Announcements

- Read
  - Messerschmitt Ch 2.3 (38-50)
  - Messerschmitt Ch 3.1-3.3 (59-82)
- Homework assignment 2 due next Tuesday
- Folio 1 due on Thursday
- 2 Classes on Jan 21st
  - 12:1-45 PM
  - 2:3-45 PM

Student Presentations

This Week’s Presentations:
- 21 Jan
  - Kellie (Cisco Case Study)
  - Ashley (News Story)
  - Brian (News Story)
  - Seth (News Story)

Example: Usefulness of Porter Model

Bob wants to start a dentist office
- However, bob did not go to dental school
- Bob will hire the dentist and other staff
- Is this a good model?

![Diagram of Porter Model]

Example: Usefulness of Porter Model

Suppose Alice, who is a dentist, opens an office

- Dentist School Graduates
  - Dentists moving in from other regions
- Suppliers
  - Indirect rivals
  - Other local dentist offices
- Buyers
  - Public in general
  - Insurance companies
  - Those wanting cosmetic dentistry
- Substitutes
  - Alternative Medicine

No! Dentist has too much bargaining power, she could always go into business for herself.
"Primary" Porter Strategies

- In economics you will learn a market where
  - Product is a commodity
  - Firms all have the same production costs
  - New firms can enter market at no cost ("free entry")
  - Profits are driven to zero.
- Consequently Firms need to
  - Differentiate and/or
  - Achieve Cost leadership

"Primary" Porter Strategies

- Differentiation—customer values the differences that you provide in products, services or capabilities.
- Cost—become the lowest cost provider. If this is the only primary strategy in the industry, over time there will only one ultimate winner.

Porter Supporting Strategies

- Innovation
  - Can reduce costs and or differentiate
- Growth
  - Help offset fixed costs
  - Establish reputable brand (differentiate)
- Alliances
  - Achieve more complete solution (differentiate)
  - Integration of each other's technology may reduce costs

Rules Regarding Strategies

- Must pick at least one of the two primary strategies.
- Can pick any combination of supporting strategies.

Let’s test the logic of this using Dell and Wal-Mart Stores.

Dell, Inc. Strategies

Primary Strategy:
- Differentiation
- Least Cost

Supporting Strategies:
- Innovation
- Growth
- Alliances

Wal-Mart Strategies

Primary Strategy:
- Least Cost
- Differentiation

Supporting Strategies:
- Innovation
- Growth
- Alliances
What do Porter Models Have to do with IT?
Any ideas?

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.

Value Chain Purpose
- A way of classifying a company's activities and how they help deliver value to customer.
- A framework for evaluating decisions like outsourcing, or deployment of IT.

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?

Generic Value Chain

<table>
<thead>
<tr>
<th>PRIMARY ACTIVITIES</th>
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<tbody>
<tr>
<td>SUPPORT ACTIVITIES</td>
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<tr>
<td>OPERATIONS</td>
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<tr>
<td>OUTSOURCED LOGISTICS</td>
</tr>
<tr>
<td>PROCUREMENT</td>
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<tr>
<td>TECHNOLOGY DEVELOPMENT</td>
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<tr>
<td>HUMAN RESOURCES MANAGEMENT</td>
</tr>
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<td>FIRM INFRASTRUCTURE</td>
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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 adding 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 contradict the ultimate objective.
Simple Value Chain for Manufacturing Industry

Research and Development  Engineering  Production and Manufacturing  Marketing  Sales and Distribution  Services

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

Support Processes

Business Processes

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.

Other terms in Chapter 2

- Agile Company
  - Ability to prosper in rapidly changing environment
  - Some good examples in O'Brien ch2

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 downsides

- 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?

Other terms in Chapter 2

- 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**

**Frito Lay**

- Market:
  - Salty Snacks
- Who owns Frito Lay
  - PepsiCo
- Competitors:
  - P & G (Pringles)
  - Anheuser Busch (Eagle Snacks)
  - Borden (Wise Chips)
  - Small Regionals
- Sales Force
  - 10000 people
  - Drive around in trucks, sell and deliver snacks

**Frito Lay**

- Growth
  - In the 70s, "double digit"
  - Mid 80s - slowed to single digit.
  - Foreign Expansion?
    - Not for Frito-Lay division, because PepsiCo has a separate international snacks div.
- Good:
  - Several top brands
- Bad
  - Monolithic national approach

**Frito-Lay**

- Segmentation
  - Supermarkets
  - "up/down street"
- Regionalized Micro-Marketing
  - Targeted smaller brands to regional customers
- Hand Held Computer
  - Small computer for each salesperson to carry around
  - Log sale transaction data.
Frito-Lay

- 3 stated objectives
  - Replace optical scanner system used now
  - IBM will stop supporting it soon
  - $1 hour per day per driver paper-work reduction
  - Marketing effectiveness
    - Detailed sales data
    - Will help make regional marketing decisions
    - Negotiate with stores for more shelf space

Frito-Lay

- Cost of Implementation:
  - Data Center upgrade
    - $1.2 million
  - Machinery in Truck
    - 10000 x 3000 = $30 million
  - computers in distribution centers
    - 5-10 million?
  - 45 Systems Development Professionals
    - $70K x 45 = ~3 million

TOTAL: 45-55 million

Frito Lay

- To have a 10% Rate of Return, what would the benefits per year have to be?
  (for simplicity assume these benefits are received every year forever)
  ~5 million

Break into discussion groups of 3 or 4

- What are the risks the project is facing?
- What is Frito Lay doing to mitigate these risks?
- Does your group think the potential benefits are worth the risks and costs?
  Why or why not?

Frito Lay

- HHC was a $40+ million project
- What were risks?
- How did they mitigate risks?
- Risk Mgmt
  - Pilot test of technology
  - 3 layer rollout
    - 1) essential systems
    - 2) sales compensation
    - 3) strategic uses of new data (fuzzy)

Action plan

- Region by region?
- All at once?
- Weakest or Strongest region first?
Frito Lay

- HHC deployed to LA area first, a region that won a sales award
- By the end of the 80's
  - HHC deployment completed
  - Development of Information Systems to process HHC data to support operations
- Early 90's re-org to decentralize decision making to different regions

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue</th>
<th>Profit</th>
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<tbody>
<tr>
<td>1985</td>
<td>$2447</td>
<td>$401</td>
</tr>
<tr>
<td>2004</td>
<td>$9091</td>
<td>$2366</td>
</tr>
</tbody>
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- Revenue growth ~ 6% per year on average