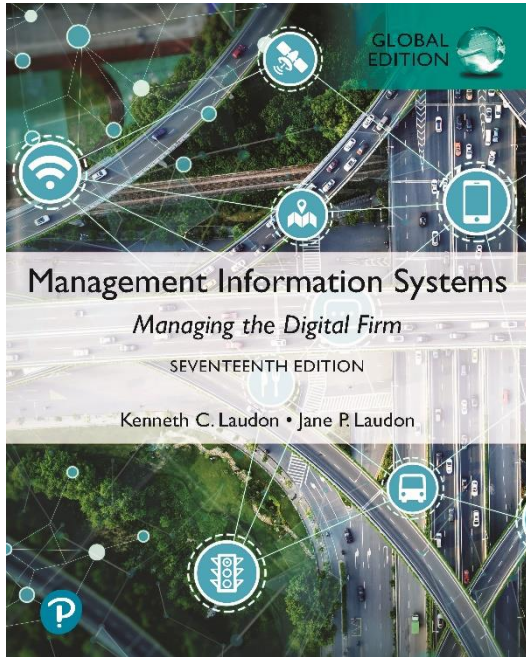


Management Information Systems: Managing the Digital Firm

Seventeenth Edition, Global Edition



Chapter 2

Global E-Business and
Collaboration

Learning Objectives

- 2.1** What are business processes? How are they related to information systems?
- 2.2** How do systems serve the different management groups in a business, and how do systems that link the enterprise improve organizational performance?

Business Processes (1 of 2)

- Business processes
 - Flows of material, information, knowledge
 - Logically related set of tasks that define how specific business tasks are performed
 - May be tied to functional area or be cross-functional
- Businesses: Can be seen as collection of business processes

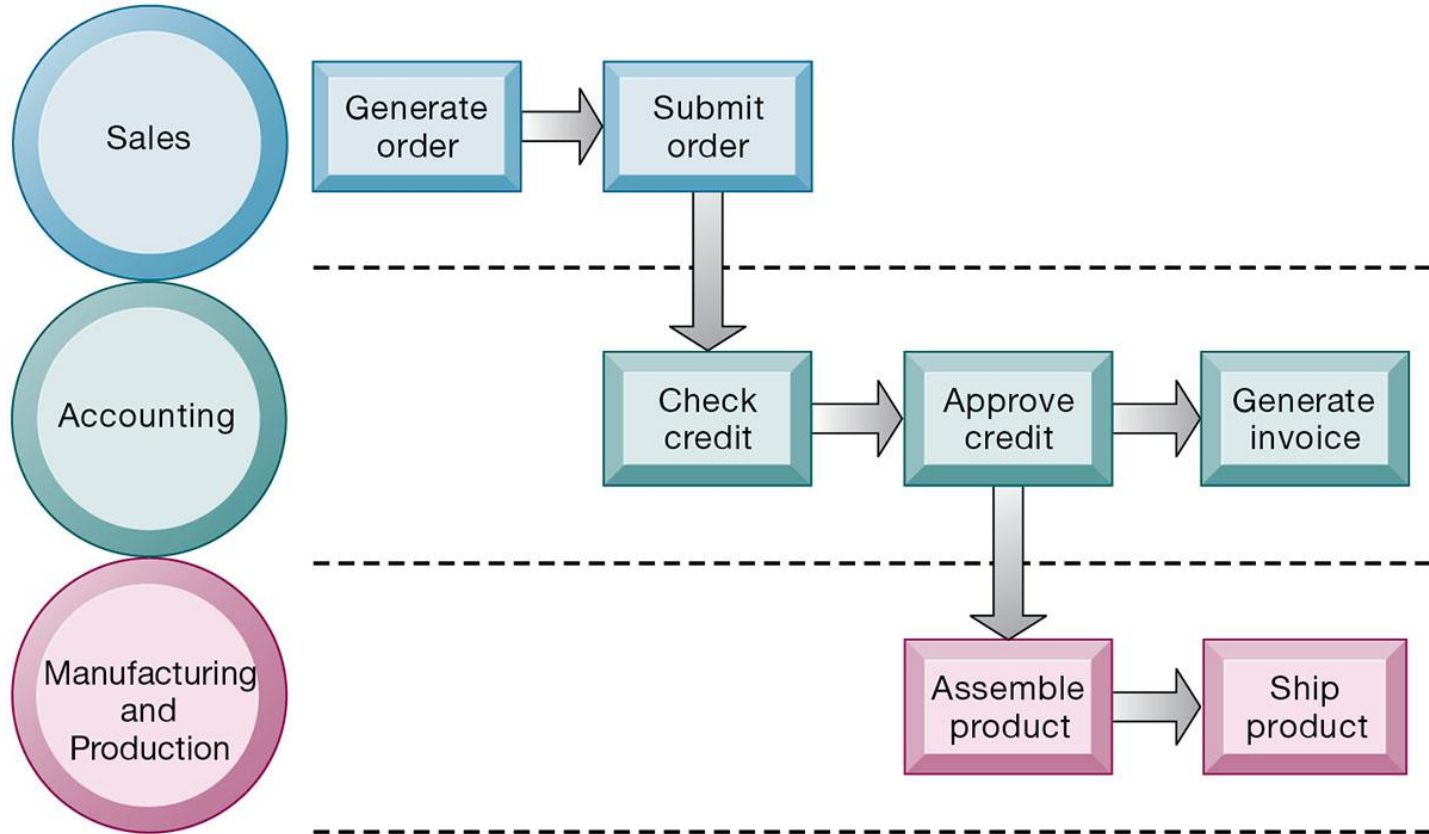
Business Processes (2 of 2)

