Introduction to Information Systems

Essentials for the Internetworked E-Business Enterprise

Eleventh Edition

James A. O'Brien

Chapter 1

Foundations of Information Systems in Business

Irwin/McGraw-Hill

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Chapter Objectives

- **Explain why knowledge of information systems is important for business professionals and identify five areas of information systems knowledge they need.**
- **Give examples to illustrate how electronic business, electronic commerce, or enterprise collaboration systems could support a firm's business processes, managerial decision making, and strategies for competitive advantage.**

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Chapter Objectives

- **Provide examples of the components of real world information systems. Illustrate that in an information system, people use hardware, software, data, and networks as resources to perform input, processing, output, storage, and control activities that transform data resources into information products.**

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Chapter Objectives

- **Provide examples of several major types of information systems from your experiences with business organizations in the real world.**
- **Identify several challenges that a business manager might face in managing the successful and ethical development and use of information technology in a business.**

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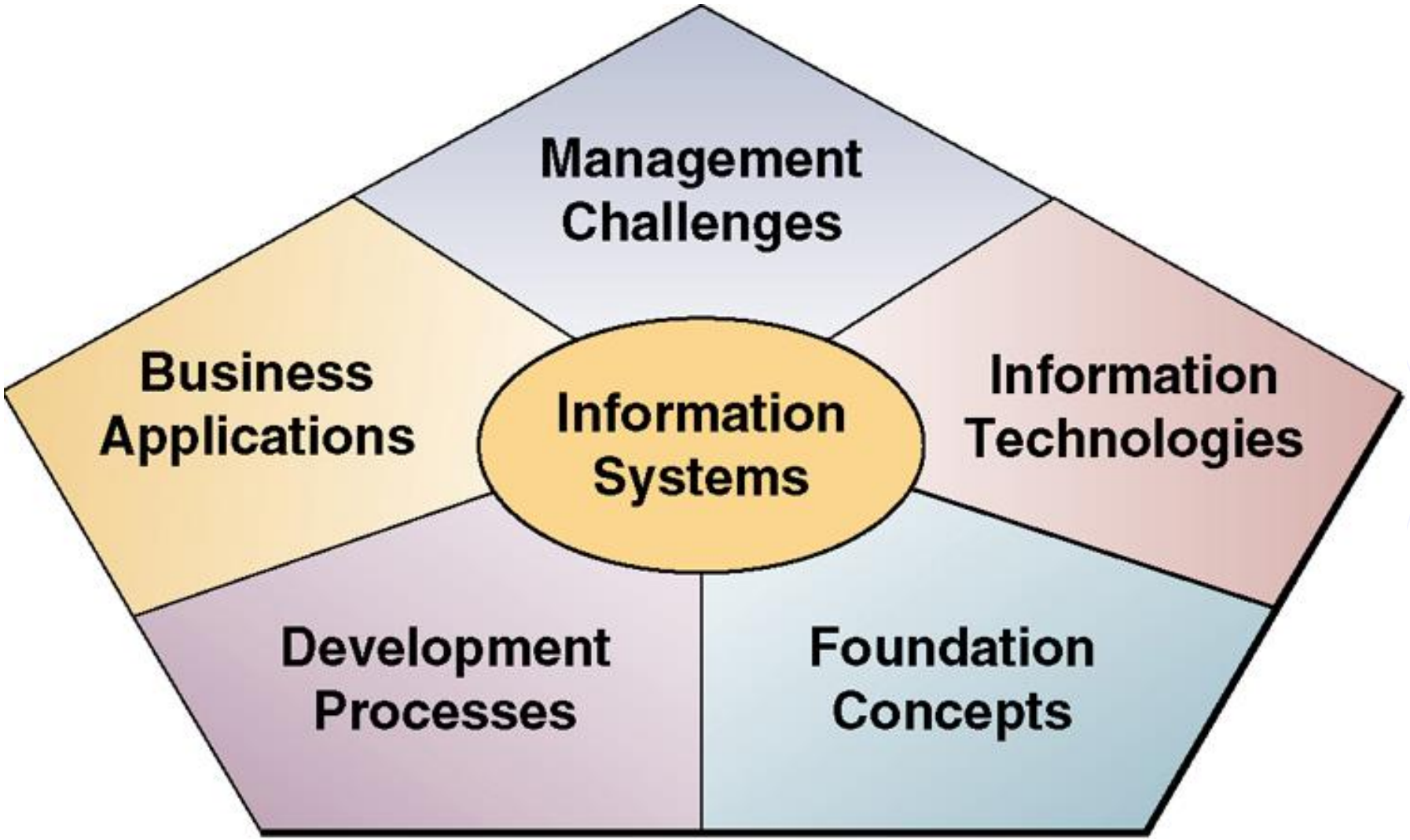
An IS Framework for Business Professionals



