

CHAPTER 1. THE ~~INFORMATION SYSTEMS~~ REVOLUTION

TRANSFORMING BUSINESS AND MANAGEMENT



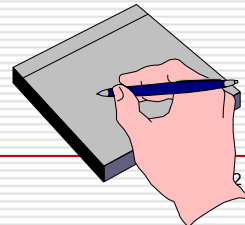
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Learning objectives (#1)

- Define information systems
- COMPUTER LITERACY versus INFORMATION SYSTEMS LITERACY
- Explain impact of information systems on organization & management

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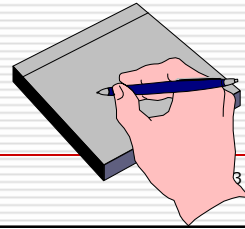
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Learning objectives (#2)

- Compare electronic commerce & electronic business, relationship to internet & digital technology
- Identify major management challenges to building, using information systems

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Management challenges (Sections)

- Why information systems?
- Contemporary approaches to information systems
- New role of info systems in organizations
- Learning to use info systems: new opportunities with technology

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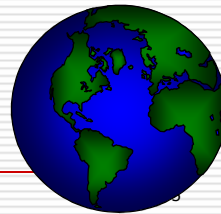


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Business Environment (sections)

- Globalization
- Industrial economies
- Transformation of the enterprise

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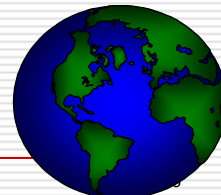


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Globalization

- Future Success Factor (Globalization)
- Management & control (IT)
- Competition in world markets
- Global work groups (SW Team)
- Global delivery systems (Real and Virtual)

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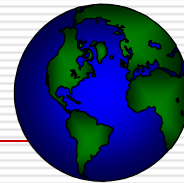
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Transformation of Industrial Economies

- Knowledge- (Info-) based economies
- Productivity (System Quality)
- New products & services
- Knowledge as an asset
- Time-based competition
- Shorter product life
- Turbulent environment
- Limited employee knowledge base

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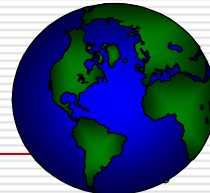


Transformation of enterprise

- Flattening
- Decentralization
- Flexibility
- Location independence
- Low transaction costs
- Empowerment (Electric-Firms)
- Collaborative work

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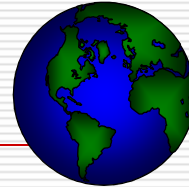


Knowledge- and information-intensive products

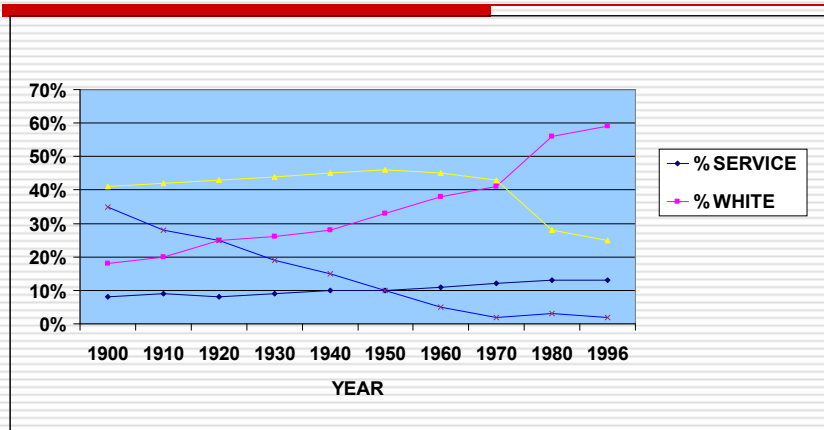
- ❑ Products that require a great deal of learning & knowledge to produce
- ❑ Employing Millions of People
- ❑ Optimize within Organization and Maximize Firm's Knowledge Resources

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LABOR FORCE COMPOSITION 1900-1996 (Figure 1-1)

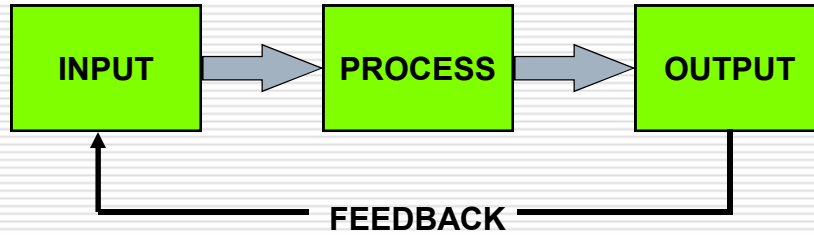


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Source: Laudon & Laudon 2000

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What is SYSTEM ?

