

Management Information Systems

Information Systems in Business Today

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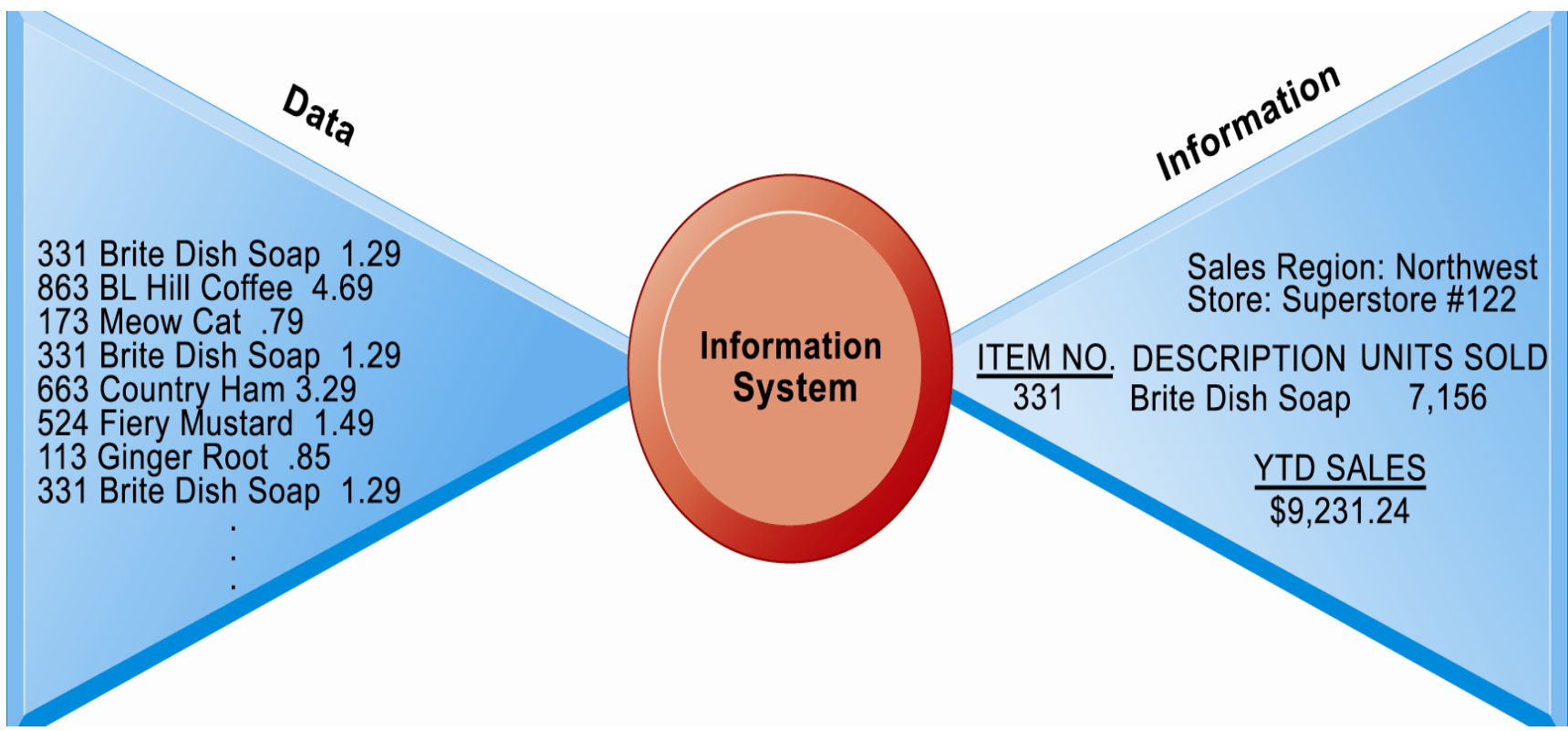
Information Systems - Defined

- Set of interrelated components
- Collect, process, store, and distribute information
- Support decision making, coordination, and control

Information v/s Data

- Data are streams of raw facts
- Information is data shaped into meaningful form

Data and Information



The Role of Information Systems

- Business firms invest heavily in information systems to achieve six strategic business objectives:
 1. Operational excellence
 2. New products, services, and business models
 3. Customer and supplier intimacy
 4. Improved decision making
 5. Competitive advantage
 6. Survival