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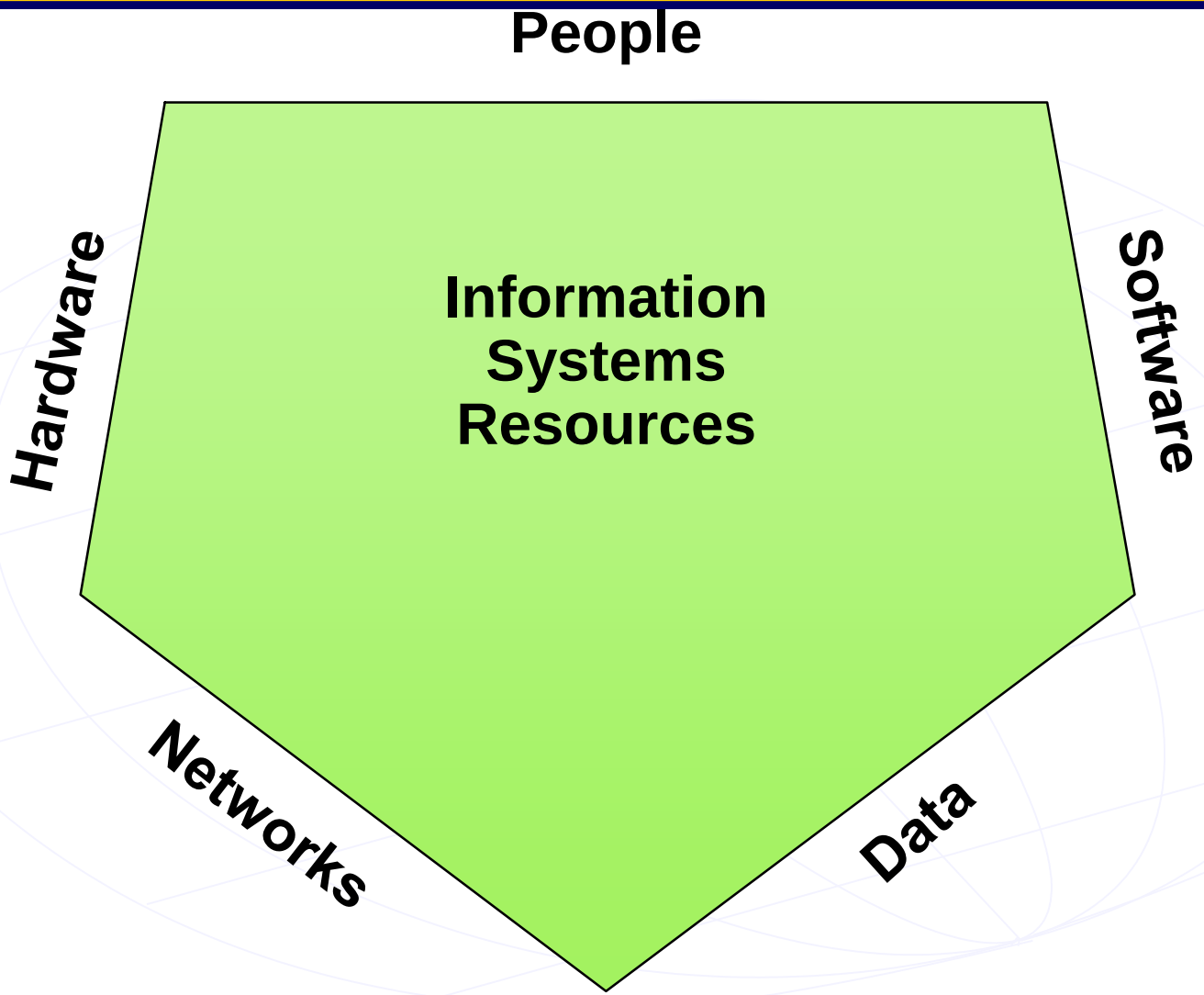
Components of an Information System



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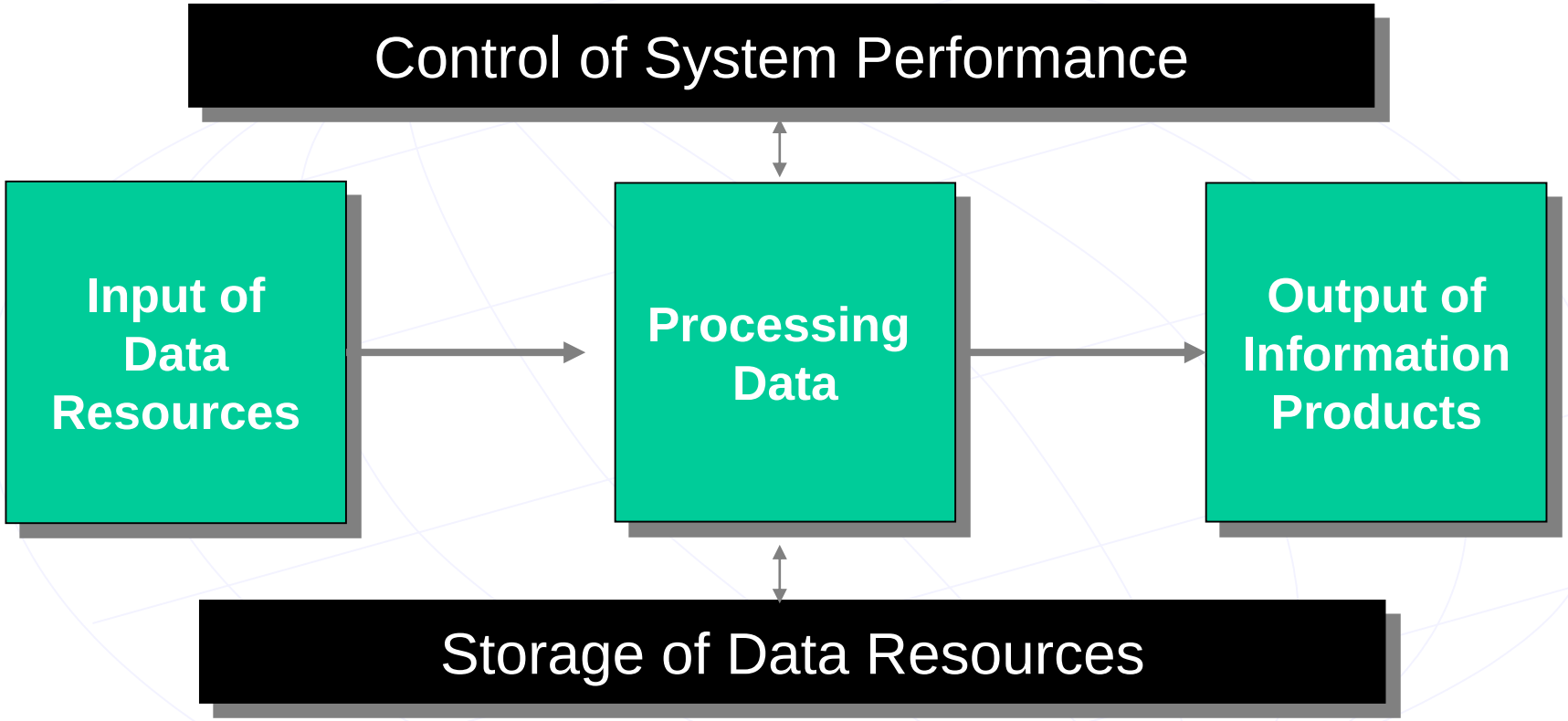
What is an Information System?



