

### Text Book Major Topics

- Information Systems (IS) usage in organizations
- Systems Theory and Methods
- Computer usage as an I.S. Tool
- Computer Based Information System
- Organizational Information Systems

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### PART 1: The Computer As An Organizational Information System

**Chapters:**

1. Introduction to Computer-Based Information System
2. Information Technology for Competitive Advantage
3. Engaging in Electronic Commerce
4. Computer Use in International Marketplace
5. Ethical Implication of Information Technology

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### Chapter 1: Introduction to CBIS

- CBIS = Computer Based Information Systems
- Information as a Resource
- Users of Information
- Systems Theory
- Development of CBIS

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### Five Main Resources for Business

- Personnel
- Money
- Material
- Machines
  - (including facilities and energy)
- Information (and data)

} Physical Resource

} Conceptual Resource

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### How Resources are Managed

- Acquire
- Assemble, or prepare
- Maximize use
- Replace

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### Factors Stimulating Interest in Information Management

- Increasing complexity of business
  - International economy
  - Worldwide competition
  - Increasing complexity of technology
  - Shrinking time frames
  - Social constraints
- Improved computer capabilities

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### Who are the Information Users?

- Managers
- Non managers
- Persons & organizations in the firm's environment

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### Various management levels

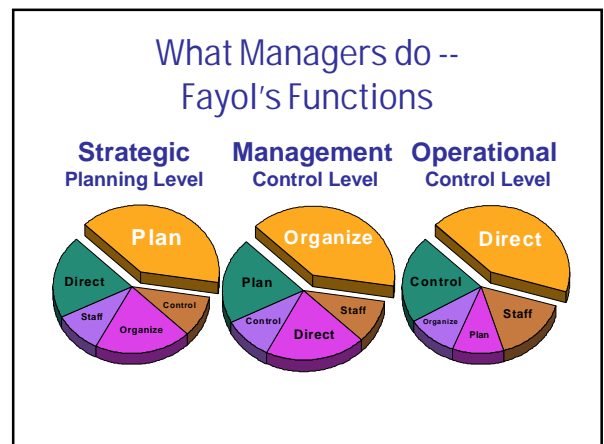
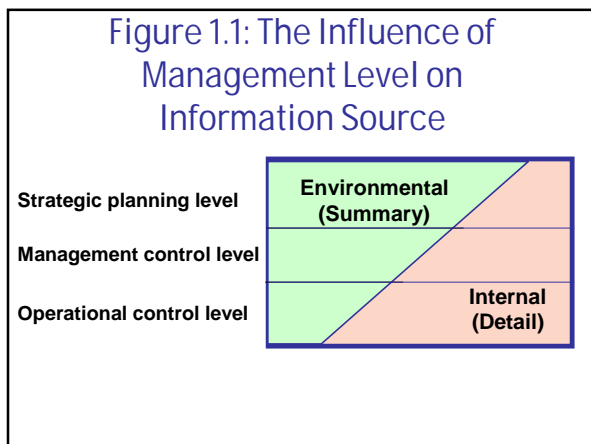
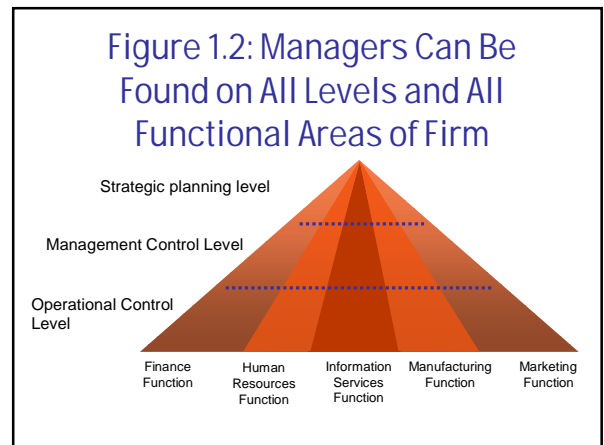
- **Strategic planning**
  - CEO, CFO, COO, CIO
  - Sets organization goals
- **Management control**
  - Regional, Product, Division
  - Plan of action to meet goals
- **Operational control**
  - Supervisory, Project Leaders
  - Accomplish plans

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### Where Managers are Found?