Operational excellence

- Improvement of efficiency to attain higher profitability
- Information systems, technology an important tool in achieving greater efficiency and productivity

New Products, Services, and Business Models

- **Business model:** describes how company produces, delivers, and sells product or service to create wealth
- Information systems and technology a major enabling tool for new products, services, business models

Customer and Supplier Intimacy

- Serving customers well leads to customers returning, which raises revenues and profits
 - Example: High-end hotels that use computers to track customer preferences and use to monitor and customize environment
- Intimacy with suppliers allows them to provide vital inputs, which lowers costs
 - Example: J.C.Penney's information system which links sales records to contract manufacturer

Improved decision making

- Without accurate information:
 - Managers must use forecasts, best guesses, luck
 - Leads to:
 - Overproduction, underproduction of goods and services
 - Misallocation of resources
 - Poor response times
 - Poor outcomes raise costs, lose customers

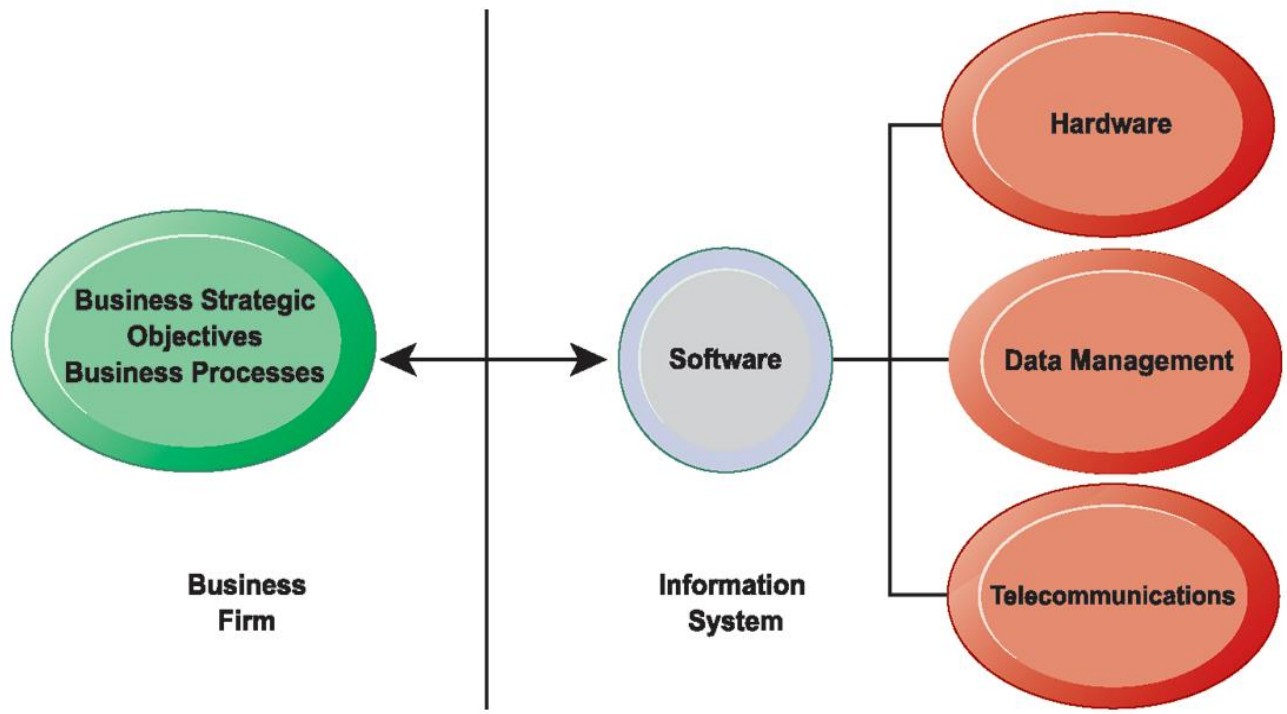
Competitive advantage

- Delivering better performance
- Charging less for superior products
- Responding to customers and suppliers in real time

Survival

- Information technologies as necessity of business
- May be:
 - Industry-level changes, e.g. Citibank's introduction of ATMs
 - Governmental regulations requiring record-keeping