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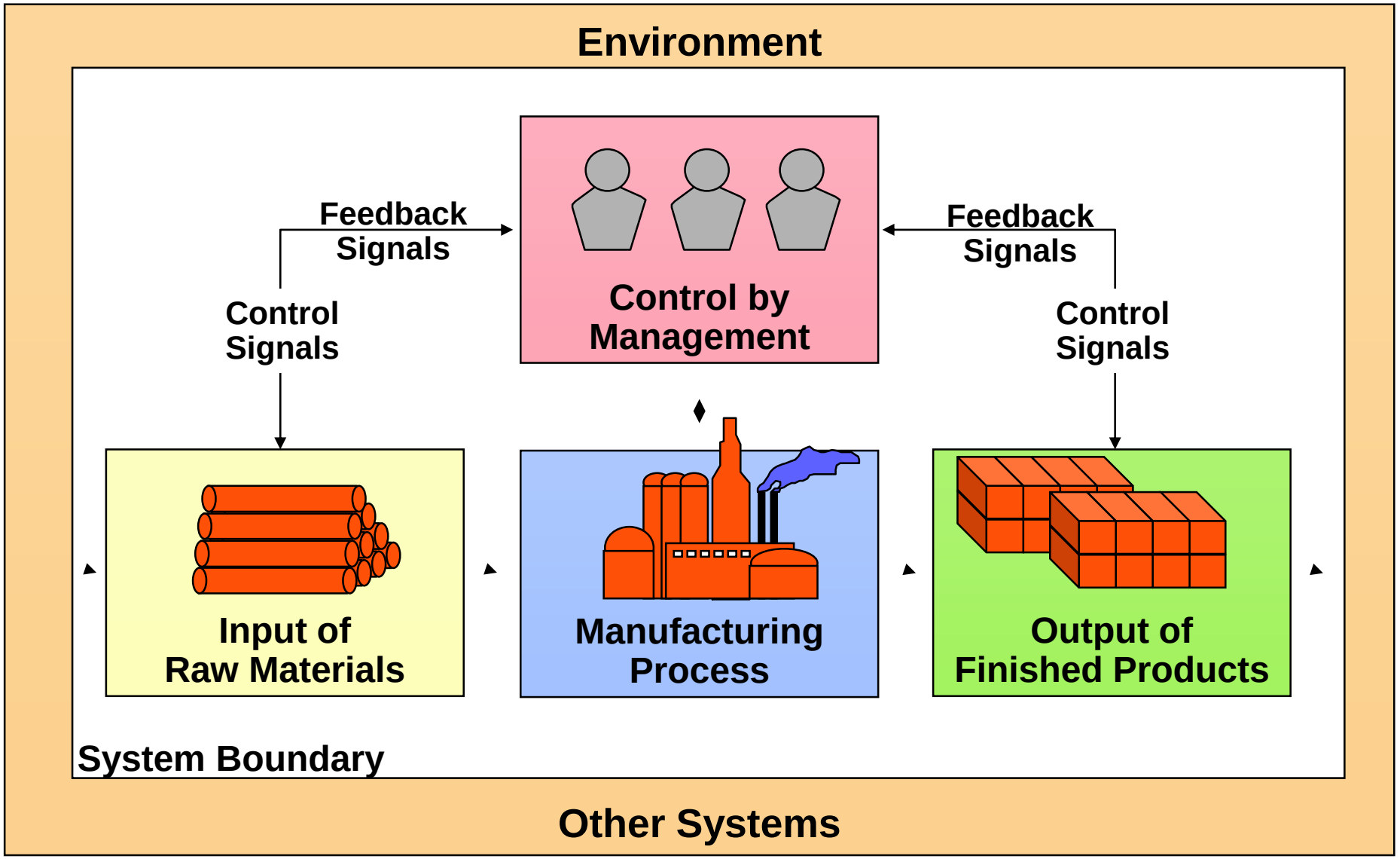
What is a System?



