ISM 50 - Business Information Systems

Lecture 4

Instructor: John Musacchio
UC Santa Cruz
October 7, 2008
Announcements

- Read Frito Lay case for Thursday.

- Homework assignment 2 is posted on web (due on October 16th)

- posted on website:
  - Group/Company Assignments
  - Presentation/News Folio Assignments
Announcements

Thursday’s Presentations:
Student Presentations
Business Processes

What is a business process?

- A designed *succession of actions* to the accomplish of some result in a business.

Example

- Order Fulfillment
A Business Process

Business Functions
- Customer
- Sales
- Finance
- Inventory Control
- Warehousing

Customer:
- Order
  - Take Order
  - Enter Order
  - Credit Check
  - Check Stock
  - Print Packing list
  - Tell Mfg. to make order
  - Find Goods
  - Print Invoice
  - Ship

Finance:
- Inventory Control
- Warehouse
Cross Functional Process

- A business process that crosses over multiple functions
- Are all business processes cross functional?
A business process within a function

Example: Channel Selection Process within Marketing function

1. New Product idea
2. Conduct Focus Group Studies
3. Find sales by channel Data for similar products
4. Mine Demographic data
5. Combine information Make decision

Flowchart:
- New Product idea
- Conduct Focus Group Studies
- Find sales by channel Data for similar products
- Mine Demographic data
- Combine information Make decision
Processes tend to be more simple at smaller organizations

Enrollment Process at a small, fictitious university...

- Fee Processing
- Financial Aid
- Housing
- Dinning
- Recreation Membership
- Health Insurance
- Class Registration
Processes tend to be more simple at smaller organizations

Enrollment Process at UCSC...
Similarly, at small companies

Example: Capital Equipment Purchase Business Process...
Big company

Capital Equipment Purchase Business Process

Director

manager

finance

accounting

IT Dept
So where do Information Systems Fit into this Story??

- Coordinates flow of information between functional departments carrying out a business process.
  - Increase Speed
  - Reduce Errors

- May reduce number of steps in a business process.

- May even allow new processes that would not have been feasible before...
Information System Roles

Competitive Advantage

Effectiveness

Efficiency
A few Information System Categories…

- **Information Systems**
  - **Operations Support Systems**
    - **Transaction Processing Systems**
      - Processing Business Transactions
    - **Process Control Systems**
      - Control of Industrial Processes
    - **Enterprise Collaboration Systems**
      - Team and Workgroup Collaboration
  - **Management Support Systems**
    - **Management Information Systems**
      - Prespecified Reporting for Managers
    - **Decision Support Systems**
      - Interactive Decision Support
    - **Executive Information Systems**
      - Information Tailored for Executives
**Transaction Processing Systems**

- Record and Process data resulting from business transactions
- Example: Credit card trans. processing
- 2 types
  - Real-time
  - Batch-Processing
An example: Process Control Systems

- Monitor and control physical processes

- Example:
An example decision support systems
What is Business Process Reengineering?

- A fundamental rethinking and redesign of business processes

- Minor improvement to a business process is often called streamlining the business process
Business Process Example

Customer
Order
Take Order
Enter Order
Credit Check
Check Stock
Print Invoice
Print Packing list
Find Goods
Tell Mfg. to make order

Sales
Finance
Inventory Control
Warehousing

Business Functions
A Streamlined Business Process

Customer

Order

Take Order

Enter Order

Credit Check

Check Stock

Print Invoice

Print Packing list

Find Goods

Ship

Tell Mfg. to make order
A Reengineered Business Process

Customer

Order
On web

Automatic Credit Check
Automatic Checking of Stock

Business Functions

Sales

Finance

Inventory Control

Warehousing

Inform Mfg. to replenish stock

Print
Packing list
And invoice

Find Goods

Ship
Role of Information Systems in Business Process Reengineering?

- IS often enables complicated business processes be made more simple.

- IS doesn’t always drive business process reengineering though...
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
Porter Competitive Model
Education Industry – Universities

Potential New Entrants

Intra-Industry Rivalry
SBU: UCSC
Rivals: UC campuses, CSU, Private universities, Community Colleges

Substitute Products and Services
• Internet Distance Learning
• Books and Videotapes
• Computer-Based Training
• Company Education Programs

Bargaining Power of Suppliers
• Faculty
• Staff
• Equipment and Service Suppliers
• Alumni
• Foundations
• Governments
• IT Vendors

Bargaining Power of Buyers
• Students
• Parents
• Businesses
• Employers
• Legislators

• Foreign Universities
• Shift in Strategy by Universities or Companies
Porter Model in Business Paper

- You must include a Porter Model in your Business Paper
  - Figure
    - Make it look nice!
  - Narrative analysis of the five forces
    - Identify the industry.
    - Identify the major buyers, suppliers, potential new entrants, substitutes, and intra-industry rivals.
    - Discuss if and why these players put strong or weak competitive pressures on your business.
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?

  ![Porter Model Diagram]

  New Entrants
  Suppliers
  Dentist (Alice)
  Bob’s Dentist Office
  Substitutes
  Buyers

No! Dentist has too much bargaining power, she could always go into business for herself.
Example: Usefulness of Porter Model

- Suppose Alice, who is a dentist, opens an office

**New Entrants**
- Dental School Graduates
- Dentists moving in from other regions

**Suppliers**
- Staff
- Hygienists

**Intra-industry rivals**
- SBU: Alice’s Dentist Office
  - Other local dentist offices

**Substitutes**
- Alternative Medicine?

**Buyers**
- Public in general
- Insurance companies
- Those wanting cosmetic dentistry
“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 be 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 others technology may **reduce costs**