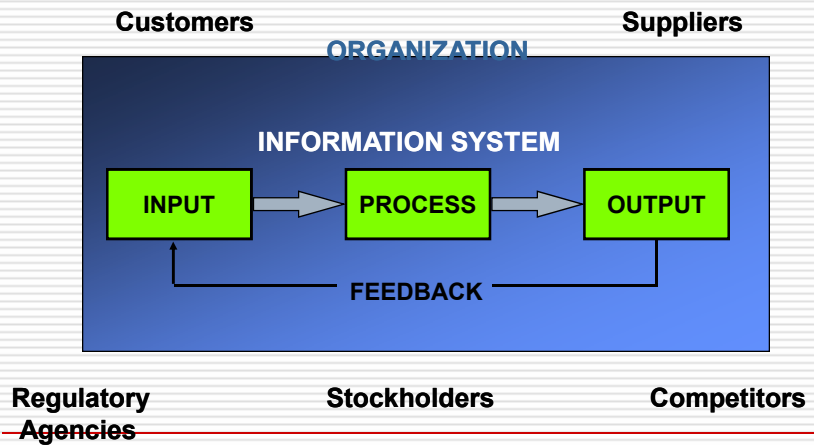


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FUNCTIONS OF AN INFORMATION SYSTEM (figure 1-3)

ENVIRONMENT

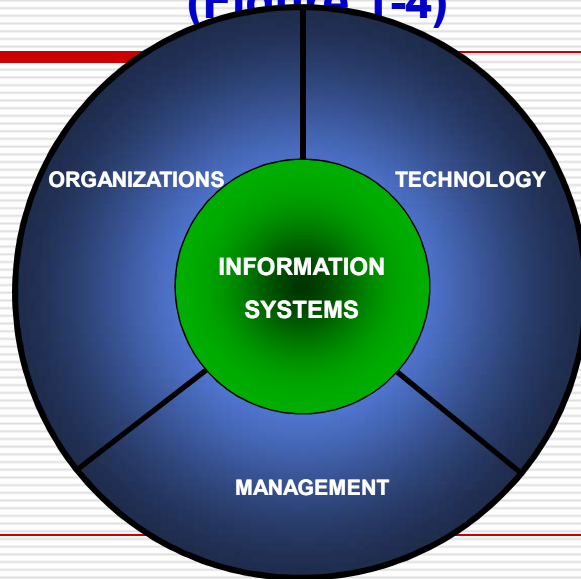


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INFORMATION SYSTEMS

(Figure 1-4)



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Computer-based information systems (CBIS)

- Formal systems
- Fixed definitions of data, procedures
- Collecting, storing, processing, disseminating, using data

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A Business Perspective on Information Systems

- Organizational and Management Solution, based on IT, posed by Env.
- Information Systems Literacy – Computer Literacy
- SOPs (Standard Operation Procedures)

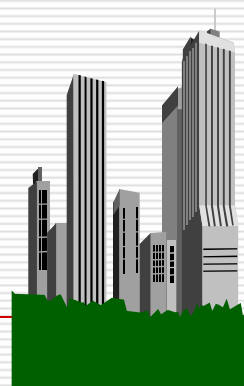
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Major organizational functions (Table 1-2)

- Sales & marketing
- Manufacturing
- Finance
- Accounting
- Human resources

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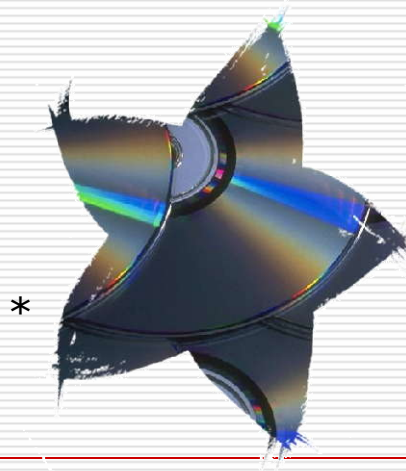