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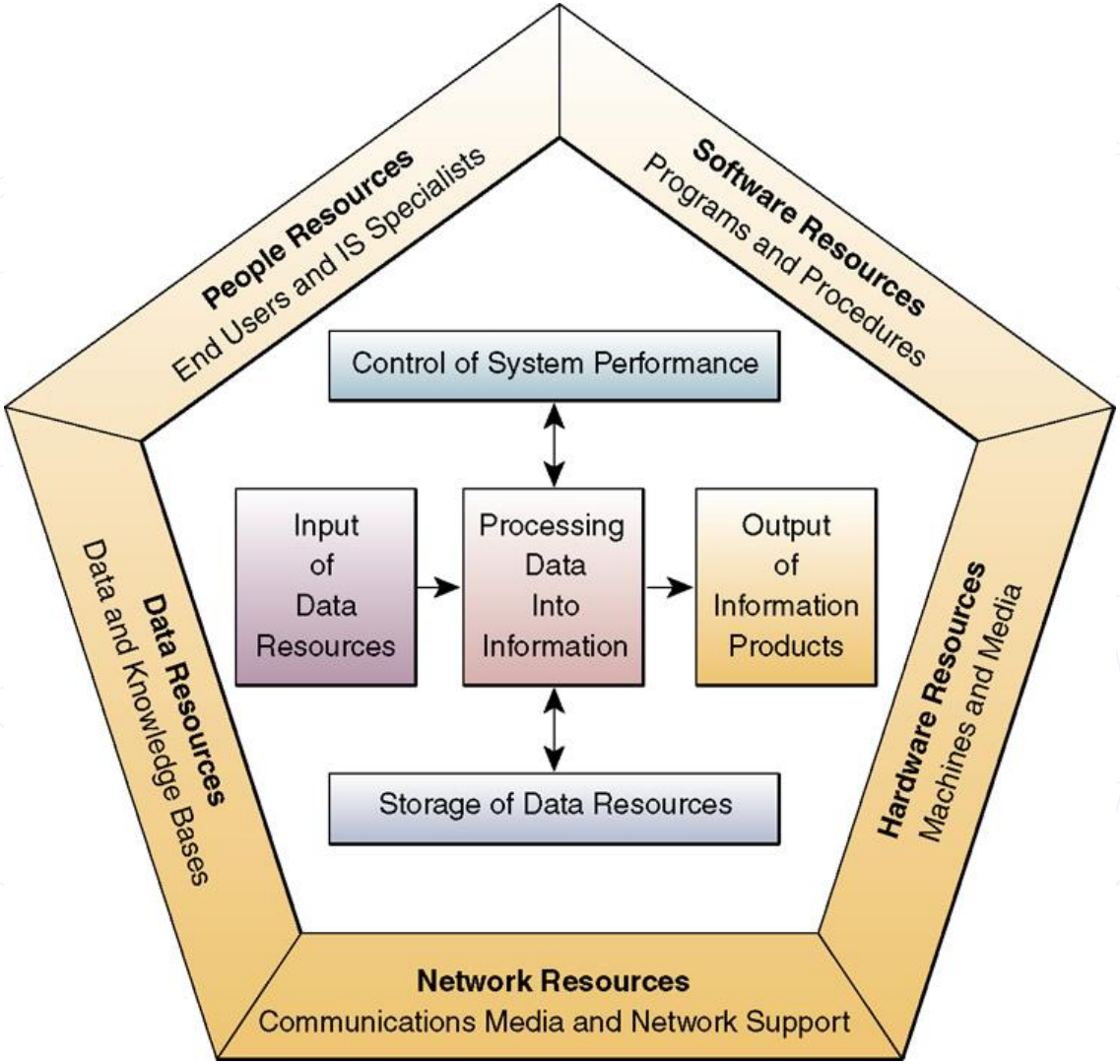
Components of an Information System



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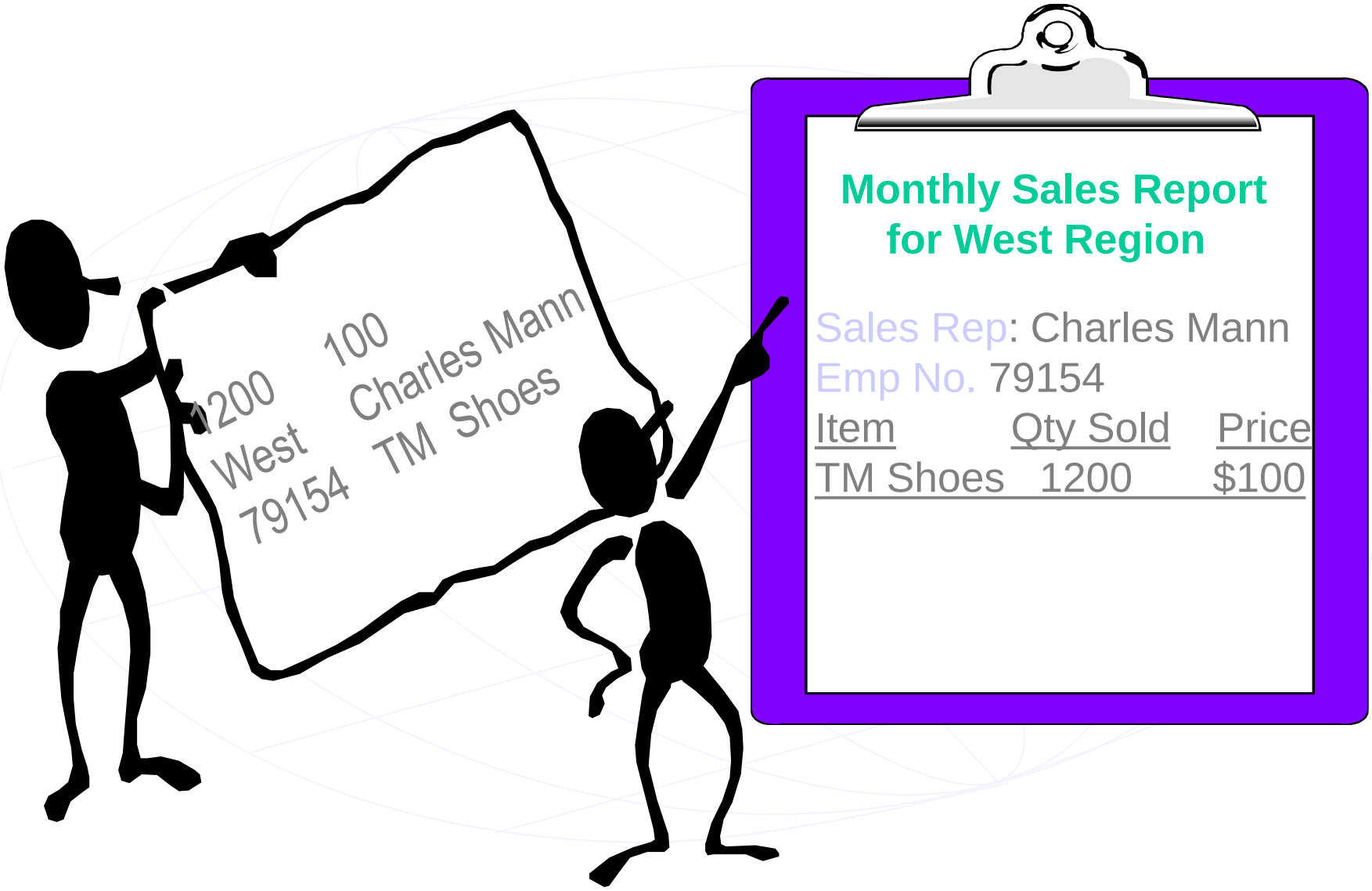
Data versus Information



