Information System
ITEC-522
First Semester Third Year
Information Technology

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Week # 4

Business Processes and Information Systems

- Business processes:

  - Workflows 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

Cont.

- Examples of functional business processes
  - Manufacturing and production
    - Assembling the product
  - Sales and marketing
    - Identifying customers
  - Finance and accounting
    - Creating financial statements
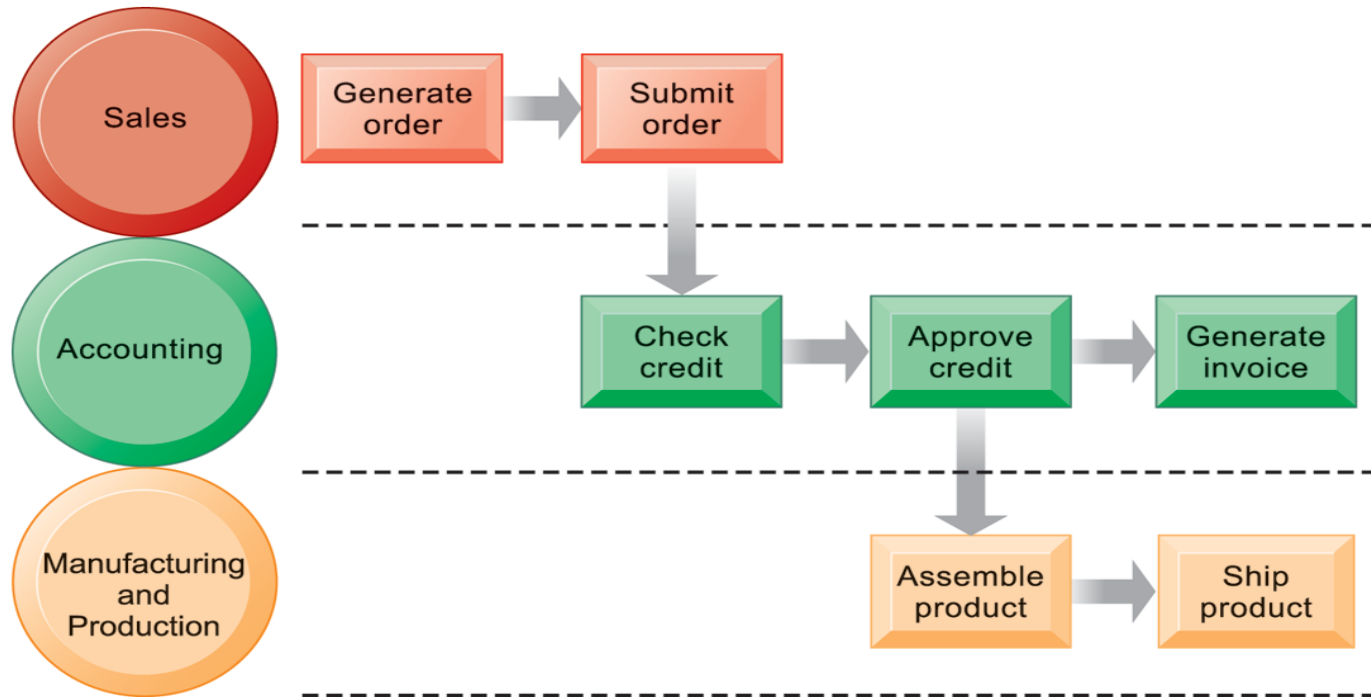 - Human resources
    - Hiring employees

Cont.

- Information technology enhances business processes in two main ways:

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

2. Enabling entirely new processes that are capable of transforming the businesses
   - Change flow of information
   - Replace sequential steps with parallel steps
   - Eliminate delays in decision making

Examples of Functional Business Processes

- Manufacturing and production: Assembling product, checking quality, producing bills of materials

- Sales and marketing: Identifying customers, creating customer awareness, selling

- Finance and accounting: Paying creditors, creating financial statements, managing cash accounts