- **Various functional areas**
  - Finance
  - Human Resources
  - Information Systems
  - Manufacturing
  - Marketing

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### What Managers do -- Mintzberg's Roles

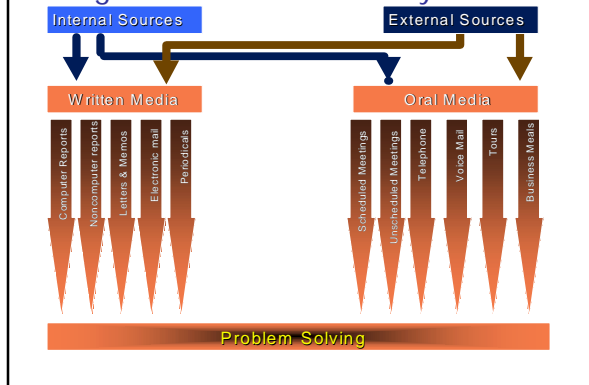
- ◆ **Interpersonal roles**
    - Figurehead
    - Leader
    - Liaison
  - ◆ **Informational roles**
    - Monitor
    - Disseminator
    - Spokesperson
  - **Decisional roles**
    - Entrepreneur
    - Disturbance handler
    - Resource allocator
    - Negotiator
- (See Table 1.1)

### Management Skills

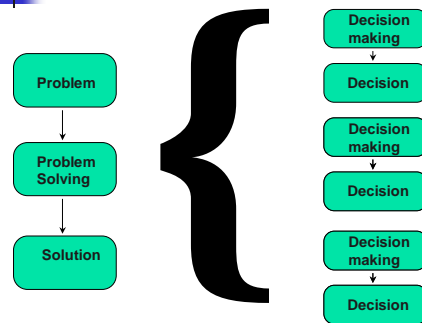
- ◆ **Communications**
  - ◆ **Problem solving (Problems = Opportunities)**
- } How can an information specialist help?

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Fig 1.4: Information in Many Forms



### Problems and Decisions



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### Effective Management Requires

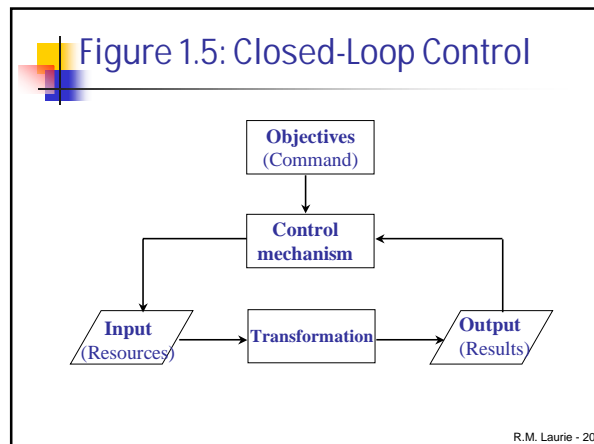
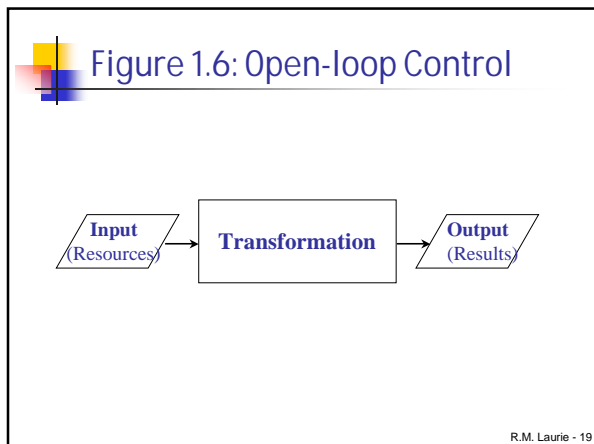
- **Computer literacy**
- **Information literacy**
- **What's the difference?**