- Examples of functional business processes
 - Manufacturing and production
 - Assembling the product
 - Sales and marketing
 - Identifying customers
 - Finance and accounting
 - Creating financial statements
 - Human resources
 - Hiring employees

TABLE 2.1 EXAMPLES OF FUNCTIONAL BUSINESS PROCESSES

FUNCTIONAL AREA	BUSINESS PROCESS
Manufacturing and production	Assembling the product Checking for quality Producing bills of materials
Sales and marketing	Identifying customers Making customers aware of the product Selling the product
Finance and accounting	Paying creditors Creating financial statements Managing cash accounts
Human resources	Hiring employees Evaluating employees' job performance Enrolling employees in benefits plans

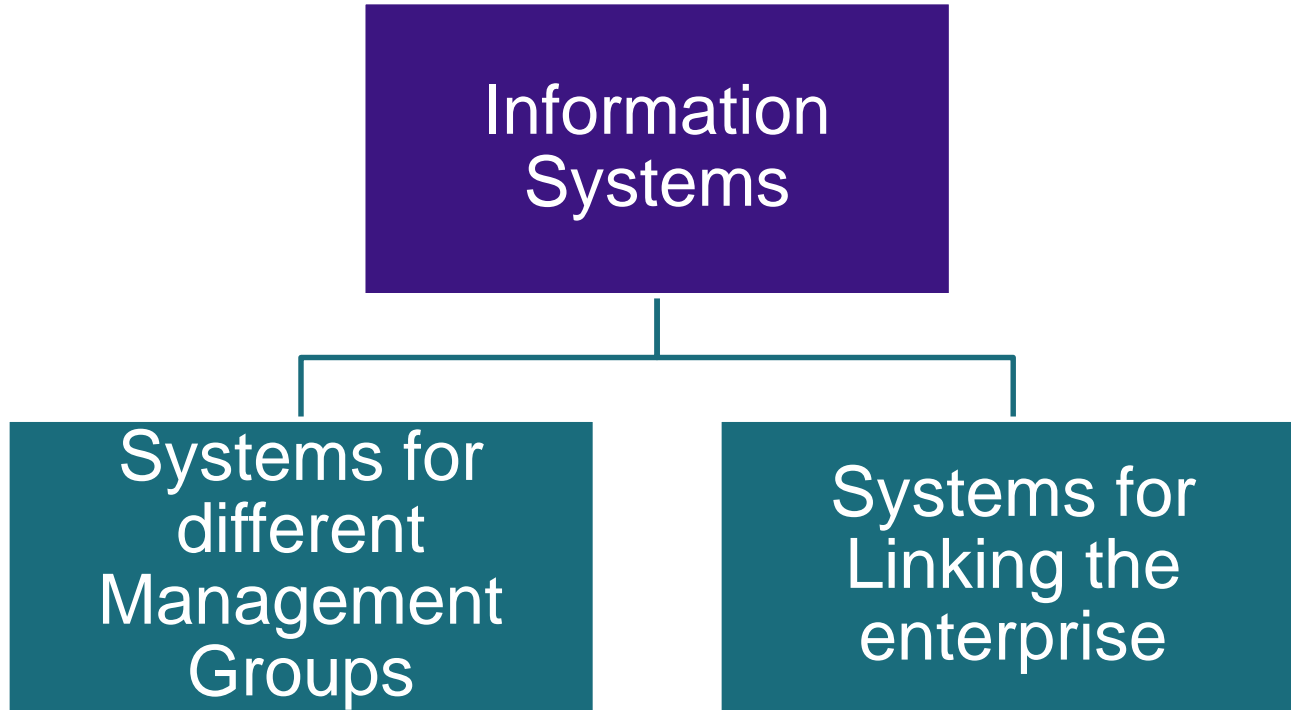
Figure 2.1 The Order Fulfillment Process