- Human Resources: Hiring employees, evaluating performance, enrolling employees in benefits plans
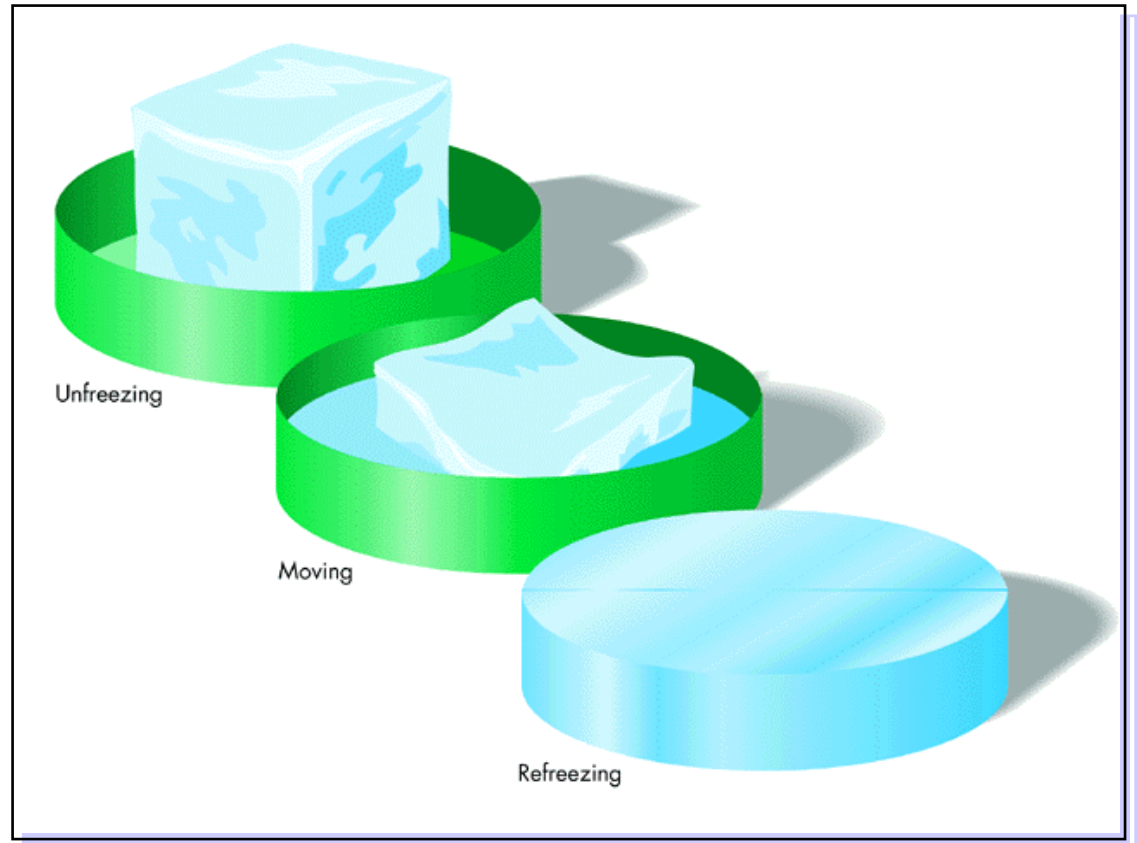
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Order Fulfillment Process

Fulfilling a customer order involves a complex set of steps that requires the close coordination of the sales, accounting, and manufacturing functions.

Organizational Change
Lewin & Schein

• **Create receptive climate(there is a better way to operate)**

• **Learn new methods, obtain commitment**

• **Reinforce, reward new behavior**

Unfreezing

Moving

Refreezing

Reengineering

- The radical redesign of business processes to achieve a significant breakthrough in business results
  - Delivery time
  - Product & service quality
  - Costs, revenue & productivity

Reengineering

- Employee resistance
- Employees must understand benefits
- Old rules must be challenged
  Examples
  - Size of orders
  - Credit approval
  - Decision-making level

Reengineering

- Examples of reengineering initiatives
  - Simplifying work processes
  - Combining several jobs into one
  - Outsourcing ancillary processes
  - Entering new business areas
  - Establishing new management structures
  - Renovating technology systems

Reengineering vs. Continuous Improvement

- Strong action to solve serious problems

- Top-down-driven by senior executives

- Broad in scope; cuts across organizations

- Goal is to achieve a major breakthrough

- Routine actions to make minor improvements

- Worker driven

- Narrow in scope; focus in a given area

- Goal is continuous, gradual improvement

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Total Quality Management

- Company-wide effort to add more value
  - Keen awareness of customer
  - Strategic vision for quality
  - Empowerment of employees
  - Rewards for high quality

Outsourcing

- Contracting with outside professional services to meet specific business needs.
  - Focus on core business
  - Save money

Downsizing

- Reducing the number of employees to cut costs

Performance-Based Information Systems

- Productivity
  - A measure of the output achieved divided by the input required.
- Return on Investment
  - Profit or benefit as a percentage of investment
- Earnings Growth
- Market Share
- Customer Awareness & Satisfaction
- Total Cost of Ownership

Identifying Risks

- How well are requirements understood?