Relation Between IS and Company



Activities of an Information Systems

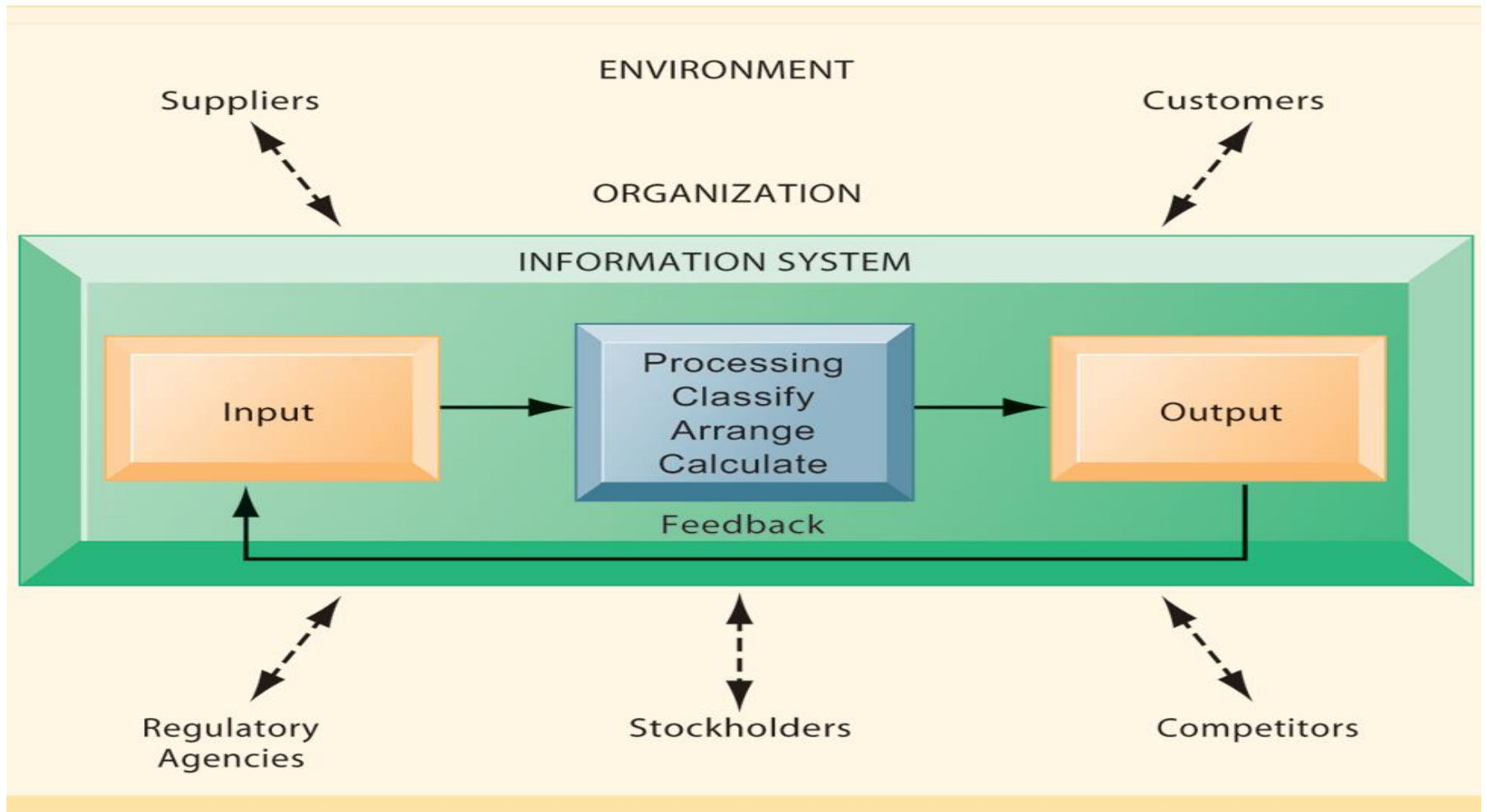
1. **Input:** Captures raw data from organization or external environment
2. **Processing:** Converts raw data into meaningful form
3. **Output:** Transfers processed information to people or activities that use it

