



OBJECTIVES

- **What exactly is an information system?**
- **How are information systems transforming organizations and management?**
- **How have the Internet and Internet technology transformed business?**
- **What are the major management challenges to building and using information systems?**



1.2 WHAT IS AN INFORMATION SYSTEM?

Information System:

- **Interrelated components working together to collect, process, store, and disseminate information to support decision making, control, and analysis in an organization**



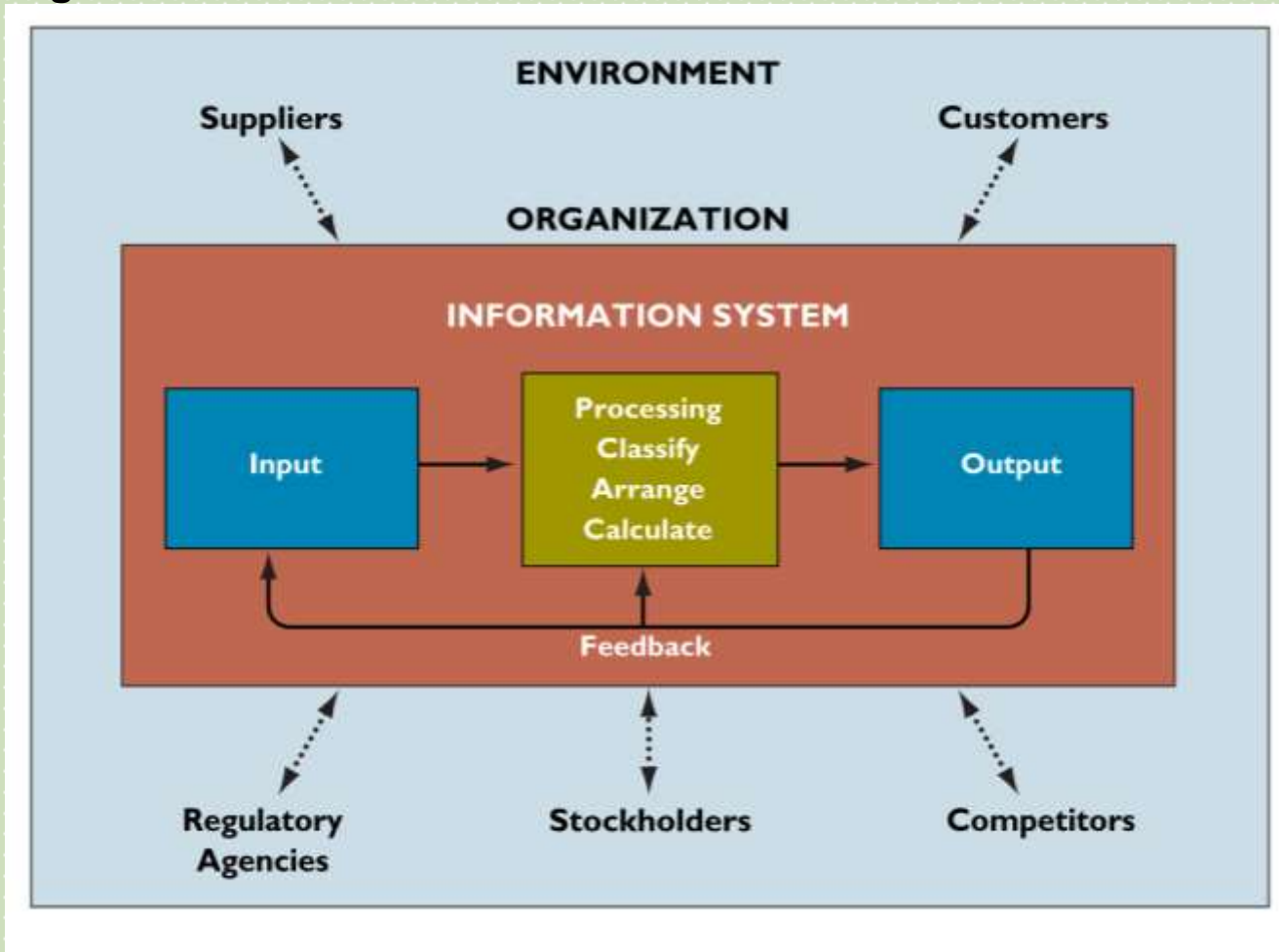
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1.2 WHAT IS AN INFORMATION SYSTEM?