- Does the project require pioneering effort?

- Is there a risk of severe business repercussions?
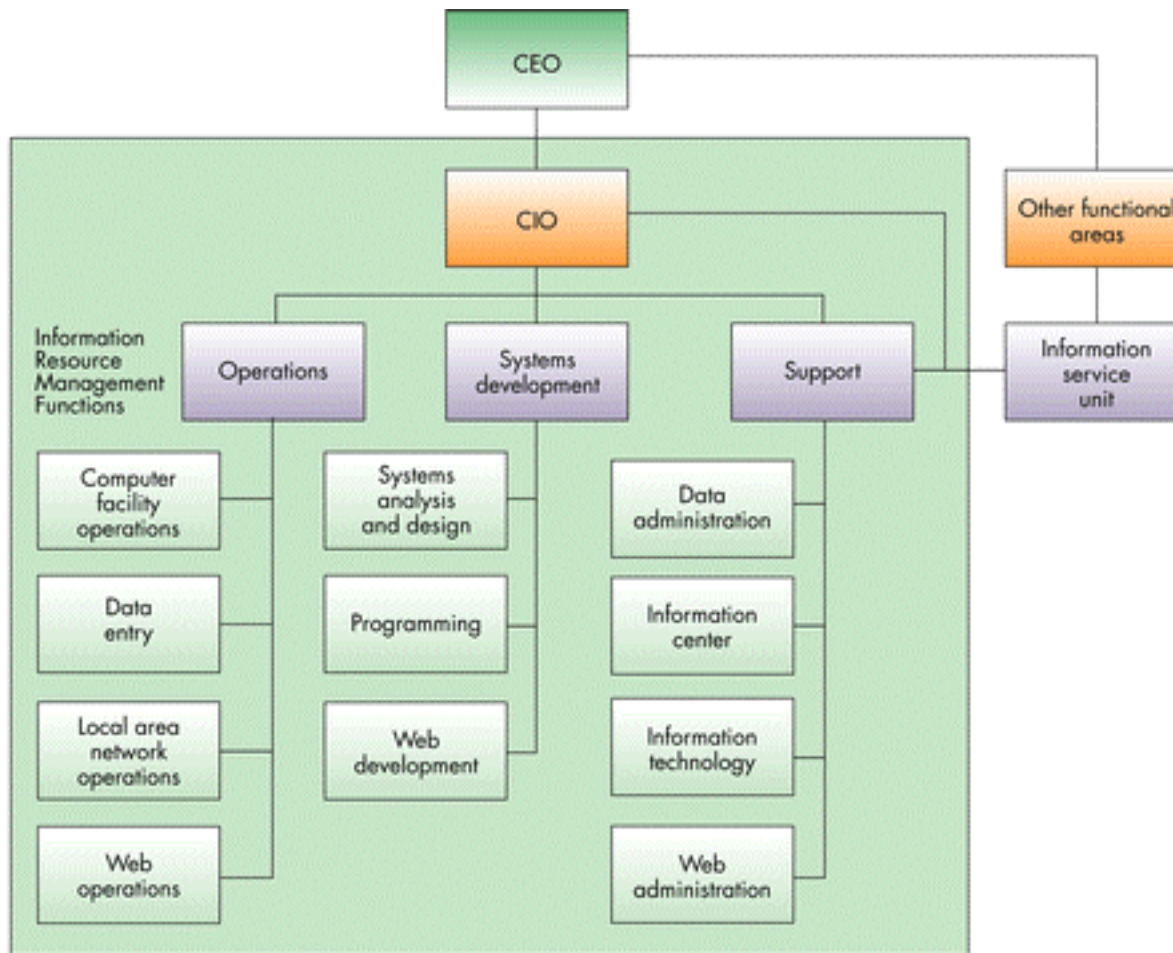
Leading Edge vs. Bleeding Edge

- Bleeding Edge: When failure occurs because an organization tries to be too far out on the technological leading edge
  - Time-Warner's Pathfinder portal
- Leading Edge: Let competitors test the new technology first
  - Microsoft Word, Excel, Access, IE

Justifying IS

- Tangible savings (reduced costs)
- Intangible savings (better decisions)
- Legal requirements (reports)
- Modernization (Y2K, new apps)
- Pilot project (laptops)

Roles and Functions in the IS Department

Discussion

Questions?