Chapter 9: People in Information Systems

❖ **The Creators of Information Systems**
  ◆ **Systems Analyst**
  ◆ **Programmer**
  ◆ **Computer Engineer**
    ◆ Hardware engineer
    ◆ Software engineer
    ◆ Systems engineer
    ◆ Network engineer
❖ **Info-Systems Operations and Administration**
  ◆ **Computer Operator**
  ◆ **Database Administrator**
  ◆ **Help-Desk/Support Analyst**
  ◆ **Trainer**

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Managing Information Systems

❖ **CIO or Chief Information Officer**
❖ **Functional Manager**
❖ **ERP Management**
❖ **Project Managers**
❖ **Information-Security Officer**

Office of the Chief Information Officer (OCIO)

| IT Security Division | Capital Planning & Governance Division | Technology & Innovation Division | Enterprise Service & Integration Division |

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Organizational Dimension of Information Systems

❖ **Separate business functions within hierarchy**
❖ **Unique business processes**
  ◆ **Operational procedures**
  ◆ **Management rules**
  ◆ **IT for Automation**
❖ **Business culture**
  ◆ **Assumptions**
  ◆ **Accepted Values**
  ◆ **Ethics**
❖ **Politics**
  ◆ **Compromise**
  ◆ **Resources**
  ◆ **Conflict**

Strategic Planning Level:
President or CEO
Marketing Director
CFO
CIO
COO
HR Director

Management Control Level

Operational Control Level

Sales and Marketing | Manufacturing and Production | Finance and Accounting | Human Resources

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Environments and Organizations

❖ Organizations are open to, dependent on, and can influence environment
❖ Organizations only "see" what their systems will let them see

The Organization and Its Environment

Environmental Resources and Constraints

The Firm

Governments
Competitors
Customers
Financial Institutions
Culture

Knowledge
Technology

Information Systems

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Enterprise Application Architecture

Enterprise applications automate processes that span multiple business functions and organizational levels and may extend outside the organization
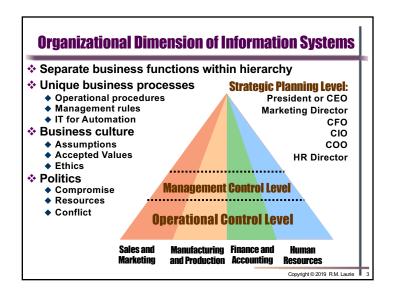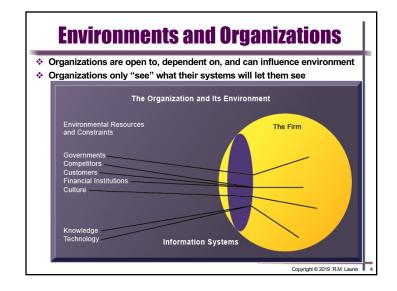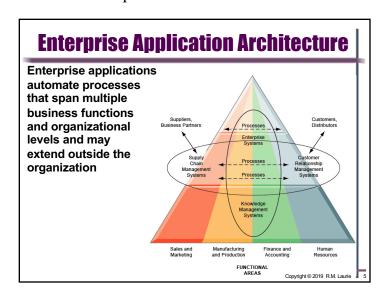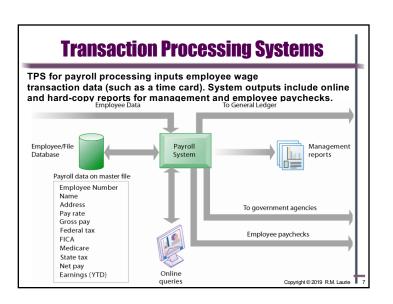

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Systems that Span the Enterprise

- ❖ **Enterprise applications**
  - ◆ **Span functional areas**
  - ◆ **Execute business processes across firm**
  - ◆ **Include all levels of management**
- ❖ **Major applications:**
  - ◆ **Enterprise Resouce Planning systems (All Layers)**
  - ◆ **Executive Support Systems (Strategic Management)**
  - ◆ **Decision Support Systems (Middle Management)**
  - ◆ **Supply Chain Management systems (Operational)**
  - ◆ **Transaction Processing Systems (Operational)**
  - ◆ **Customer Relationship Management systems (Operational)**

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Transaction Processing Systems

TPS for payroll processing inputs employee wage transaction data (such as a time card). System outputs include online and hard-copy reports for management and employee paychecks.

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Quality Management

- ❖ **Fine-tuning business processes to improve quality in their products, services, and operations**
  - ◆ **The earlier in the business cycle a problem is eliminated, the less it costs the company**
  - ◆ **Quality improvements lower costs**
- ❖ **Total Quality Management (TQM):**
  - ◆ **Achievement of quality control is end in itself**
  - ◆ **Everyone is expected to contribute to improvement of quality**
  - ◆ **Focuses on continuous improvements over time**
  - ◆ **Goal is zero defects in product manufacturing**
  - ◆ <u>**W. Edwards Deming**</u>
    - ◆ **Founder of Quality Management in Japan and later USA**
    - ◆ <u>**Deming's 14 points of Quality Management**</u>
- ❖ **Common Quality Standards**
  - ◆ **ISO9000   ISO9001**
    - ◆ **Corporate certification describes that they are managing business processes in an effective way**
  - ◆ **Six sigma: Statistical analysis tools to detect flaws and adjust**

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