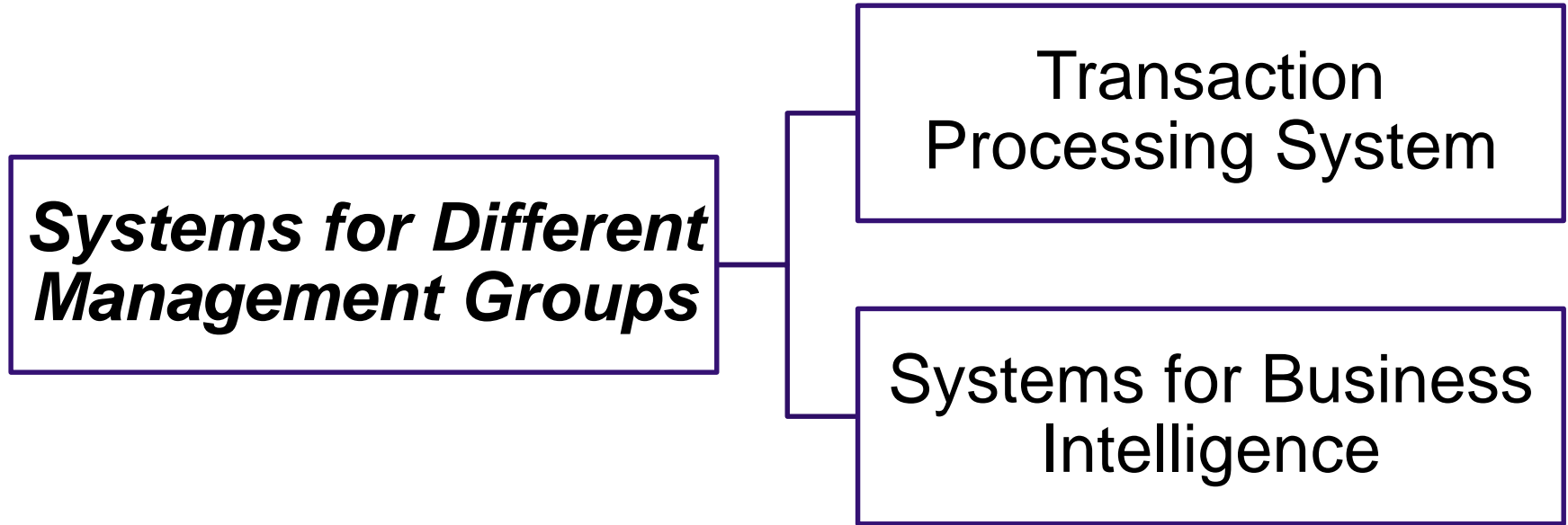
How Information Technology Improves Business Processes

1. **Increasing Efficiency:** IT streamlines workflows, reduces redundancies, and boosts accuracy.
2. **Automating Manual Tasks:** using AI, Robotics, and self-service systems
3. **Enabling New Processes:** enabling digital transactions, real-time analytics, and AI-driven decisions.
4. **Changing Information Flow:** Data is instantly accessible, ensuring seamless sharing across departments and eliminating bottlenecks.
5. **Parallel Processing:** IT allows simultaneous processing, reducing delays and improving collaboration.
6. **Faster Decision-Making:** Real-time analytics and AI insights help businesses make quick, data-driven decisions.
7. **Supporting New Business Models:** IT has given rise to models like the gig economy, subscription services, and decentralized finance.