Activities of an Information Systems

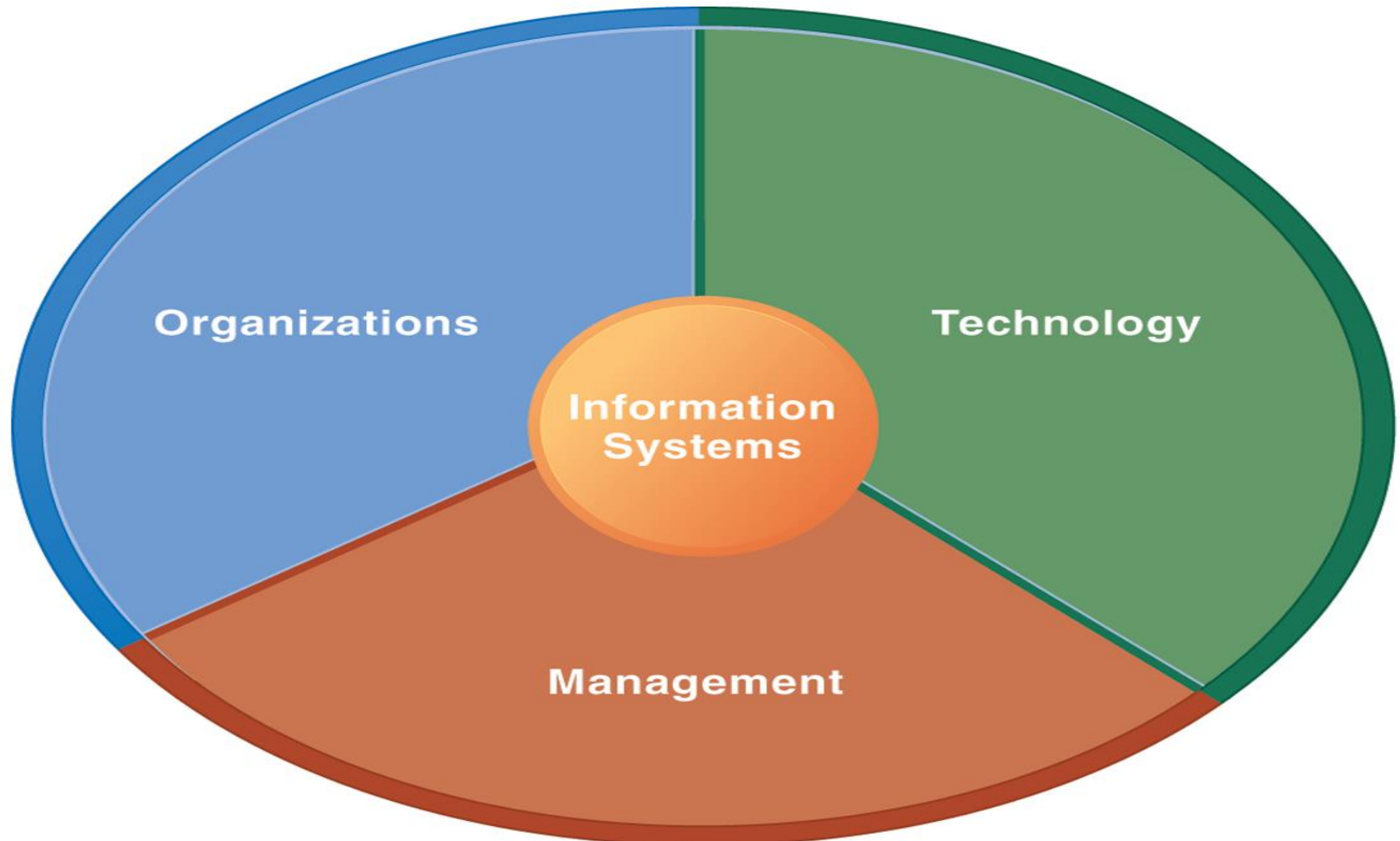
Feedback:

Output returned to appropriate members of organization to help evaluate or correct input stage

Activities of an Information Systems



Perspective on IS



Organization Dimension

- Separation of business functions
 - Sales and marketing
 - Human resources
 - Finance and accounting
 - Manufacturing and production

Management Dimension

- Managers set organizational strategy for responding to business challenges
- In addition, managers must act creatively:
 - Creation of new products and services