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Computer technology

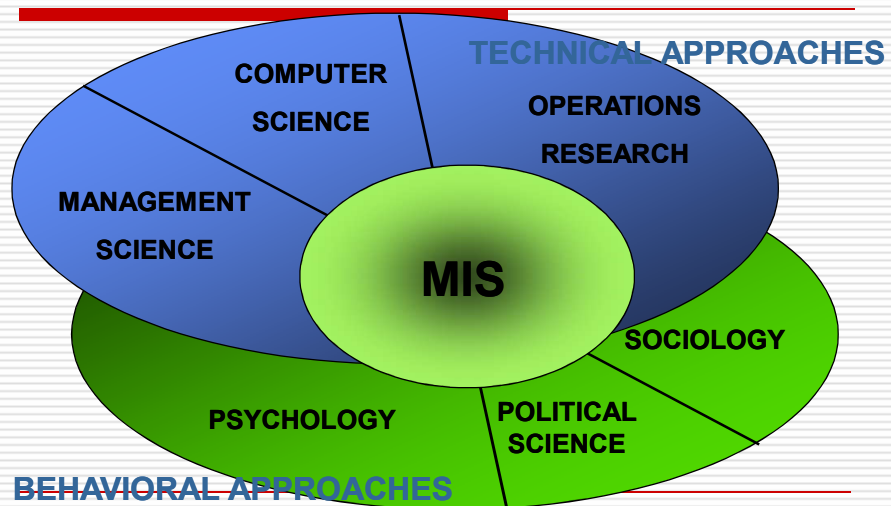
- Hardware
- Software
- Storage
- Communications
- Network



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APPROACHES TO INFO SYSTEMS (#1) (Figure 1-5)



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APPROACHES TO INFO SYSTEMS (#2)

- Technical Approach
 - Computer science
 - Management Science
 - Operations Research
- Behavioral Approaches
 - Sociologists
 - Psychologists
 - Economists

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Sociotechnical perspective (#1)

Optimize system performance:
Technology & organization mutually
adjust to one another
Until fit is satisfactory

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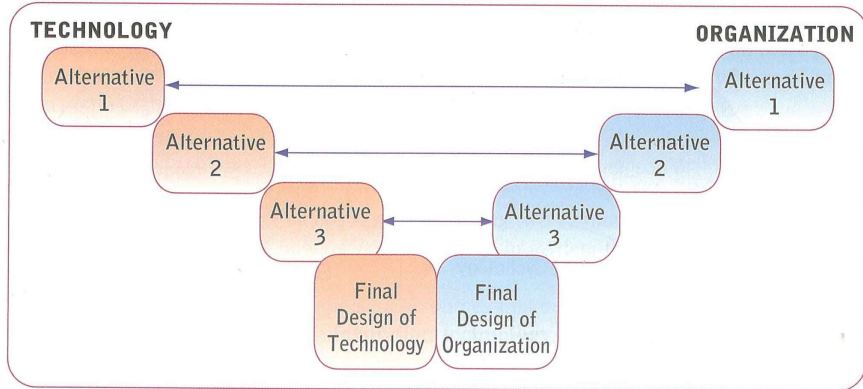


