Global E-business and Collaboration

Learning Objectives

• What are business processes? How are they related to information systems?
• How do systems serve the different management groups in a business and how do systems that link the enterprise improve organizational performance?
• Why are systems for collaboration and social business so important and what technologies do they use?
• What is the role of the information systems function in a business?

Problem: Need to improve employee collaboration and knowledge sharing; outdated knowledge on intranet

Solutions: New technology for collaborative knowledge sharing

Microsoft Yammer provided enterprise-wide social networking platform for collaboration on projects and editing of shared documents

Demonstrates IT’s role in collaboration and documenting knowledge

Illustrates the ability of information systems to positively change business culture

Business processes:
– Flows of material, information, knowledge
– Sets of activities, steps
– May be tied to functional area or be cross-functional

Businesses: Can be seen as collection of business processes

Business processes may be assets or liabilities
Examples of functional business processes

- Manufacturing and production
  - Assembling the product

- Sales and marketing
  - Identifying customers

- Finance and accounting
  - Creating financial statements

- Human resources
  - Hiring employees

Information technology enhances business processes by:

- Increasing efficiency of existing processes
  - Automating steps that were manual

- Enabling entirely new processes
  - Change flow of information
  - Replace sequential steps with parallel steps
  - Eliminate delays in decision making
  - Support new business models

Transaction processing systems

- Serve operational managers and staff
- Perform and record daily routine transactions necessary to conduct business
  - Examples: sales order entry, payroll, shipping
- Allow managers to monitor status of operations and relations with external environment
- Serve predefined, structured goals and decision making
A TPS for payroll processing captures employee payment transaction data (such as a time card). System outputs include online and hard-copy reports for management and employee paychecks.

Business intelligence
- Data and software tools for organizing and analyzing data
- Used to help managers and users make improved decisions

Business intelligence systems
- Management information systems
- Decision support systems
- Executive support systems

Management information systems
- Serve middle management
- Provide reports on firm’s current performance, based on data from TPS
- Provide answers to routine questions with predefined procedure for answering them
- Typically have little analytic capability
Management Information Systems
Chapter 2: Global E-business and Collaboration

Sample MIS Report

Consolidated Consumer Products Corporation Sales by Product and Sales Region: 2015

<table>
<thead>
<tr>
<th>PRODUCT CODE</th>
<th>PRODUCT DESCRIPTION</th>
<th>REGION</th>
<th>ACTUAL SALES</th>
<th>PLANNED SALES</th>
<th>ACTUAL vs PLANNED</th>
</tr>
</thead>
<tbody>
<tr>
<td>4469</td>
<td>Carpet Cleaner</td>
<td>Northeast</td>
<td>4,906,700</td>
<td>4,800,000</td>
<td>0.95</td>
</tr>
<tr>
<td></td>
<td></td>
<td>South</td>
<td>3,778,112</td>
<td>3,750,000</td>
<td>1.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Midwest</td>
<td>4,867,921</td>
<td>4,600,000</td>
<td>1.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td>West</td>
<td>4,903,480</td>
<td>4,400,000</td>
<td>0.91</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>18,751,253</td>
<td>17,550,000</td>
<td>0.95</td>
</tr>
</tbody>
</table>

| 5674         | Room Freshener      | Northeast | 3,676,700 | 3,900,000 | 0.94            |
|              |                     | South     | 5,638,112 | 4,700,000 | 1.18            |
|              |                     | Midwest   | 4,711,921 | 4,200,000 | 1.12            |
|              |                     | West      | 4,363,340 | 4,000,000 | 0.93            |
| TOTAL        |                     |         | 18,558,253 | 17,700,000 | 1.05            |

FIGURE 2-4 This report, showing summarized annual sales data, was produced by the MIS in Figure 2-3.

Decision support systems
- Serve middle management
- Support nonroutine decision making
  - Example: What is the impact on production schedule if December sales doubled?
- May use external information as well TPS / MIS data
- Model driven DSS
  - Voyage-estimating systems
- Data driven DSS
  - Intrawest’s marketing analysis systems

Voyage-Estimating Decision Support System

READ THE INTERACTIVE SESSION AND DISCUSS THE FOLLOWING QUESTIONS

Interactive Session: Technology

List and describe the types of systems described in this case study.

How do these systems improve the operation of the business?

How do these systems support decision making? Identify three different decisions that can be supported by these systems.

