Information Systems for Business Integration: EDI, SCM, CRM Systems

(April 2, 2009)

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LEARNING GOALS

- Discuss Supply Chain Management systems
- Discuss Customer Relationship Management systems.

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Business Integration?
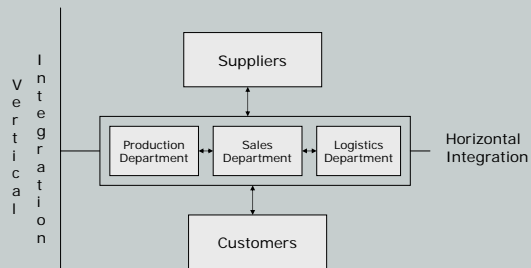
Vertical Integration

Suppliers

Production Department — Sales Department — Logistics Department

Horizontal Integration

Customers

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Supply Chain Management - SCM

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Vertical Integration with suppliers

- Possible consequences of bad vertical integration with suppliers:
  - Raw material shortage
  - Receiving more raw material than needed
  - Etc.

- Good integration implies good Supply Chain Management

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Supply Chain

- Supply Chain includes parties involved in the procurement of product or raw material
  - Upstream parties
  - Downstream parties

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Supply Chain Management SCM

- SCM implies the management of information flow between a company and upstream and downstream parties of the supply chain
- Which of the following is NOT a potential benefit of SCM?
  - a) It helps avoid shortage of raw material
  - b) It could shorten the time for delivering finished products to distributors
  - c) It could help organizations better forecast their production of goods and services
  - d) It could help organizations better forecast the needs of their distributors
  - e) None of the above

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SCM Process

- Stages of SCM (SC Council's Reference Model):

  1) Planning: develop and implement processes that attempt to forecast demand for products and services
     - **Goal:** Balance demand with supply of raw material
  2) Sourcing: determine who should supply the items required
     - **Goal:** Be supplied on time, within budget
  3) Production: make the product
     1) Schedule production
     2) Ensure raw materials are on hand when needed
  4) Product delivery (logistics)
     1) Everything from receiving a customer inquiry to invoicing
     2) Warehouse management is one very important factor
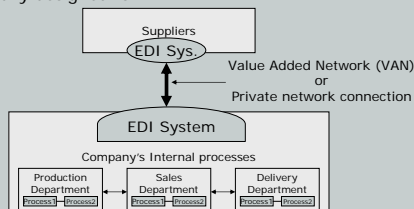 5) Returns: managing returns of raw materials as well as finished goods

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EDI: SCM Technology

- Electronic Data Interchange (EDI):
  - A network technology that allows the transfer and processing of business documents (usually orders) between a company and its suppliers
  - Private network connections or Value Added networks specially designed for EDI

Suppliers

EDI Sys.

Value Added Network (VAN)
or
Private network connection

EDI System

Company's Internal processes

Production Department	Sales Department	Delivery Department
Process1 Process2	Process1 Process2	Process1 Process2

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EDI: SCM Technology

- EDI documents must be formatted according to specific standards
  - ANSI X12 – used in North America
  - EDIFACT – international, but widely used in Europe

- Advantages:
  - Eliminates paperwork
  - Reduces errors
  - Speeds supply process

- Disadvantages:
  - Provides connection only between two companies
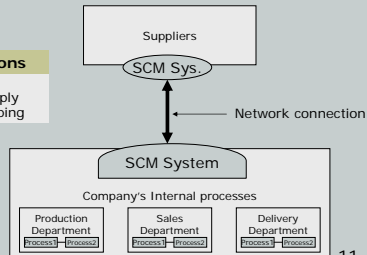 - Limits freedom of comparing prices.

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SCM information system

- Part of extended ERP components
- Could be bought separately

Suppliers
SCM Sys.

Three main functions
- Forecast demand
- Handle purchase of supply
- Manage storage + shipping

Network connection

SCM System

Company's Internal processes

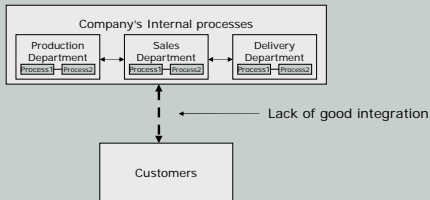| Production Department	Sales Department	Delivery Department
Process1 — Process2	Process1 — Process2	Process1 — Process2

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Customer Relationship Management - CRM

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Vertical Integration with customers

- Possible consequences of bad vertical integration with customers:
  - Out of product
  - Poor customer support
  - Etc.

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          Company's Internal processes
  ┌─────────────────────────────────────────┐
  │ Production      Sales         Delivery   │
  │ Department      Department    Department │
  │ [Process1][Process2] [Process1][Process2] [Process1][Process2] │
  └─────────────────────────────────────────┘
                      ┊
                      ┊ ◄──── Lack of good integration
                      ┊
               ┌──────────────┐
               │  Customers   │
               └──────────────┘
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CRM systems

- CRM systems are systems that can help manage all aspects of organizations' relations with their customers.
- Which of the following is NOT a potential benefit of CRM systems?
  - a) Provide better customer service
  - b) Make call centers more efficient
  - c) Simplify marketing and sales processes
  - d) Get a better knowledge of customers needs
  - e) None of the above

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Systems for Vertical Integration

- Goal of CRM is to increase sales and repeat business by learning the customer
  - Determine the customer's needs and preferences
  - Determine the customer's satisfaction with service
  - Determine which customers are in the magic 20 percent (or have the potential to become part of it)

- **R**ecency, **F**requency, **M**onetary value (RFM) at heart of CRM systems. CRM helps in determining:
  - How recently a customer purchased items (Recency)
  - How frequently a customer purchased items (Frequency)
  - How much a customer spends on each purchase (Monetary Value

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CRM software

- CRM software modules include
  - Personalization
  - Marketing automation
  - Sales force automation
  - Service and support

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CRM Module Functions

- Personalization
  - One-to-one marketing through personalized products and services

- Marketing automation
  - Determine market segments
  - Planning and implementing campaigns
  - Analyzing results
  - Segment customers
    - Demographics
    - Past purchases
    - Preferred method of shopping

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CRM Module Functions (continued)

- Sales force automation
  - Managing contacts and leads by storing customers' basic demographic data
  - Provide to-do lists and calendars
  - Recognize early customer trends
  - Forecasts of future sales

- Service and support
  - After-sales support
  - Complaint resolution
  - Returns

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Summary Questions

	Book	Notes
1) Is the information flow between a company and its retailers part of its supply chain?		6
2) What are the potential benefit of SCM systems?		7
4) What is EDI? What is the EDI message standard used in the U.S.? In Europe?		9
5) Are SCM systems part of ERP systems? Are SCM systems sold as separate system from ERP systems?		11
5) What are the potential benefit of CRM systems?		14
5) What is the main goal of using CRM systems? What is meant by RFM?		15

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