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SOURCE: Liker, et al, 1987

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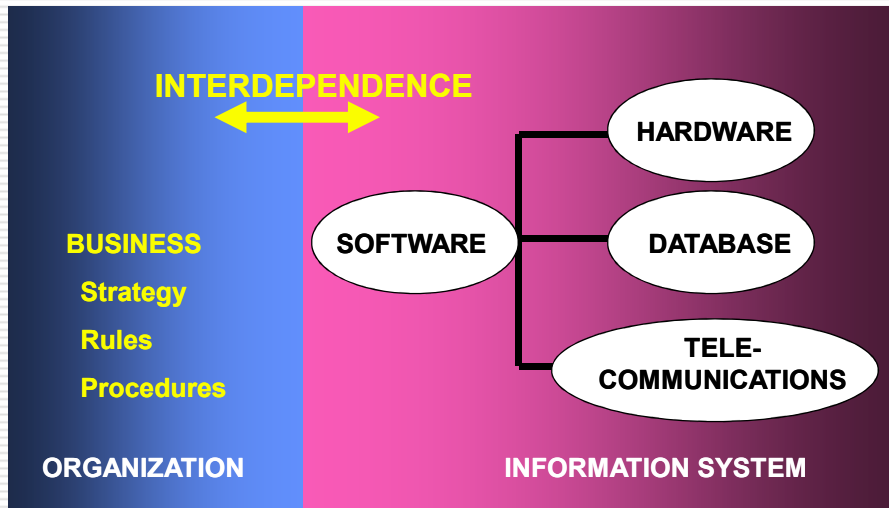
A Sociotechnical Perspective on IS (#2) (Figure 1-6)



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SYSTEM INTERDEPENDENCE



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Scope of info systems

- ❑ 1950s: TECHNICAL CHANGES
- ❑ 60s-70s: MANAGERIAL CONTROL
- ❑ 80s-90s: INSTITUTIONAL CORE ACTIVITIES

Growing importance



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Network Revolution & Internet

- ❑ Network
- ❑ Internet → Platform
- ❑ New Business Models

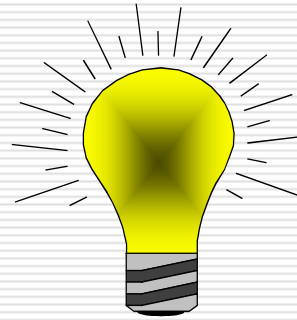
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What you can do on the internet

- Communicate & collaborate
- Access information
- Discuss
- Obtain information
- Entertainment
- Transact business

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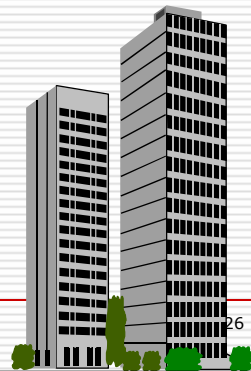
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New options for organizational design (sections)

- Flattening organizations
- Separating work from location
- Reorganizing work-flows
- Increasing flexibility
- Redefining organizational boundaries

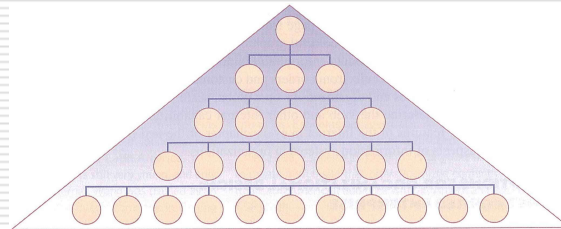
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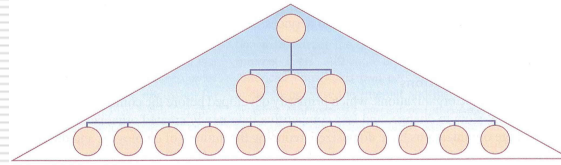
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Flattening Organizations