Functions of an Information System

Figure 1.2





1.2 WHAT IS AN INFORMATION SYSTEM?

- **Data:** Raw facts representing events occurring in organizations or their environment
- **Information:** Data that have been shaped into a form that is meaningful and useful to human beings



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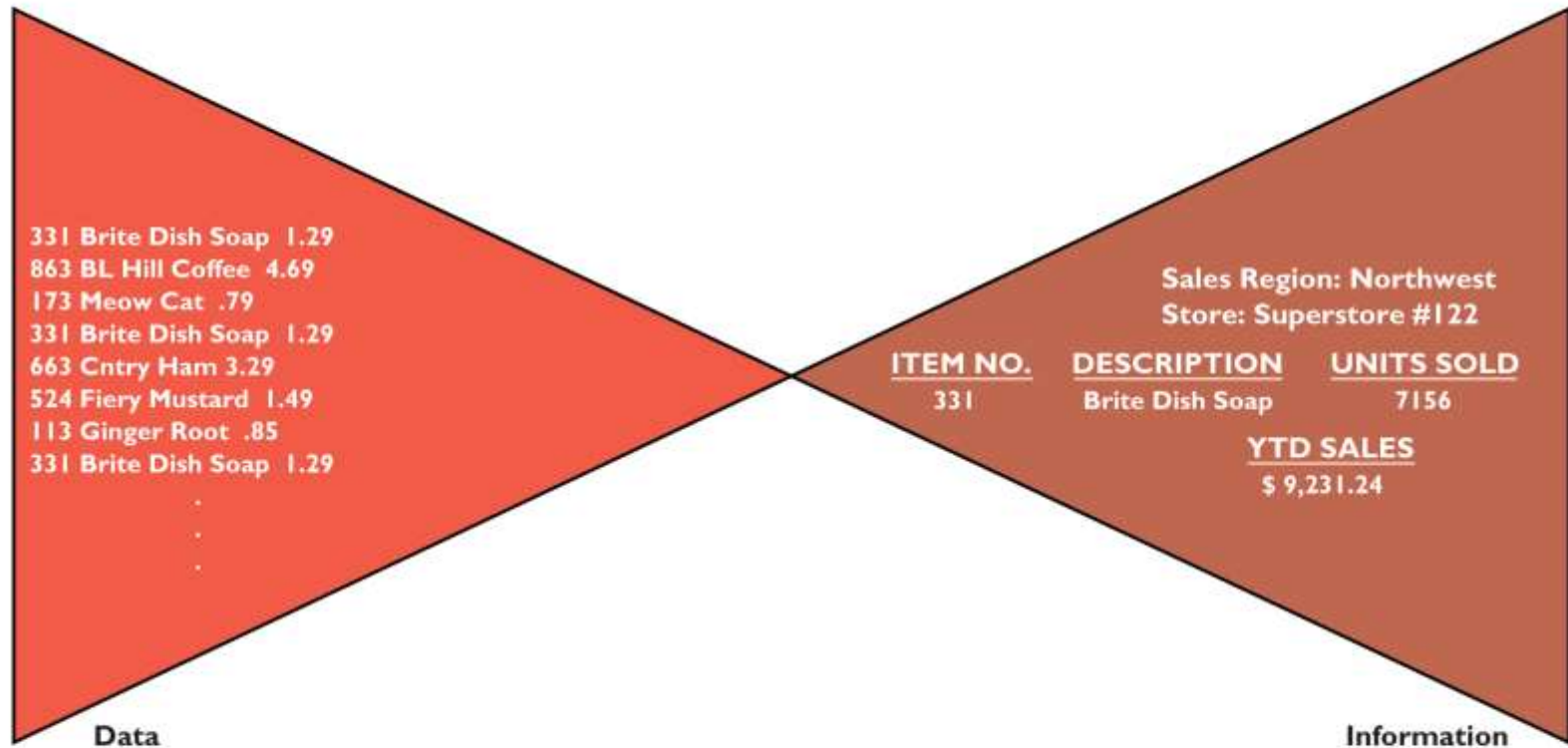


Figure 1.1 Data and information. Raw data from a supermarket checkout counter can be processed and organized in order to produce meaningful information, such as the total unit sales of dish-washing detergent or the total sales revenue from dish-washing detergent for a specific store or sales territory.



