Class Announcements

For next time

- Read Cisco Case
- Laudon and Laudon Ch9 “e-commerce: digital markets, digital goods”
Class Announcements

- Project proposals due on 1/29!!
  - 2-3 pages
  - Give a plan what you will cover in report
  - Cite some references, and show that you have started your research!
    - Remember **references must be cited in the body of the text** with footnotes or end notes.
# Database Tutorials

## JANUARY

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- 21-23:30
- 26-5-6:30

- Oakes College 205
• Businesses are collections of business processes—

• Some times they are written in manuals, but in many cases business processes are informal.

• To use IS effectively, you need to change business processes.

• Before changing processes, you need to change people’s attitudes and behaviors, and even the organization itself.
• Business process management = continuous improvement
  • Identify processes for change.
  • Analyze existing processes.
  • Design new process.
  • Implement new process.
  • Measure new process.
Figure 3-7

Access online bookstore → Search online catalog → Book Available? → Enter order and payment data → Receive book in mail → Yes

No → Select other online bookstore → Access online bookstore
Business Process Reengineering

- A radical form of fast change
- Not continuous improvement, but elimination of old processes, replacement with new processes, in a brief time period
- Can produce dramatic gains in productivity, but increases organizational resistance to change
Enterprise 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.
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??
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
ERP Overview
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?
Questions

How standardized are organizational processes?

- Customer service
- Finance
- Manufacturing
Fundamental options

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

- **Integrated software modules**
- **Central database**

Data shared by different business processes...

...and functional areas

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Figure 8-1
Nike’s Supply Chain

Figure 8-2
This figure illustrates the major entities in Nike’s supply chain and the flow of information upstream and downstream to coordinate the activities involved in buying, making, and moving a product. Shown here is a simplified supply chain, with the upstream portion focusing only on the suppliers for sneakers and sneaker soles.
Push- Versus Pull-Based Supply Chain Models

The difference between push- and pull-based models is summarized by the slogan “Make what we sell, not sell what we make.”

**Push-Based Model**
- Supplier: Supply to forecast
- Manufacturer: Production based on forecasts
- Distributor: Inventory based on forecasts
- Retailer: Stock based on forecasts
- Customer: Purchase what is on shelves

**Pull-Based Model**
- Supplier: Supply to order
- Manufacturer: Produce to order
- Distributor: Automatically replenish warehouse
- Retailer: Automatically replenish stock
- Customer: Customer orders

**Figure 8-5**
Analytical CRM uses a customer data warehouse to analyze customer data. Data from firm’s “customer touch points” and from other sources.

Customer Relationship Management Systems

Analytical CRM Data Warehouse

Figure 8-11