:

- **11-Oct**
  - Christina Price (News)
  - Evan Housel (News)
  - Arthur Mueller (Frito Lay case)

- **16-Oct**
  - Kelsey Perkins (News)
  - Yee Luong (News)
Student Presentations
Porter Competitive Model?

- **What is it?**
  - A model to help understand the competitive environment in which a company operates.

- **What are the “5 forces“?**
  - Intra-Industry Competition
  - Bargaining power of Suppliers
  - Bargaining power of Customers
  - Substitutes
  - Threat of New Entrants.
Porter Competitive Model
(Identify the Industry and the Specific Market Being Evaluated)

- Potential New Entrants
- Bargaining Power of Suppliers
- Intra-Industry Rivalry
- Strategic Business Unit
- Bargaining Power of Buyers
- Substitute Products and Services
What do Porter Models Have to do with IT?

Any ideas?
Strategic Application Evolution

Progression of Information Technology within an enterprise.
Level 1: Strategic
Level 2: Offensive
Level 3: Defensive
Level 4: Cost-Justified
Level 5: Controlled

The progression is from bottom to top.
Strategic Uses of Information Technology

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<th>Strategy</th>
<th>IT Role</th>
<th>Outcome</th>
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<td>Improving Business Processes</td>
<td>Use IT to reduce costs of doing business</td>
<td>Enhance Efficiency</td>
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<td>Promote Business Innovation</td>
<td>Use IT to create new products or services</td>
<td>Create New Business Opportunities</td>
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<td>Locking in Customers and Suppliers</td>
<td>Use IT to improve quality Use IT to link business to customers and suppliers</td>
<td>Maintain Valuable Customers and Relationships</td>
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Strategic Uses of Information Technology

Strategy
- Raise Barriers to Entry
- Build a Strategic IT Platform
- Build a Strategic Information Base

IT Role
- Increase amount of investment or complexity of IT needed to compete
- Leverage investment in IS resources from operational uses to strategic uses
- Use IT to provide information to support firm’s competitive strategy

Outcome
- Increase Market Share
- Create New Business Opportunities
- Enhance Organizational Collaboration
Porter Model and Information Systems:

1. Build **barriers** to prevent a company from **entering** an industry?

2. Build in costs that would make it difficult for a customer to **switch** to another supplier?

3. Change the basis for competition within the industry?

4. Change the balance of power between a company and its customers or suppliers?

5. Provide the basis for new products and services?
Porter's Value Chain

- **Porter's Competitive Model** deals with the company's competitive environment.

- **Porter's Value Chain** tracks progress of a product through organization:
  - Starts with idea in research
  - Finishes with delivery to customer.
Generic Value Chain

- **FIRM INFRASTRUCTURE**
- **HUMAN RESOURCE MANAGEMENT**
- **TECHNOLOGY DEVELOPMENT**
- **PROCUREMENT**
- **INBOUND LOGISTICS**
- **OPERATIONS**
- **OUTBOUND LOGISTICS**
- **MARKETING AND SALES**
- **SERVICE**

**PRIMARY ACTIVITIES**

**SUPPORT ACTIVITIES**
Value Chain Purpose

- A way of classifying a company's activities and how they help deliver value to the customer.

- A framework for evaluating decisions like outsourcing, or deployment of IT.
Things to Remember Regarding the Value Chain

- The ultimate objective is value to customer.

- As a new product and/or services moves through the value chain, it is important to maximize value-add activities and minimize things that do not add value to customer.

