SISTEM INFORMASI PERUSAHAAN

- Konsep dan definisi
- Evolusi SI eksekutif dan SI perusahaan
- Peran eksekutif dan kebutuhan informasi
- Karakteristik dan kemampuan sistem pendukung eksekutif
- Perbandingan dan integritasi SI eksekutif dengan SPK
- Soft informasi dalam SI
- Lahirnya SI perusahaan: PLM, BPM dan BAM

Referensi lihat SAP: [5] Bab 8,
[7] Chapter 8
Concepts and Definitions

• Executive information systems (EIS)

• Executive support systems (ESS)

• Enterprise information systems (EIS)

Evolution of Executive and Enterprise Information Systems

• DSS and ODSS

• 1980s: Top execs get Executive Information Systems

• 1995+’s: Move to everybody’s information systems and enterprise information systems

• Definitions follow
Executive Information System (EIS)

- A computer-based system that serves the information needs of top executives
- Provides rapid access to timely information and direct access to management reports
- Very user-friendly, supported by graphics
- Provides exceptions reporting and "drill-down" capabilities
- Easily connected to the Internet
- Drill down

Executive Support System (ESS)

Comprehensive support system that goes beyond EIS to include

- Communications
- Office automation
- Analysis support
- Intelligence
Enterprise Information System

- Corporate-wide system
- Provides holistic information
- From a corporate view
- Part of enterprise resource planning (ERP) systems
- For business intelligence
- Leading up to enterprise information portals and knowledge management systems
Executives’ Role and Their Information Needs

• Decisional Executive Role (2 Phases)
  1. Identification of problems and/or opportunities
  2. The decision of what to do about them

• Flow chart and information flow (Figure 8.1)

• Use phases to determine executives’ information needs
Methods for Finding Information Needs

• Wetherbe's Approach
  1. Structured Interviews
     – IBM's Business System Planning (BSP)
     – Critical Success Factors (CSF)
     – Ends/Means (E/M) Analysis
  2. Prototyping

• Watson and Frolick's Approach
  – Asking (interview approach)
  – Deriving the needs from an existing information system
  – Synthesis from characteristics of the systems
  – Discovering (Prototyping)
    • Ten methods

• Other Methods
Characteristics of EIS

- Drill down
- Critical success Factors (CSF)
- Status access
- Analysis
- Exception reporting
- Colors and audio
- Navigation of information
- Communication

Critical Success Factors (CSF)

Monitored by five types of information

1. Key problem narratives
2. Highlight charts
3. Top-level financials
4. Key factors (key performance indicators (KPI))
5. Detailed KPI responsibility reports
Characteristics and Benefits of EIS (Table 8.1)

- Quality of information
- User interface
- Technical capability provided
- Benefits

Comparing and Integrating EIS and DSS

- Tables 8.2 and 8.3 compare the two systems
  - Table 8.2 - DSS definitions related to EIS
  - Table 8.3 - Comparison of EIS and DSS

- EIS is part of decision support
Integrating EIS and Group Support Systems

• EIS vendors - easy interfaces with GSS

• Some EIS built in Lotus Domino / Notes

• Comshare Inc. and Pilot Software, Inc. - Lotus Domino/Notes-based enhancements and Web/Internet/Intranet links

Traditional EIS Software

• Major Commercial EIS Software Vendors
  – Comshare Inc. (www.comshare.com)
  – Pilot Software Inc. (www.pilotsw.com)

• Application Development Tools
  – In-house components
  – Comshare Commander tools
  – Pilot Software’s Command Center Plus and Pilot Decision Support Suite
Organizational DSS (ODSS)

• Three Types of Decision Support
  – Individual
  – Group
  – Organizational

  Hackathorn and Keen (1981)

• Organizational decision support focuses on an organizational task or activity involving a sequence of operations and actors

• Each individual's activities must mesh closely with other people's work

• Computer support is for
  – Improving communication and coordination
  – Problem solving
Definitions of ODSS

• A combination of computer and communication technology designed to coordinate and disseminate decision-making across functional areas and hierarchical layers in order that decisions are congruent with organizational goals and management's shared interpretation of the competitive environment (R. T. Watson, 1990)

• A DSS that is used by individuals or groups at several workstations in more than one organizational unit who make varied (interrelated but autonomous) decisions using a common set of tools (Carter et al., 1992)

• A distributed decision support system (DDSS). Not a manager's DSS, but supports the organization's division of labor in decision making (Swanson and Zmud, 1990)

• Apply the technologies of computers and communications to enhance the organizational decision-making process. Vision of technological support for group processes to the higher level of organizations (King and Star, 1990)
Common Characteristics of ODSS (George, 1991)

• Focus is on an organizational task or activity or a decision that affects several organizational units or corporate problems

• Cuts across organizational functions or hierarchical layers

• Almost always involves computer-based technologies, and may involve communication technologies

• Can Integrate ODSS with Group DSS and Executive Information Systems

• ODSS are an enterprise information system directly concerned with decision support
Supply and Value Chains and Decision Support

• Supply chain: (originally) flow of materials from sources to internal use

• Demand chain: flow from inside to customers
Supply Chain

• The flow of materials, information, and services from raw material suppliers through factories and warehouses to the end customers

• Includes the organizations and processes that create and deliver value to the end customers
Supply Chain Management (SCM)

- To deliver an effective supply chain and do it effectively

- To plan, organize, and coordinate the supply chain’s activities
SCM Benefits

- Reduction in uncertainty and risks in the supply chain
- Positively affect
  - inventory levels
  - cycle time
  - processes
  - customer service
- Increase profitability
Supply Chain Components

- Upstream
- Internal supply chain
- Downstream

Involves product life cycle activities

Example (Figure 8.2)
Issues and Research

- GSS/EMS methods
- Web groupware
- Distance learning
- Virtual organization