A traditional hierarchical organization with many levels of management

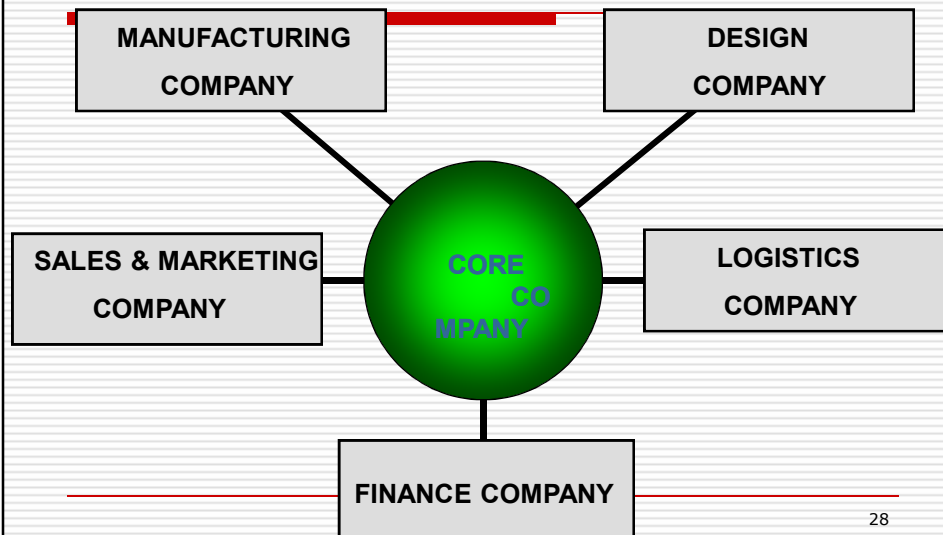


An organization that has been "flattened" by removing layers of management

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VIRTUAL ORGANIZATION

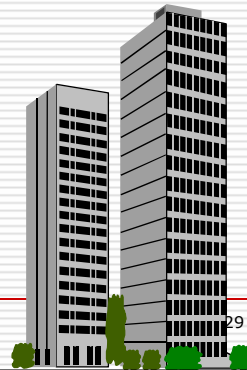


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The changing management process (sections)

- Electronic commerce
- Electronic business
- Electronic market

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Electronic Market

- Exchange Information, Products, Services, and Payments
- Retail (exp. AllBook.com.tw)
- Wholesale (exp. ChinaSteel)

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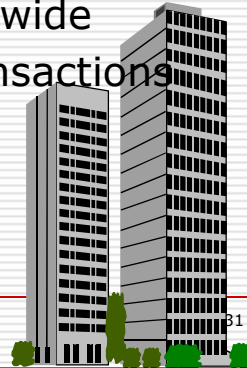
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Electronic commerce

- Internet links buyers, sellers
- Lowers transaction costs
- Goods & services advertised, bought, exchanged worldwide
- Business-to-business transactions increasing

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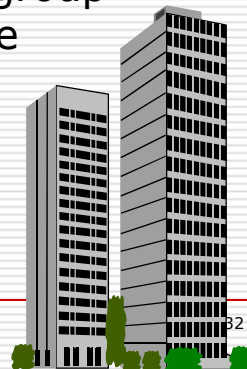


Electronic business

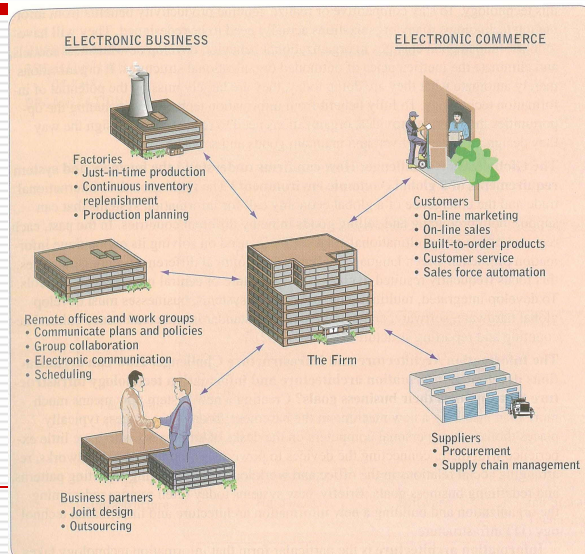
- Intranet: business builds private, secure network
- E-mail, web documents, group software extends effective communication & control
- Virtual organization

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EC & EB in Networked Enterprise



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Challenge of info systems

- ❑ Strategic: competitive & effective
- ❑ Globalization: multinational info
- ❑ Info architecture: support goals
- ❑ Investment: value of information
- ❑ Responsibility & control: ethics

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Connect to the INTERNET



Laudon/Laudon Web site:

<http://www.prenhall.com/laudon>

Additional Internet Resources related to this chapter:

<http://www.dell.com>

<http://www.amazon.com>

<http://www.firstunion.com>

<http://www.intel.com>

<http://www.clemson.edu/>

<http://www.gatech.edu>

<http://www.bath.ac.uk>

<http://www.intranet.com>

<http://www.ascusc.org/jcmc/vol1/issue1/index.html>



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