ISM 50 - Business Information Systems

Lecture 7

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UC Santa Cruz
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Class Announcements

- Business Paper Proposal Due Tuesday!

- Tuesday presentations:
  - Bradon Espinoza (Alibris Case)
  - Ellis McKiernan (news)

Class Announcements

- Project proposals due in 5 days!!
  - 1-2 pages
  - Give a plan what you will do
  - Cite some references, and show that you have started your research!
  - See website for more details.

Student Talks

- Aaron Harlan (News)

What do Porter Models Have to do with IT?
Any ideas?

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**

<table>
<thead>
<tr>
<th>PRIMARY ACTIVITIES</th>
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<tbody>
<tr>
<td>INBOUND LOGISTICS</td>
</tr>
<tr>
<td>OPERATIONS</td>
</tr>
<tr>
<td>OUTBOUND LOGISTICS</td>
</tr>
<tr>
<td>MARKETING AND SALES</td>
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<tr>
<td>SERVICE</td>
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</tbody>
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**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.

**A Virtual Company**

- A form of Organization
- ...that uses telecommunication and other IT to link
  - People
  - Assets
  - Ideas
  - Business partners
- ... in order to exploit a business opportunity

**Examples of IT Supporting Value Chain**

**Virtual Company Positives**

- Move more quickly
- Combine the products and services of specialized vendors to create something new.
- Might allow company to focus more on offering solutions (products+services) rather than product itself.
Possible Negative Factors

- Will vendors be low enough cost?
  - What about their bargaining power?
- Should the skills and knowledge be developed and maintained in-house?
  - Competitive advantage
  - Future flexibility

Other terms in Chapter 2

- Explicit knowledge
  - That which can be written down
- Tacit Knowledge
  - That which is can not 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?

Applications

- What is an application?
  - Computer software that performs useful capabilities for a user, organization, incorporating storage, manipulation, and communication of information.
- An organizational application
  - Supports an organization
- Often called enterprise application
  - (An enterprise is an organization with a commercial mission)

Types of organizational applications

- Departmental
  - Supports a single functional department
  - Example: An accounts management application for an accounting department.
- Enterprise
  - Support enterprise-wide processes and goals.
    - Example: coordinate information between functional departments involved in fulfilling an order.
      (or other cross functional process.)

Some Types of Organizational Applications

- Worker Collaboration
  - Example: video conferencing
- Operations and Logistics
  - Example: coordinate movements of goods between sites.
- Decision Support
  - Summarize info for execs.
- Knowledge Management
  - Organize and retrieve knowledge in company's documents and databases
Examples

Software Merchant
- Customer Relationship Management
  - Maintain a case file of customer questions and complaints.
  - Website of Freq. Asked Ques. And documentation.
  - Chat application for customers to communicate with tech-support personnel.

Examples

On-Line Stock Trading
- Information Management application for paying customers
- Specialized software to interface with customers
  - stock exchange
  - Customer's bank

Some more terms

Transaction Processing Systems record and process data from business transactions.

Batch Processing - transactions are accumulated over a period of time and processed periodically.

In Online Transaction Processing (OLTP), transactions are processed immediately.

Some More Terms

- A workflow application supports ongoing repetitive tasks.
  - Example: An application that passes a case summary of a customer from customer service to tech support.

So what exactly is ERP??

The precursor to ERP, MRP

- MRP (Material or Manufacturing Resource Planning)
  - Take:
    - Product Demand forecasts
    - Inventory Balances
    - Replenishment Lead Times
  - Develop a Production schedule for a single plant
  - At this Point, it is a planning tool
Later on More capabilities added

- Order Processing
- Product Costing

The planning tool begins to take more and more of an active roll in the business processes.

A desire to Link Across Functional Departments of firm

- Each functional department had its own legacy application
  - Programmed in different languages
  - Different Data formats

- Often some data was shared between departments by duplicating it.

MRP evolves into ERP

- A common software architecture with modules to support different business functions.
  - Accounting, finance, sales, HRM, material management, etc...
- Key features:
  - Multi-functional
  - Integrated
  - Modular

ERP

- How would you design an ERP?
- Design a user interface for each module
  - Ask user to fill in certain “fields” at particular times.
  - Set up a sequence of events
    - When the sales department enters an order, that event triggers an event at the manufacturing department.
- But by doing this, aren’t we presuming a particular business process?

Fundamental options

- Customize the application to existing organization?
- Mold organization to off-the-shelf application?
  - Is software a good way to propagate best practices?

Break
Cisco Case

Jason Liang