Sistem Informasi
(Arsitektur dan Manajemen SI)


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Objektif

- Understand the different ways in which ISs are deployed in organizations.

- Be able to list and explain the advantages and disadvantages of each IS architecture.

- Know the importance of collaboration between IS managers and line managers, and understand the relationships between the two groups.

- Be able to describe career paths and responsibilities in the IS field.
Centralized Information Systems Architecture

- Advantages
  - High degree of control
  - Easy to maintain hardware, software, procedure, and operation standards
  - Easy control of access to information

- Disadvantages
  - Inflexible
  - Lack of customization
Didalam *centralized IS architecture*, sumber daya informasi di kelola dalam satu atau lebih “large computers” sebagai pusat kontrol.
Decentralized Information Systems Architecture

- Allows departments and remote sites independence in organizing and using their ISs
- Local IS department establishes infrastructure
- Disadvantages
  - Difficult to share applications and data among units
  - Expensive to maintain and service different systems
Didalam decentralized IS architecture, setiap karyawan dari setiap departemen (A, B, C) menggunakan data/informasi yang khusus dimiliki oleh departemennya sendiri.
Distributed Information Systems

- Each unit selects and implements its own system.
- Remote units can share resources through communication lines.
- Many organizations changing to distributed architecture.
  - Increased reliability and affordability of data communication and PC technology
Didalam distributed IS architecture, setiap karyawan selain dapat menggunakan data/informasi yang dimiliki oleh departemennya mereka juga dapat memanfaatkan data/informasi yang diliki oleh departemen lain melalui communication lines.
Centralized vs. decentralized IS trade-offs

- Centralized Information Systems
  - Standardized Hardware and Software
  - Easier Training
  - Common Reporting Systems
  - Effective Planning of Shared Systems
  - Easier Strategic Planning
  - Efficient Use of IS Personnel
  - Tighter Top Management Control

- Decentralized Information Systems
  - Better Fit of Systems to Needs
  - Timely Response
  - Applications Development by End Users
  - Innovative Information Systems
Advantages of Centralized IS Management

- Standardized hardware and software
- Easier training
- Encouragement of common reporting systems
- Effective planning of shared systems
- Easier strategic planning
- Efficient use of IS personnel
- Accommodation of tight control by top management
Centralized management of ISs
Centralized vs. Decentralized ISs: Advantages and Disadvantages

Advantages of Decentralized IS Management

• Better fit of ISs to business needs
• Timely responsiveness of IS units to business demands
• Encouragement of end user application development
• More innovative use of ISs
• Support for delegation of authority
Decentralized management of ISs (in fully decentralized management, the central IS unit would not exist)
Trends in Information Systems Organization

– Discarding Big Iron (mainframe computers)
  • Switch to PCs brings distributed IS architecture benefits.

– Reengineering with Information Technology
  • Effort for breakthrough gains through radical business process and system changes.
  • Almost always leads to integrating IT in all processes.
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