Why is improving the guest experience so important at Vail Mountain Resort?
Executive support systems
- Support senior management
- Address nonroutine decisions
  - Requiring judgment, evaluation, and insight
  - Incorporate data about external events (e.g., new tax laws or competitors) as well as summarized information from internal MIS and DSS
- Example: Digital dashboard with real-time view of firm’s financial performance: working capital, accounts receivable, accounts payable, cash flow, and inventory

Enterprise applications
- Systems for linking the enterprise
- Span functional areas
- Execute business processes across firm
- Include all levels of management
- Four major applications:
  - Enterprise systems
  - Supply chain management systems
  - Customer relationship management systems
  - Knowledge management systems

Enterprise systems
- Collects data from different firm functions and stores data in single central data repository
- Resolves problem of fragmented data
- Enable:
  - Coordination of daily activities
  - Efficient response to customer orders (production, inventory)
  - Help managers make decisions about daily operations and longer-term planning
• Supply chain management (SCM) systems
  – Manage firm’s relationships with suppliers
  – Share information about:
    • Orders, production, inventory levels, delivery of products and services
  – Goal:
    • Right amount of products to destination with least amount of time and lowest cost

• Customer relationship management systems:
  – Provide information to coordinate all of the business processes that deal with customers
    • Sales
    • Marketing
    • Customer service
  – Helps firms identify, attract, and retain most profitable customers

• Knowledge management systems (KMS)
  – Support processes for capturing and applying knowledge and expertise
    • How to create, produce, deliver products and services
  – Collect internal knowledge and experience within firm and make it available to employees
  – Link to external sources of knowledge

• Also used to increase integration and expedite the flow of information
  – Intranets:
    • Internal company Web sites accessible only by employees
  – Extranets:
    • Company Web sites accessible externally only to vendors and suppliers
    • Often used to coordinate supply chain
• **E-business**
  - Use of digital technology and Internet to drive major business processes

• **E-commerce**
  - Subset of e-business
  - Buying and selling goods and services through Internet

• **E-government**:
  - Using Internet technology to deliver information and services to citizens, employees, and businesses

• **Collaboration**:
  - Short lived or long term
  - Informal or formal (teams)

• **Growing importance of collaboration**:
  - Changing nature of work
  - Growth of professional work—“interaction jobs”
  - Changing organization of the firm
  - Changing scope of the firm
  - Emphasis on innovation
  - Changing culture of work

• **Social business**
  - Use of social networking platforms, internal and external
  - Engage employees, customers, and suppliers
  - Goal is to deepen interactions and expedite information sharing
  - “Conversations”
  - Requires information transparency
    - Driving the exchange of information without intervention from executives or others

• **Business benefits of collaboration and teamwork**
  - Investments in collaboration technology can bring organization improvements, returning high ROI
  - **Benefits**:
    - Productivity
    - Quality
    - Innovation
    - Customer service
    - Financial performance
      - Profitability, sales, sales growth
Successful collaboration requires an appropriate organizational structure and culture, along with appropriate collaboration technology.

**Requirements for Collaboration**

- Building a collaborative culture and business processes
  - “Command and control” organizations
    - No value placed on teamwork or lower-level participation in decisions
  - Collaborative business culture
    - Senior managers rely on teams of employees.
    - Policies, products, designs, processes, and systems rely on teams.
    - The managers purpose is to build teams.

**Tools for collaboration and teamwork**
- E-mail and instant messaging
- Wikis
- Virtual worlds
- Collaboration and social business platforms
  - Virtual meeting systems (telepresence)
  - Cloud collaboration services (Google Tools, cyberlockers)
  - Microsoft SharePoint
  - IBM Notes
  - Enterprise social networking tools

**Enterprise social networking software capabilities**
- Profiles
- Content sharing
- Feeds and notifications
- Groups and team workspaces
- Tagging and social bookmarking
- Permissions and privacy
Interactive Session: Management

- Identify the management, organization, and technology factors responsible for impeding adoption of internal corporate social networks.
- Compare the experiences for implementing internal social networks of the two organizations. Why was one more successful than the other? What role did management play in this process?
- Should all companies implement internal enterprise social networks? Why or why not?

**IS SOCIAL BUSINESS WORKING OUT?**

Read the Interactive Session and discuss the following questions:

- Two dimensions of collaboration technologies
  - Space (or location)—remote or co-located
  - Time—synchronous or asynchronous
- Six steps in evaluating software tools
  1. What are your firm’s collaboration challenges?
  2. What kinds of solutions are available?
  3. Analyze available products’ cost and benefits.
  4. Evaluate security risks.
  5. Consult users for implementation and training issues.

**The Time/Space Collaboration Tool Matrix**

- Information systems department:
  - Formal organizational unit responsible for information technology services
  - Often headed by chief information officer (CIO)
    - Other senior positions include chief security officer (CSO), chief knowledge officer (CKO), chief privacy officer (CPO)
  - Programmers
  - Systems analysts
  - Information systems managers
• **End users**
  - Representatives of other departments for whom applications are developed
  - Increasing role in system design, development

• **IT Governance:**
  - Strategies and policies for using IT in the organization
  - Decision rights
  - Accountability
  - Organization of information systems function
    - Centralized, decentralized, and so on