1.2 WHAT IS AN INFORMATION SYSTEM?

Four Major Systems Defining the Digital Firm

- **Supply chain management systems (SCM)**
- **Customer relationship management systems (CRM)**
- **Enterprise systems**
- **Knowledge management systems**

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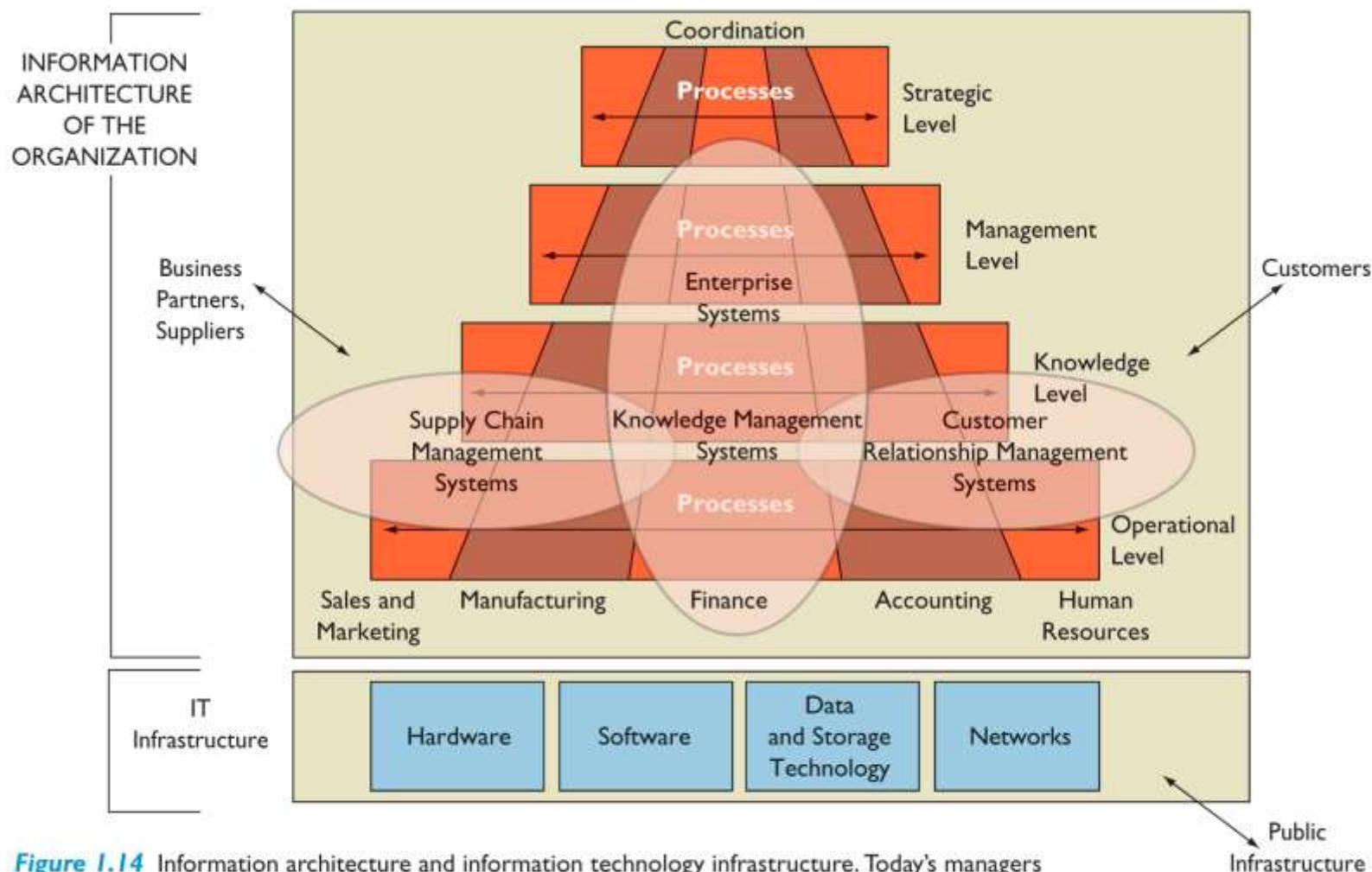


Figure 1.14 Information architecture and information technology infrastructure. Today's managers must know how to arrange and coordinate the various computer technologies and business system applications to meet the information needs of each level of the organization and the needs of the organization as a whole.



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1.3 HOW ARE IS's TRANSFORMING ORGANISATIONS?