- Functional departments must be sure to emphasize the ultimate goal of value to customer and not do things that seem to make them look good but contradicts the ultimate objective.
Simple Value Chain for Manufacturing Industry

Research and Development → Engineering → Production and Manufacturing → Marketing → Sales and Distribution → Service
Simple Value Chain for Retail Industry

Partnering with Vendor → Buying → Managing Inventory → Distributing Inventory → Operating Stores → Marketing and Selling
Examples of IT Supporting Value Chain

- Administrative Coordination and Support Services
  - Collaborative Workflow Intranet
  - Human Resources Management
- Employee Benefits Intranet
- Technology Development
- Product Development Extranet with Partners
- Procurement of Resources
- e-Commerce Web Portals for Suppliers

Primary Business Processes
- Inbound Logistics
  - Automated Just-in-Time Warehousing
- Operations
  - Computer-Aided Flexible Manufacturing
- Outbound Logistics
  - Online Point-of-Sale and Order Processing
- Marketing and Sales
  - Targeted Marketing
- Customer Service
  - Customer Relationship Management

Competitive Advantage
Other terms in Chapter 2

- **Agile Company**
  - Ability to prosper in rapidly changing environment
    - Some good examples in O’Brien ch2
A Virtual Company

A form of organization that uses telecommunications networks and other IT to link the people, assets and ideas of a variety of business partners, no matter where they may be located, in order to exploit a business opportunity.
Virtual Company Positives

• Share infrastructure and risk.
• Link complementary core competencies.
• Reduce concept-to-cash time through sharing.
• Increase facilities.
• Expand market coverage.
• Migrate from selling products to selling solutions.
• Migrate from selling boxes to selling systems.
Possible Negative Factors

• Will the vendor be able to perform the service at a cost sufficiently low enough and still gain a profit?

• Will the people laid off take with them essential skills and insights that the company needs?

• Will the vendor be able to respond to the organization’s new needs for capabilities and flexibility?
Explicit knowledge
- That which can be written down

Tacit Knowledge
- That which is cannot be written down
- Example: How to Ride a bicycle.

Much of a company's value is in its knowledge
- Patents, documents
- Tacit knowledge in employee's heads
Other terms in Chapter 2

- **Knowledge-Creating Company**
  - Create new business knowledge
  - Disseminate knowledge throughout company

- **Knowledge Management Systems**
  - Facilitate this dissemination
  - Often, like a search engine on a company intranet.

- Aside: might a knowledge management system affect the negotiating power of employees?
Total Quality Management

How do you say to a long time, loyal, hard working employee that quality isn’t good enough?
Total Quality Management

1. We are good, but we must continue to improve.

2. Individually and/or departmentally we may be very good but we must be as good in the total efforts of the entire organization.
What You’d Get From 99.9% Suppliers

- At Least 20,000 Wrong Drug Prescriptions Each Year.
- More than 15,000 Newborn Babies Dropped by Doctors or Nurses Each Year.
- Unsafe Drinking Water at Least One Hour Each Month.
- No Telephone Service or Television Transmission for Nearly Ten Minutes Each Week.
- Two Short or Long Landings at O’Hare Airport Each Day.
- Nearly 500 Incorrect Surgical Procedures Each Week.
- 2,000 Lost Articles of Mail Per Hour.
What You’d Get From Six Sigma Suppliers

• One Wrong Prescription in 25 Years.

• Three Newborn Babies Dropped by Doctors or Nurses in 100 Years.

• Unsafe Drinking Water One Second Every Sixteen Years.

• No Telephone Service or Television Transmission for Nearly Six Seconds in 100 Years.

• One Short or Long Landing in Ten Years in all the Airports in the U.S.

• One Incorrect Surgical Procedure in Twenty Years.

• Thirty-five Lost Articles of Mail Per Year.
Chapter 2 Summary

- Porter models are important as a way to evaluate competitive environment and/or internal processes.

- Use Porter strategy terminology in discussing how an industry and companies in the industry compete.
Frito Lay Case

Arthur Mueller
Break into discussion groups of 3 or 4

- **Position 1: The HHC is a great project**
  - It will:
    - reduce burden on sales force.
    - replace optical scanner system that we need to replace soon anyway.
    - Give us lots of good data for more effective marketing.

- **Position 2: The HHC is a bad project**
  - It costs $40 million or more (almost 10% of our annual profits!)
  - There is no solid proof that it will increase revenue or reduce costs enough to justify the investment.
  - It might not work properly, wasting the sales force’s time.
  - It is a distraction from our true mission - selling salty snacks!