TIM 50 - Business Information Systems  
Lecture 2  

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Announcements  
- Business paper preferences due Tuesday  
- Assignment 1 posted and due Thursday (1/15)  
  - On OTIS case  
- Read ch 3 of Laudon and Laudon for Tuesday  

Business Analysis Paper Preferences  
Due NEXT WEEK -- Tuesday 1/13!  
- We want you to try to form your own groups.  
  - However, we may modify the groups to balance skills and experience  
- As a group, turn in (paper):  
  - Names of proposed group members with emails  
  - List of companies you would like to study  
- Use the form we provide on the class webpage!  

Business Paper Preferences 1/13  
- To help us create balanced groups...  
- ...you will self identify your best skills from:  
  - W: Writing  
  - A: Accounting and finance  
  - C: Computers and technology  
  - S: Business strategy  
  - L: Literature Search  

Business Paper Preferences  
- Example:  
  - Bob Smith smith@yahoo.com  
  - Jane Doe JaneDoe@hotmail.com  
  - Chris Tomas christ@gmail.com  

Business Analysis Paper Preferences  
Due Tuesday 1/13!  
At least two of your preferred companies must be from this list:  
- Emirates (airline), CVS Caremark, eBay, Carrefour (Supermarket Chain), Charles Schwab  
- Inditex (Clothing retailer), Netflix, Volkswagen Group, Amazon  

With your preferences in mind, we will make the final company assignments to the groups.
What is a Business?

An organization that provides a product and/or a service that satisfies a need for which people are willing to pay money.

Makes money if revenues exceed costs.

Why Does a Company Need to Make a Profit?

- An obligation to owners/shareholders
  - Owners and shareholders have invested money and time. They expect to see something in return.
- Survival requires continued investments
  - New product development.
  - Facilities and equipment.
  - Acquiring other companies.
  - Invest in employees (training and salary increases)
- Stakeholders want to see performance before investing in a company’s future.

Recall: What is a System?

System Definition: A group of interrelated components working toward the attainment of a common goal by accepting inputs and producing outputs in an organized transformation process

- Input
- Processing
- Output
- Feedback
- Control

Business as a System

A business is an organizational system where economic resources (input) are transformed by various organizational processes (processing) into goods and services (output).

A Business is a System

Helps to remember and to tie together:

- Some business basics while remembering the importance of making a profit.
- The understanding of business functions.
- The appreciation for the importance of business processes.
Important Things to Understand

Two terms:

1) business functions
2) business processes

Will be frequently used throughout this course.

It would be a good idea to make absolutely sure that you know what they are.

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Business Functions

**Function:** A group of people with related skills (specialized) seems to be a good starting point in understanding functions but this is a fairly loose definition.

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Business Functions

- **Examples**
  - Design
  - Engineering
  - Sales
  - Finance
  - Marketing
  - Etc...

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What prompts the creation and justification of business functions?

- Specialization
- Size
- Efficiency
- More cost effective

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Business Processes

What is a business process?

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

Example

- Order Fulfillment

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A Business Process

Customer → Order → Take Order → Enter Order → Credit Check → Check Stock → Print Packing List → Find Goods → Ship → Tell Mfg. to make order
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

Processes tend to be more simple at smaller organizations

Enrollment Process at a small, fictitious university...

- Fee Processing
- Financial Aid
- Housing
- Dining
- 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
Business and Firm Hierarchies

- Hierarchy with authority is concentrated at top
- Goal: Achieve Coordination
- Typical Breakdown:
  - Senior management
  - Middle management
    - Knowledge workers
    - Operational management
      - Data workers
      - Production or service workers
  - Operational management
  - Knowledge workers
  - Data workers
  - Production or service workers
- Each group has different needs for information

Components of a Business

- Management information systems:
  - Assist middle managers with reports on firm’s performance.
  - Summarize and report on basic operations using data from TPS.
  - Provide weekly, monthly, annual results, but may enable drilling down into daily or hourly data.
  - Typically not very flexible systems with little analytic capability (in contrast to higher level systems).
- Transaction processing systems:
  - Serve operational managers.
  - Answer routine questions
    - E.g., Is the widget in stock? Was Bob paid?
  - Monitor status of internal operations and firm’s relationship with external environment.
    - E.g., Is the gizmo in production? Did we get paid?
  - Feed information to higher level info. systems.
- Executive support systems:
  - Address strategic issues and long-term trends, both in firm and in external environment.
How MIS Obtain Their Data from TPS

Components of a Business

Transaction Processing Systems

Management Information Systems

Order file
Order processing system
Sales data
Materials resource planning system
Product change data
MIS FILES

Production master file
Users product cost data
General ledger system
Expense data

Accounting file

Figure 2-6

Sample MIS Report

Consolidated Consumer Products Corporation Sales by Product and Sales Region: 2000

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Sales Region</th>
<th>Actual Sales</th>
<th>Planned Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>4459</td>
<td>Carpet Cleaner</td>
<td>Northeast</td>
<td>4,005,700</td>
<td>4,005,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>South</td>
<td>3,775,123</td>
<td>3,750,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Midwest</td>
<td>4,005,580</td>
<td>4,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>West</td>
<td>4,000,040</td>
<td>4,000,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>16,785,383</td>
<td>17,000,000</td>
</tr>
</tbody>
</table>

Figure 2-7

This report, showing summarized annual sales data, was produced by the MIS in Figure 2-6.

Decision Support System Example:
Voyage-Estimating Decision Support System

This DSS operates on a powerful PC. It is used daily by managers who must develop bids on shipping contracts.

Figure 2-8

Model of an Executive Support System

This system pools data from diverse internal and external sources and makes them available to executives in an easy-to-use form.

Figure 2-9

Types of Business Information Systems

Enterprise applications

• Executive support systems (ESS):
  • Serve senior managers.
  • Address strategic issues and long-term trends
    • E.g., what products should we make in five years?
  • Nonroutine decision making
  • Provide generalized computing capacity that can be applied to changing array of problems
  • Draw summarized information from MIS, DSS, and data from external events
  • Typically use portal with Web interface to present content

Essentials of Management Information Systems
Chapter 2 E-Business: How Businesses Use Information Systems

Types of Business Information Systems

• Enterprise applications
  • Systems that span functional areas, focus on executing business processes across the firm, and include all levels of management.
  • Supply chain management systems
  • Customer relationship management systems
  • Enterprise Resource Planning Systems
  • Knowledge management systems

Systems That Span the Enterprise

Figure 2-10

Types of Business Information Systems

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Systems That Span the Enterprise

Figure 2-11
### Supply Chain Management Systems
- Manage relationships with suppliers, purchasing firms, distributors, and logistics companies.
- Manage shared information about orders, production, inventory levels, and so on.
- Goal is to move correct amount of product from source to point of consumption as quickly as possible and at lowest cost.
- Type of interorganizational system:
  - Automating flow of information across organizational boundaries.

### Customer Relationship Management Systems
- Help manage relationship with customers.
- Coordinate business processes that deal with customers to optimize revenue and customer satisfaction, and increase sales.
- Combine sales, marketing, and service record data from multiple communication channels to provide unified view of customer, eliminate duplicate efforts.
- E.g., Saab CRM applications to achieve 360 degree view of customers resulted in greater follow-up rate on sales leads and increased customer satisfaction.

### Enterprise Systems
- Integrate data from key business processes into single system.
- Speed communication of information throughout firm.
- Enable greater flexibility in responding to customer requests, greater accuracy in order fulfillment.
- Enable managers of large firms to assemble overall view of operations.
- Alcoa used ERP to eliminate redundancies and inefficiencies in its disparate systems.