Types of Information Systems



Systems for Different Management Groups



Transaction Processing Systems

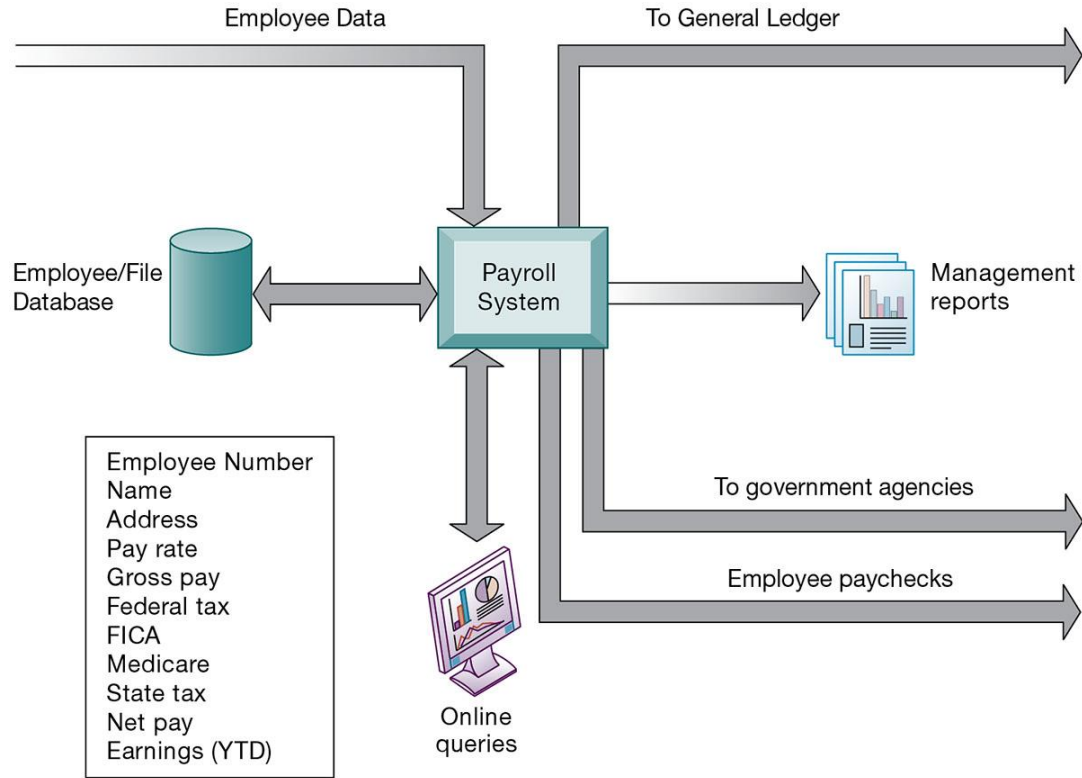
Serve operational managers and staff

Perform and record daily routine transactions necessary to conduct business.
Examples: sales order entry, payroll, shipping

Allow managers to monitor status of operations and relations with external environment