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### Systems Theory

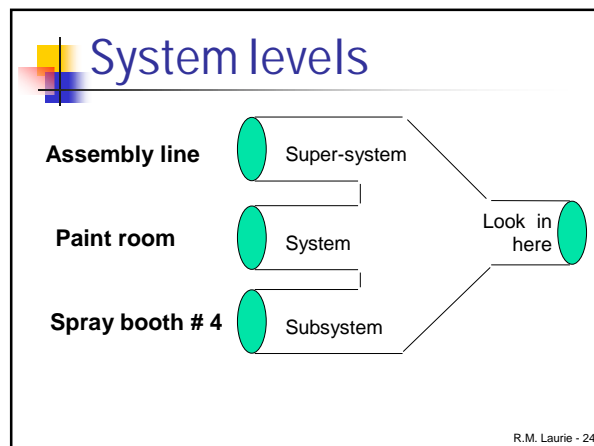
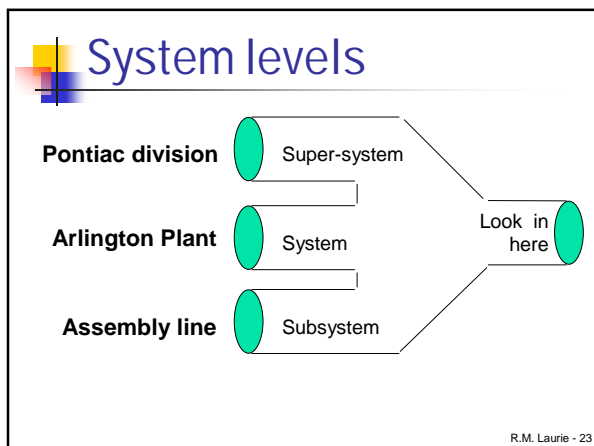
- **System = Group of elements that are integrated for a purpose of achieving a goal or objective**
- **System Control**
  - **Open Loop Control**
    - Car Heat or AC
  - **Closed Loop Control**
    - Thermostat controlled home heating
    - Automobile Cruise Control
- **Open or Closed Systems**

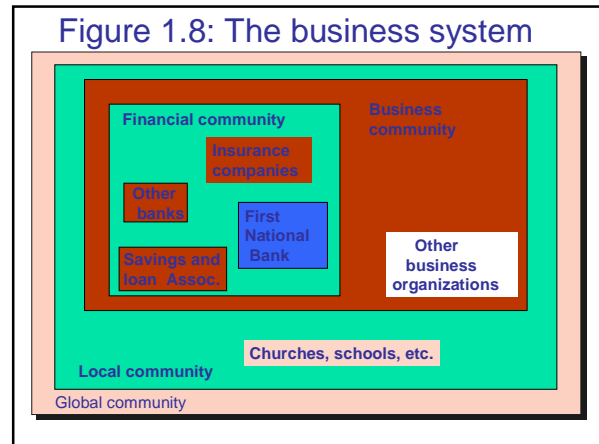
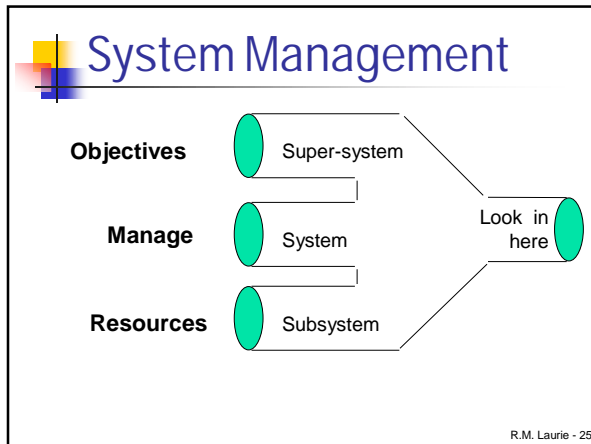
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- ### Open versus Closed Systems
- Refers to environmental connection NOT control mechanism.
  - Open system
    - Connected to its environment by means of resource flows
  - Closed system
    - Not connected to its environment
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- ### System levels
- General Motors
    - Pontiac division
      - Arlington Plant
        - Assembly line
          - Paint room
            - Spray booth # 4
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- ### Physical and Conceptual Systems
- **Physical system**
    - The business firm
    - Composed of physical resources
  - **Conceptual system**
    - Models a physical system
    - Uses conceptual resources
      - Information
      - Data
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- ### A Systems View
- **Business operations are embedded within a larger environmental setting**
    - Complexity minimized for manager
    - Focused objectives for manager
    - Requires cooperation at all levels
    - Feedback Closed Loop Control implemented for systems
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- ### Data and Information Processor
- **Information processor transforms data to information**
  - **Information processor can be manual as well as electronic computer or mechanical**
  - **An information processor is a key element in the conceptual system**
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- ### Evolution of the CBIS
- ◆ Data (EDP) 1950's
  - ◆ MIS 1960's
    - Organizational
    - IBM promoted the concept for sales
  - ◆ DSS 1970's
    - DSS: Individual/group
  - ◆ OA 1980s Productivity Movement
  - ◆ AI/ES 1990s saw heavy investments
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