Class Announcements

- For next time
  - Read Cisco Case
    - Hwk 2 due by start of class Tuesday
    - On ecommons
  - Laudon and Laudon Ch10 “e-commerce: digital markets, digital goods”
  - Database Assignment 1 posted

Database Tutorials

- Database tutorial sessions will be
  - Thursday 10/8/15, 4:30 – 6:00pm at Merrill Ming Ong PC lab
  - Friday 10/9/15, 4:30 – 6:00pm at Merrill Ming Ong PC lab
  - Monday 10/12/15, 4:00 – 5:30pm at Merrill Ming Ong PC lab

Project proposals due on 10/29!!
- 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.

Enterprise 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**
  - Supports 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**
  - Support decision making by middle managers

- **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.

**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.

- **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 role 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?

Essentials of Management Information Systems
Chapter 8 Achieving Operational Excellence and Customer Intimacy: Enterprise Applications

Supply Chain Management Systems

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."
What Is Customer Relationship Management?

- Knowing the customer
  - In large businesses, too many customers and too many ways customers interact with firm

- Customer relationship management (CRM) systems
  - Capture and integrate customer data from all over the organization
  - Consolidate and analyze customer data
  - Distribute customer information to various systems and customer touch points across enterprise
  - Provide single enterprise view of customer

CRM Software

- CRM packages typically include tools for:
  - Sales force automation (SFA)
    - E.g., sales prospect and contact information, and sales quote generation capabilities
  - Customer service
    - E.g., assigning and managing customer service requests; Web-based self-service capabilities
  - Marketing
    - E.g., capturing prospect and customer data, scheduling and tracking direct-marketing mailings or e-mail

Customer Loyalty Management Process Map

This process map shows how a best practice for promoting customer loyalty through customer service would be modeled by customer relationship management software. The CRM software helps firms identify high-value customers for preferential treatment.

Operational and Analytical CRM

- Operational CRM:
  - Customer-facing applications such as sales force automation, call center and customer service support, and marketing automation

- Analytical CRM:
  - Analyzes customer data output from operational CRM applications
  - Based on data warehouses populated by operational CRM systems and customer touch points
  - Customer lifetime value (CLTV)

Business Value of Customer Relationship Management

- Business benefits:
  - Increased customer satisfaction
  - Reduced direct-marketing costs
  - More effective marketing
  - Lower costs for customer acquisition/retention
  - Increased sales revenue

- Churn rate:
  - Number of customers who stop using or purchasing products or services from a company
  - Indicator of growth or decline of firm’s customer base
Enterprise Application Challenges

- Highly expensive to purchase and implement enterprise applications—total cost may be four to five times the price of software
- Technology changes
- Business process changes
- Organizational changes
- Switching costs, dependence on software vendors
- Data standardization, management, cleansing

Extending Enterprise Software

- To bring greater value from enterprise applications
  - Enterprise solutions/suites: make applications more flexible, Web-enabled, integrated with other systems
  - Service platform: integrates multiple applications to deliver a seamless experience for all parties
    - Order-to-cash process
    - Portal software

Analytical CRM Data Warehouse

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

Figure 8-11

- Customer data
  - Channels
    - Call center
    - Web site
    - Wireless
    - Self-service
    - E-mail
    - Mail
    - Partner
  - Other sources
    - Legacy systems
    - Demographic data
    - Transaction data
    - Promotional campaign data
- Data mart
  - Profitable customers
  - Market segments
  - Customer profiles
  - Churn analysis

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