Serve predefined, structured goals and decision making

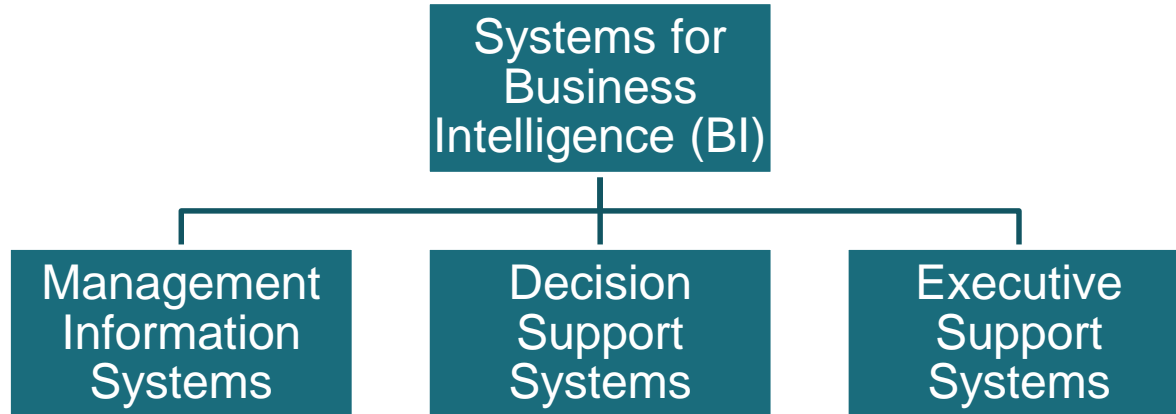
Figure 2.2 A Payroll TPS



Payroll data on master file

Systems for Business Intelligence

- Data and software tools for organizing and analyzing data
- Used to help managers and users make improved decisions



Management Information Systems

Serve middle management

Provide reports on firm's current performance, based on data from T P S

Provide answers to routine questions with predefined procedure for answering them

Typically have little analytic capability

Figure 2.3 How Management Information Systems Obtain Their Data from the Organization's TPS

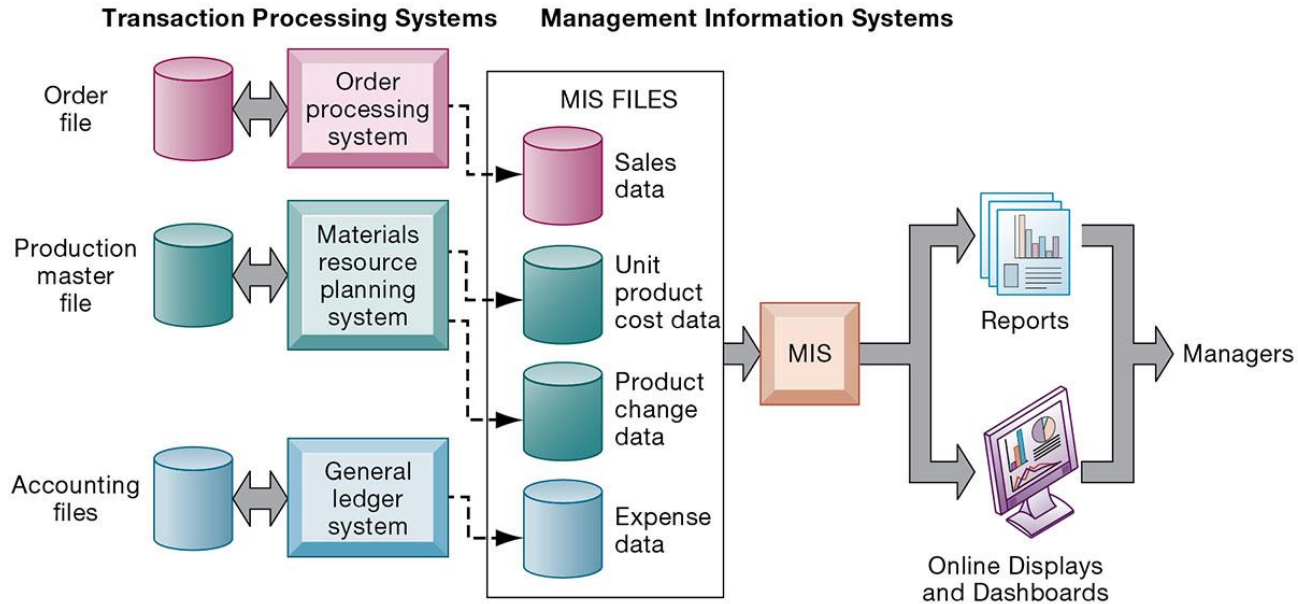


Figure 2.4 Sample MIS Report

Consolidated Consumer Products Corporation Sales by Product and Sales Region: 2020

PRODUCT CODE	PRODUCT DESCRIPTION	SALES REGION	ACTUAL SALES	PLANNED	ACTUAL versus PLANNED
4469	Carpet Cleaner	Northeast	4,066,700	4,800,000	0.85
		South	3,778,112	3,750,000	1.01
		Midwest	4,867,001	4,600,000	1.06
		West	4,003,440	4,400,000	0.91
		TOTAL		16,715,253	17,550,000
5674	Room Freshener	Northeast	3,676,700	3,900,000	0.94
		South	5,608,112	4,700,000	1.19
		Midwest	4,711,001	4,200,000	1.12
		West	4,563,440	4,900,000	0.93
		TOTAL		18,559,253	17,700,000

Decision Support Systems

Serve middle management

Support non-routine decision making, for example: What is the impact on production schedule if December sales doubled?