- **Computer Literacy:**
 - Knowledge about how computer-based technologies work
 - not enough for today's challenges!
- **Information Systems Literacy:**
 - includes behavioural knowledge about organizations and individuals using information systems and technical knowledge about computers



1.3 HOW ARE IS's TRANSFORMING ORGANISATIONS?

Organizations

Key Elements of IS Literacy

- **Operating Procedures:** Standard operating procedures (SOP, rules for action)
- **People:** Managers, knowledge workers, data workers, production or service workers
- **Culture:** Assumptions, values and ways of doing things



1.3 HOW ARE IS's TRANSFORMING ORGANISATIONS?

The Changing Management Process

- **Separating work from location**
- **Reorganizing work-flows**
- **Increasing flexibility**
 - eg 'mass customization'
- **Increasing collaborative work**
- **"Flattening" the organization**



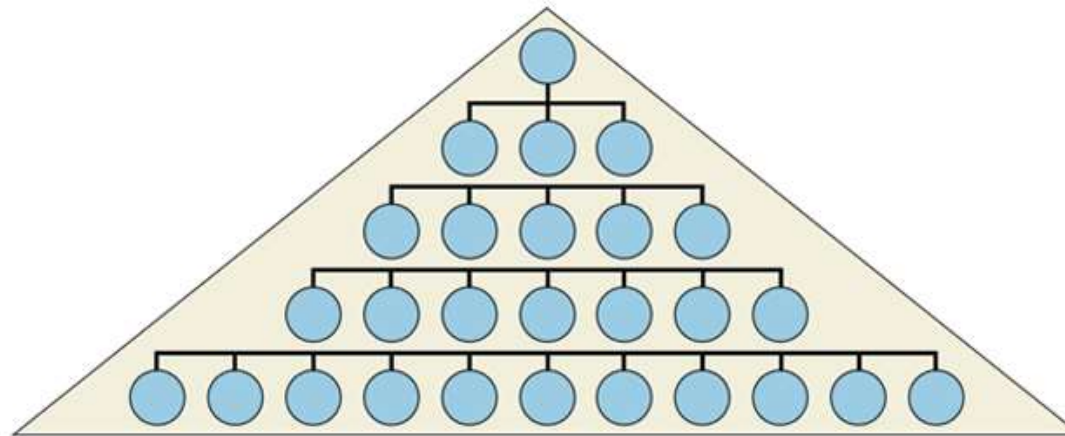
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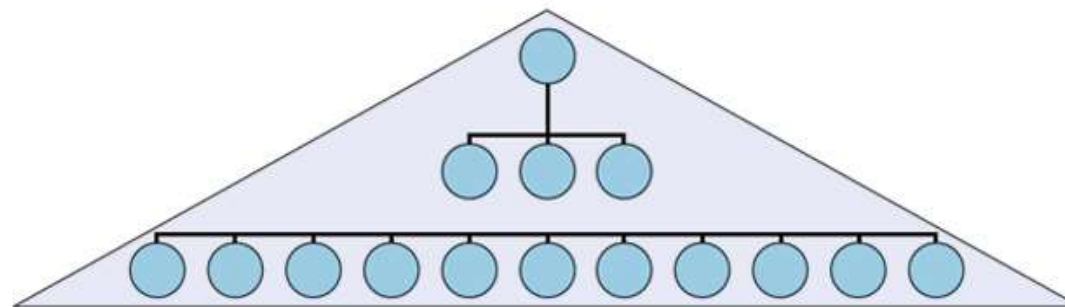
1.3 TOWARD THE DIGITAL FIRM

New Options for Organizational Design

Figure 1.9: Flattening Organizations



A traditional hierarchical organization with many levels of management



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



1.3 HOW ARE IS's TRANSFORMING ORGANISATIONS?

Emergence of the Digital Firm

- **Digitally-enabled relationships with customers, suppliers, and employees**
- **Nearly all significant business processes** (the unique ways in which organizations coordinate activities and information to produce a product or service) **are computerized**