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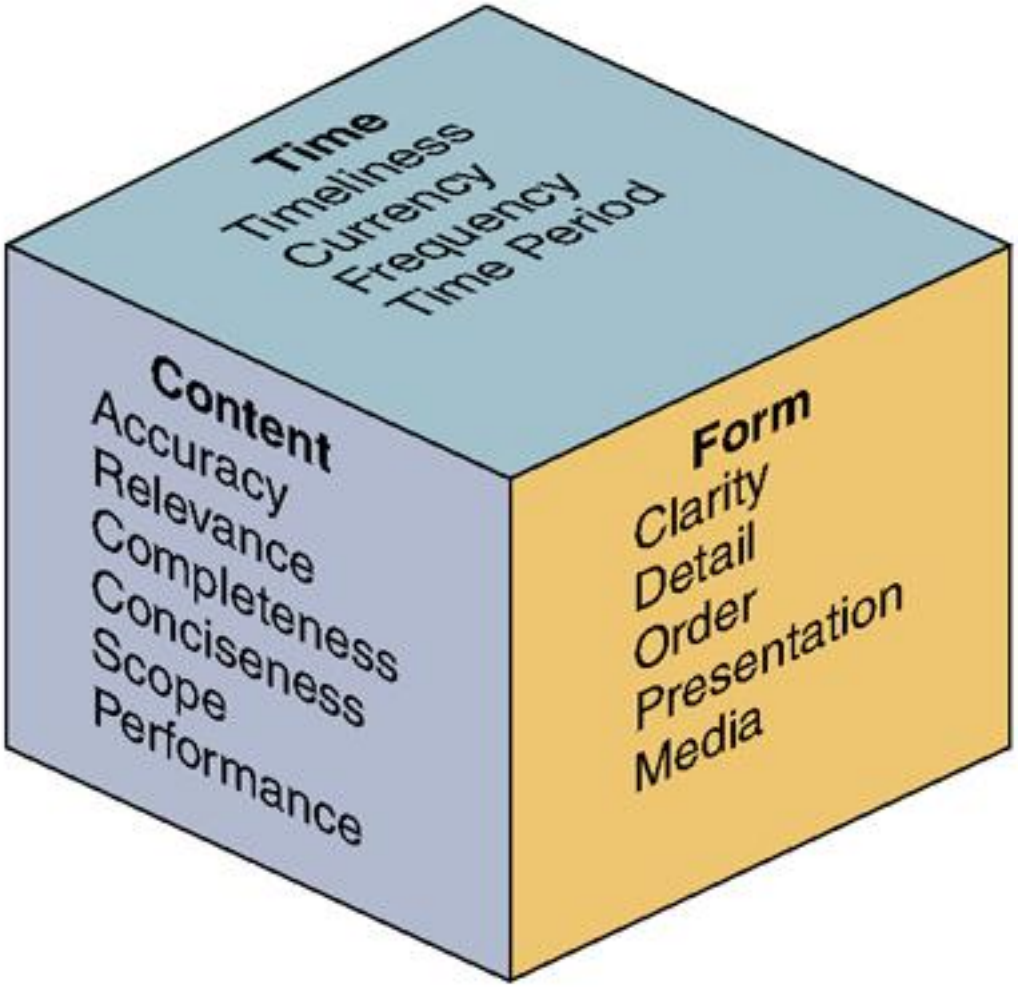
Attributes of Information Quality



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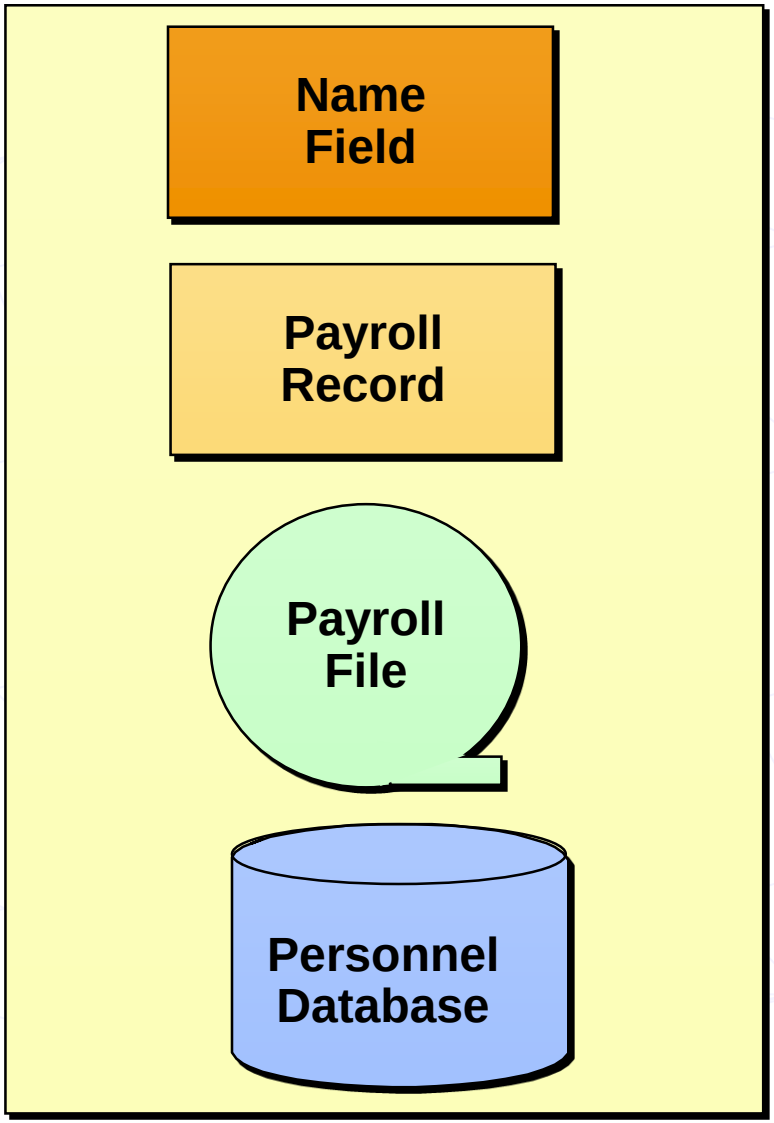
Logical Data Elements



