Class Announcements

- Reading for next time
  - Cisco Case

- Folio 1 due today
  - (only those not assigned a presentation)

- Assignment 2 due Thursday

- Business Paper Proposal Due in 1 week!

Class Announcements

- Project proposals due in 7 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.

- Speakers next class
  - Diana Gonzalez Lozano (Cisco Case)
  - Christopher Lee (news)

Student Talks

- Katie Adamiak (news)
- Kumi Matsumoto (news)

Frito Lay (Review)

- Market: Salty Snacks
  - Who owns Frito Lay?

- 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

- 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
  - ½ 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

- 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)

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

1985
- Revenue: $2847
- Profit: $401

2004
- Revenue: $9091
- Profit: $2366
- Revenue growth ~ 6% per year on average

Other Terms From O'Brien
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...
  - 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?

Other terms in Chapter 2

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

- 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

- 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?

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.

Information access

by

David G. Messerschmitt
A hierarchy

- **Data**: numbers, character strings, etc.
- **Information**: recognizable patterns organized so as to inform or influence us in some way
- **Knowledge**: concepts, relationships, truths, principles.
- **Wisdom**: insight or judgement

Classification of 'XV', 'SF', 34, 'CN', 16
- The 49-ers won Super Bowl XV by a score of 34 to 16.
- The National Football Conference wins 17 out of 20 Super Bowls on average.
- Football is a major cause of obesity because fans spend too much couch potato time in front of the boob tube.

Roles in information access

- User
- Author or publisher
- Indexer or organizer
- Librarian or teacher or interpreter
- Recommender

Classification based on "A Streetcar Named Desire":
- Tennessee Williams
- Actor
- Critic
- Playbill magazine

Classification based on "Understanding Networked Applications":
- D.G. Messerschmitt
- Morgan Kaufmann
- Amazon.com

Exercise

User
- Author or publisher
- Indexer or organizer
- Librarian or teacher
- Recommender

How are these roles being changed by networked computing?
Push vs. pull

User

Control over what is provided

Time when it is provided

Publisher

Intermediate cases:

Notification

Subscription

Pull

Push

Proper roles of push and pull in a workgroup

Pull: work

Pull: attention

Brainstorming

Notification of topic

Accessing documents

Notification of document availability

Reminder of deadlines

Question

What are some differences between push and pull with respect to:

- invasiveness on the user?
- refinement of the information received?
- timeliness with which information received?

Some modalities of information access

Aids in finding useful information

Besides the information content itself, other aids:

- reference to related information: hyperlink
- list of content: index
- description of content: metadata
- judgment of content: recommendation

Exercise

Give an example of the following functions in the context of movie rentals:

Hyperlink

Index

Metadata

Recommendation
Question

Comment on the following widely held beliefs (at their time):
- "the movie will displace legitimate theater"
- "television will displace movies"
- "remote learning will displace the university campus as we know it"

What does this suggest about networked applications?

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.

So what exactly is ERP??

**Early 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

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**ERP Overview**

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**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?

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**Questions**

How standardized are organizational processes?
- Customer service
- Finance
- Manufacturing

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**Fundamental options**

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