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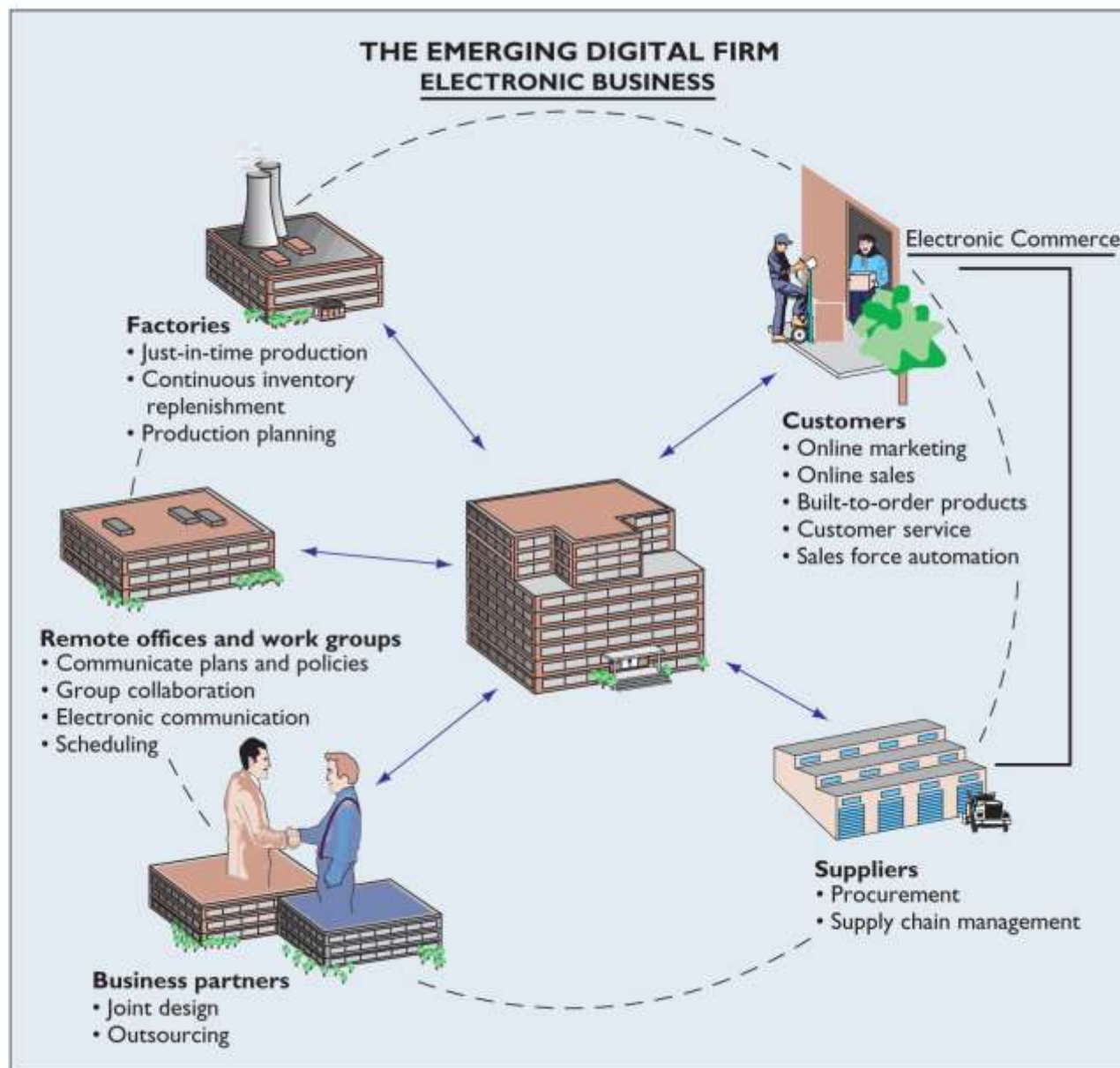
1.4 HOW HAS the INTERNET CHANGED BUSINESS?

- **Intranet:**
 - An internal network based on Internet and World Wide Web technology and standards
- **Extranet:**
 - Private internet that is only accessible to authorized outsiders
- **E-Commerce:**
 - The process of buying and selling goods and services electronically, involving transactions using the Internet

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Figure 1.13 Electronic business and electronic commerce in the emerging digital firm. Companies can use the Internet, intranets, and extranets for e-commerce transactions with customers and suppliers, for managing internal business processes, and for coordinating with suppliers and other business partners. E-business includes e-commerce as well as the management and coordination of the enterprise.





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1.5 Major Management Challenges

- **The Globalization Challenge:**
 - How can a firm respond to Global Competition, Global work groups, and Global delivery systems
- **The Information Architecture & Infrastructure Challenge:**
 - How can a firm develop an information architecture & IT infrastructure when goals and technologies change rapidly?
- **The IS Investment Challenge:**
 - How can organizations determine the business value of information systems?
- **The Responsibility and Control Challenge:**
 - How can organizations ensure that their information systems are used in an ethically and socially responsible manner?



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