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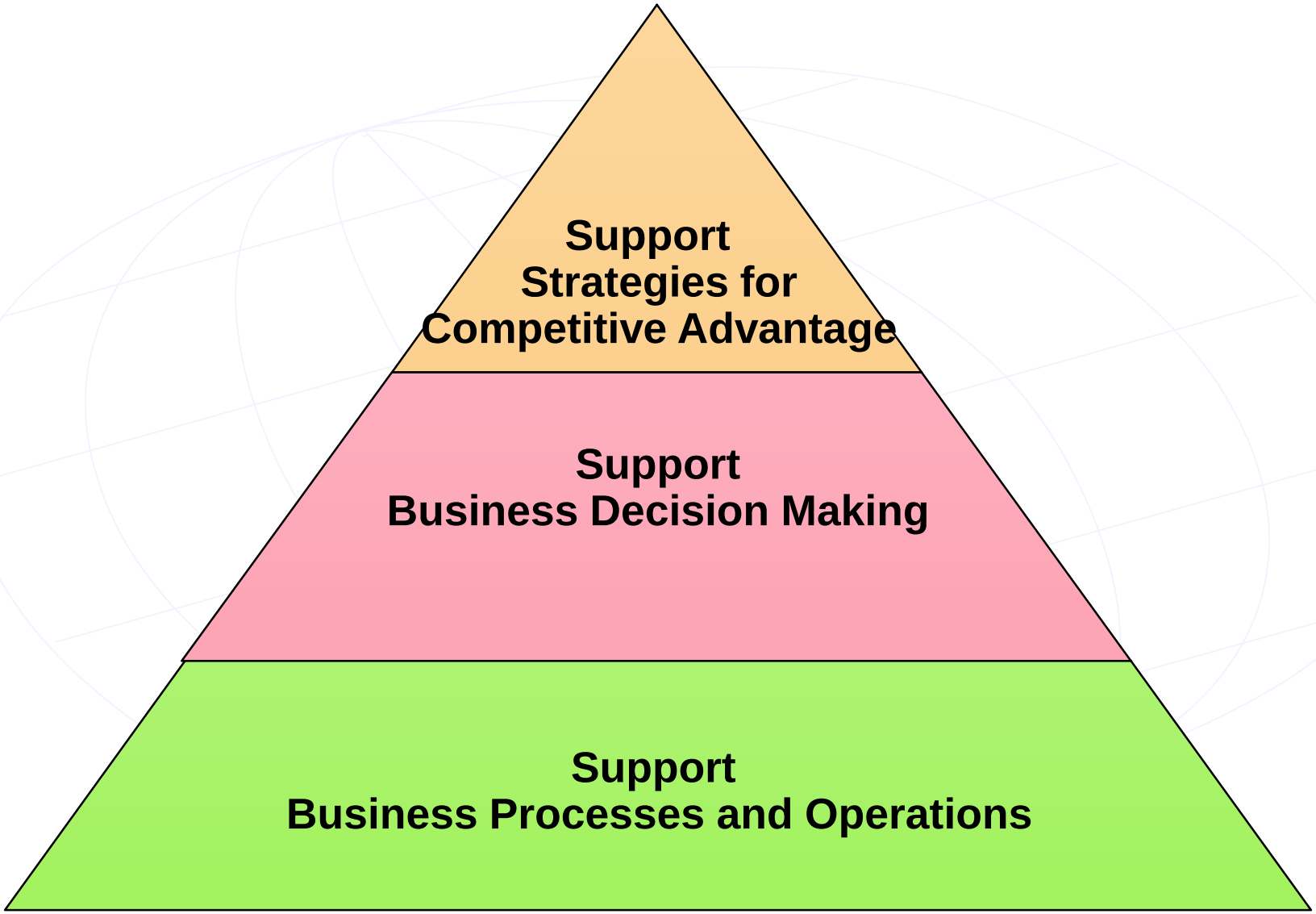
Major Roles of Information Systems



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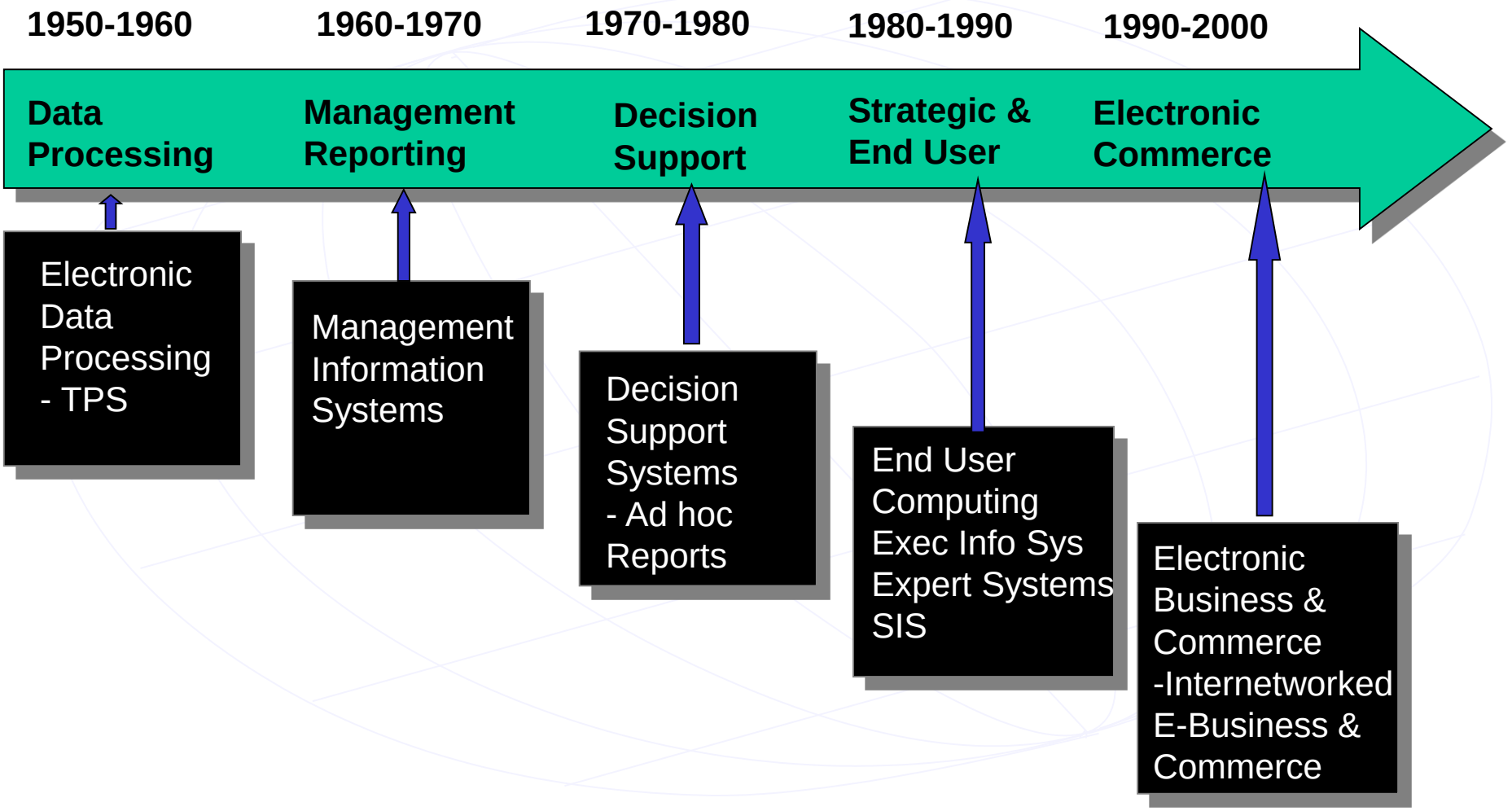
History of the role of Information Systems