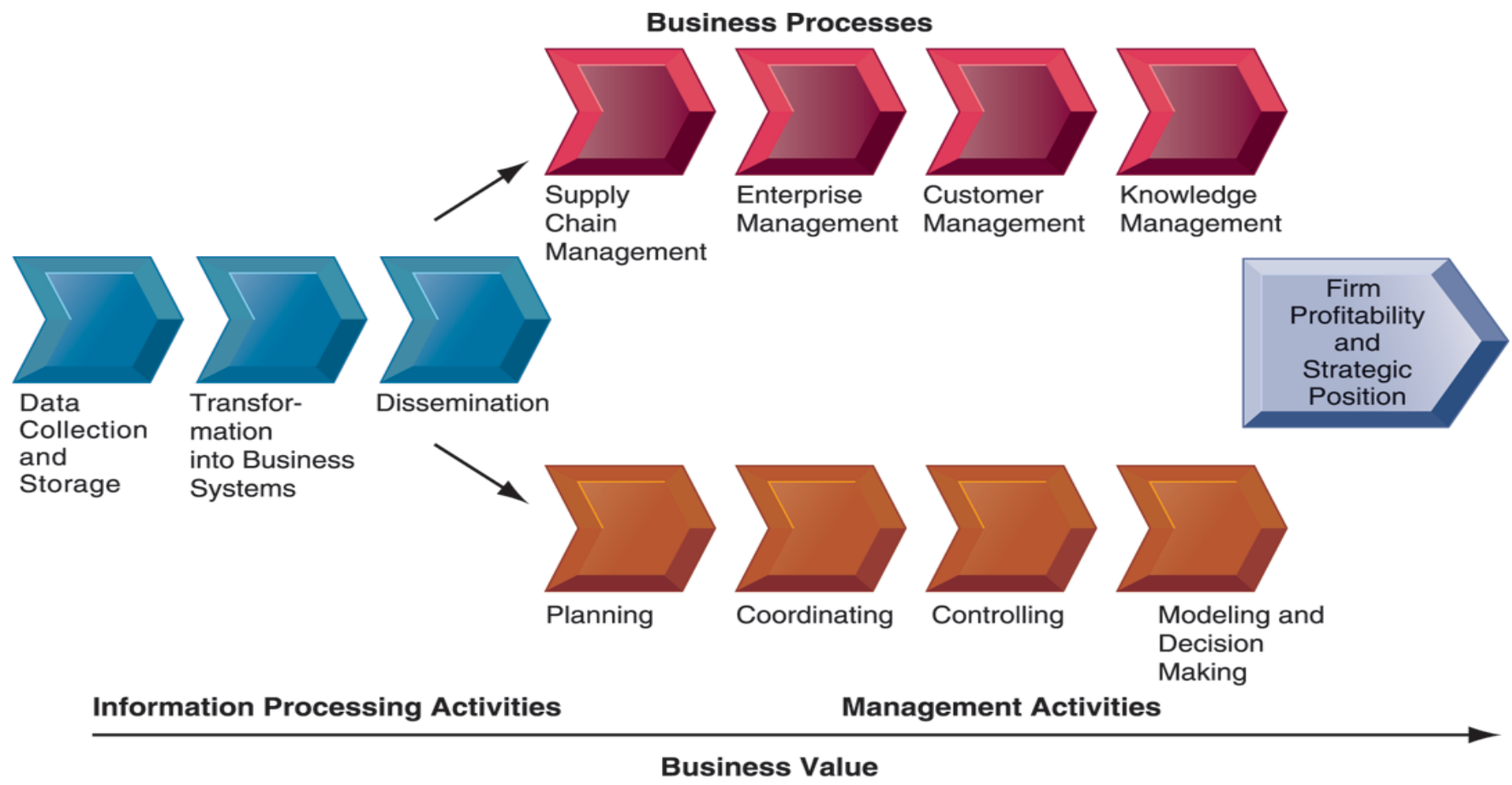
Technology Dimension

- Computer hardware and software
- Data management technology
- Networking and telecommunications technology
 - Networks, the Internet, intranets and extranets, World Wide Web
- IT infrastructure: provides platform that system is built on

Business Information Value Chain

- Raw data acquired and transformed through stages that add value to that information
- Value of information system determined in part by extent to which it leads to better decisions, greater efficiency, and higher profits

Business Information Value Chain



Perspective on IS

- Investing in information technology does not guarantee good returns
- Considerable variation in the returns firms receive from systems investments
- Factors:
 - Adopting the right business model
 - Investing in complementary assets (organizational and management capital)

Complementary Assets

- Assets required to derive value from a primary investment
- Firms supporting technology investments with investment in complementary assets receive superior returns
- E.g.: invest in technology and the people to make it work properly