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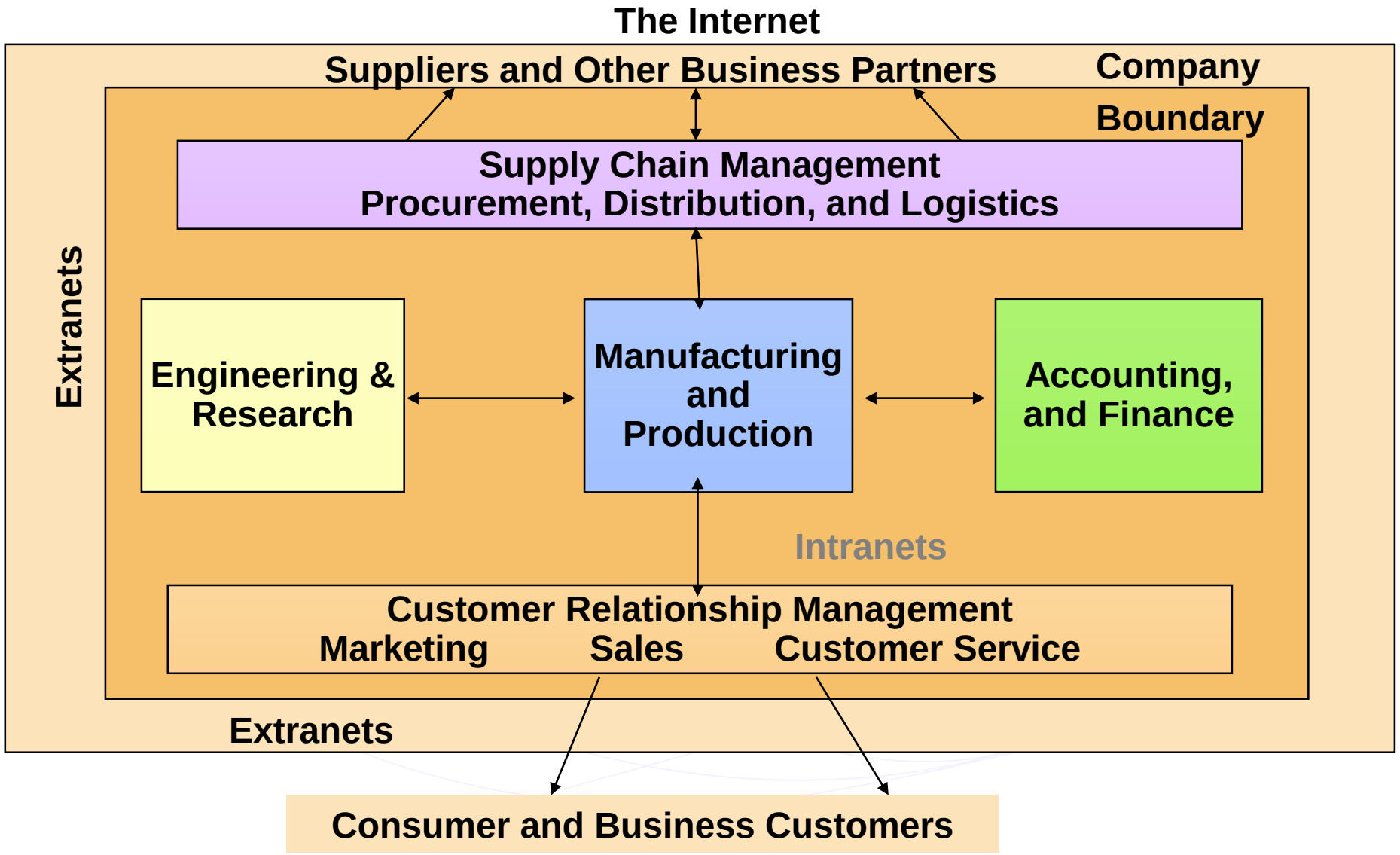
The e-Business Enterprise



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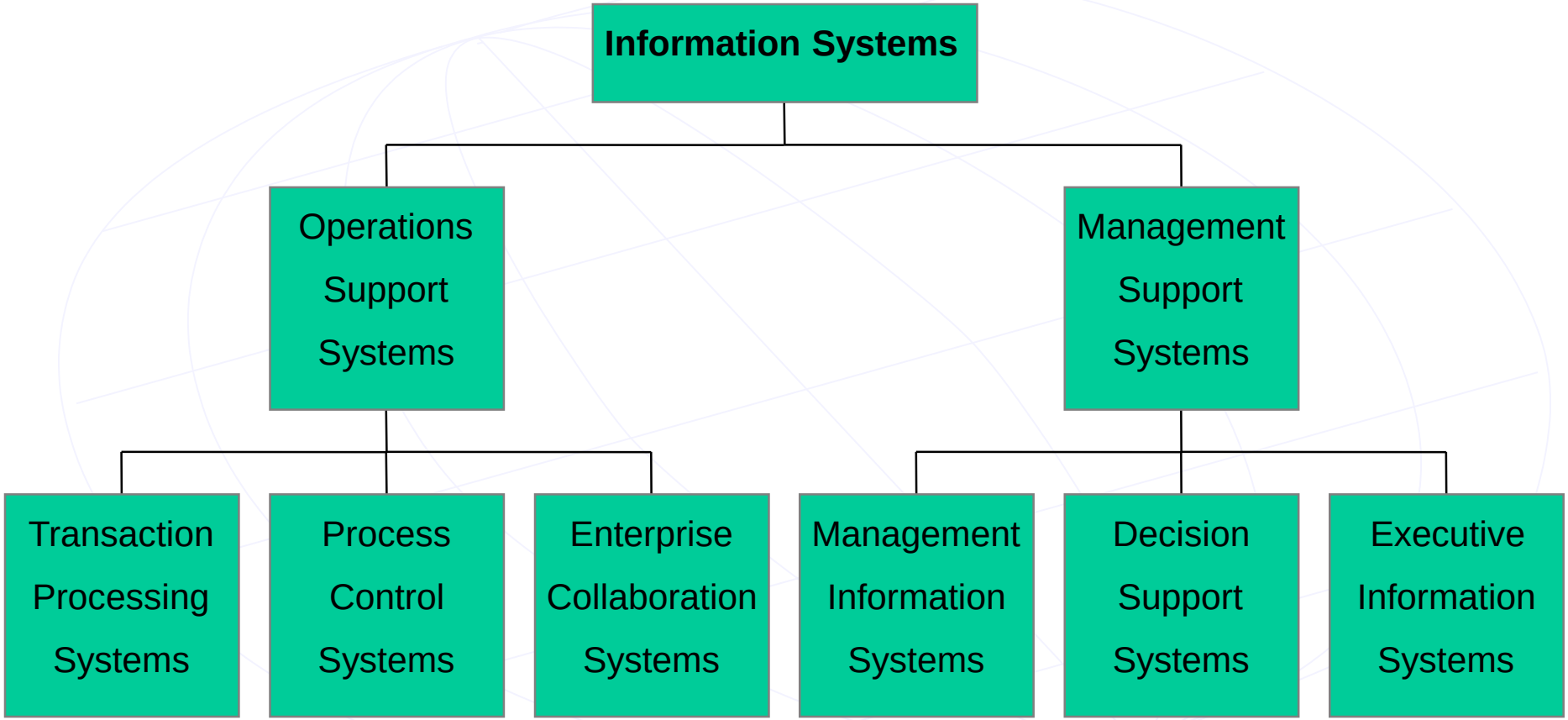
Types of Information Systems



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Other Categories of Information Systems

- Expert Systems
- Knowledge Management Systems
- Functional Business Systems
- Strategic Information Systems
- Cross-Functional Information Systems

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The Information Systems Development Process

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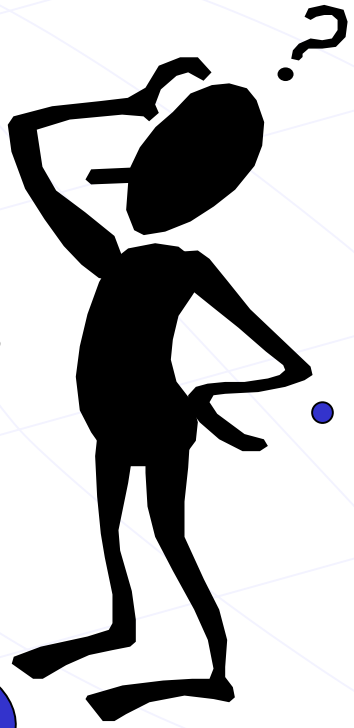
Management Challenges of the E-business Enterprise



- IS Human Resources
- IS Development

- IT Infrastructure
- IS Performance

- Organization Structure
- and Culture
- User Acceptance

- Business Strategies
- Business Processes
- Business Needs

- Customer Relationships
- Business Partners
- Suppliers
- Business Customers

Ethical Considerations
Potential Risks?
Potential Laws?
Possible Responses?

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Chapter Summary

- **Information Systems play a vital role in the efficient and effective operations of E-business, E-commerce and enterprise collaboration.**
- **The business professional must know:**
  - Foundations (fundamentals) of IS
  - Information Technologies
  - Business Applications
  - Development Processes; and
  - Managerial Challenges

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Chapter Summary (cont)

- **A system is a group of interrelated components working toward the attainment of a common goal by accepting inputs and producing outputs in an organized transformation process.**
- **An information system uses the resources of people, hardware, software, data, and networks to perform input, processing, output, storage and control activities.**

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Chapter Summary (cont)

IS Resources:

- Hardware Resources
- Software Resources
- People Resources
- Data Resources
- Network Resources

Products:

- Paper Reports
- Visual Displays
- Multimedia Documents
- Electronic Messages
- Graphics images
- Audio Responses

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Chapter Summary (cont)

- **Information systems perform three vital roles in business firms. They support:**
  - Business processes and operations,
  - Business decision making; and
  - Strategic competitive advantage
- **Major application categories of information systems include:**
  - Operations Support Systems; and
  - Management Support Systems

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