May use external information as well as T P S / M I S data

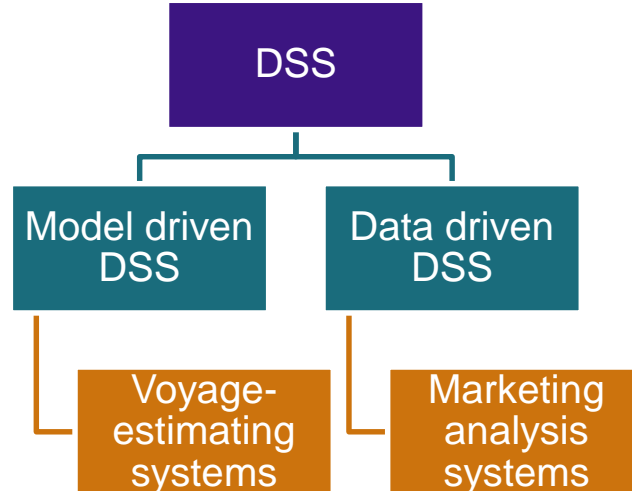
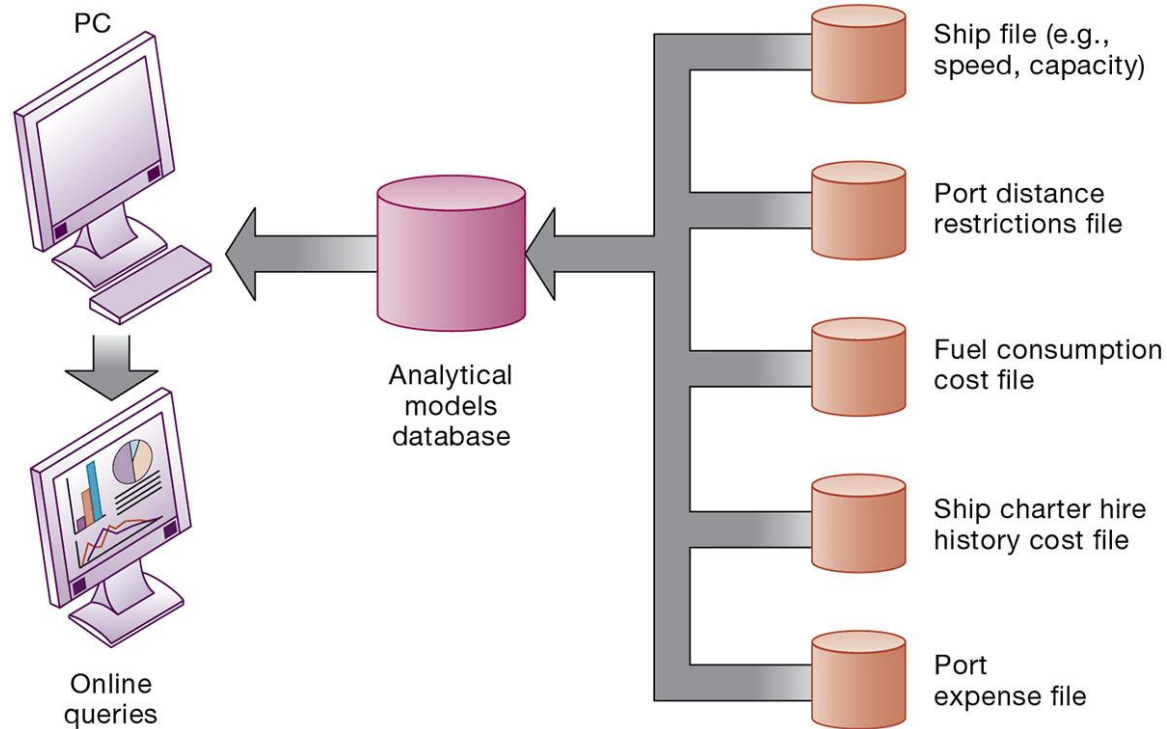


Figure 2.5 Voyage-Estimating Decision-Support System



Executive Support Systems

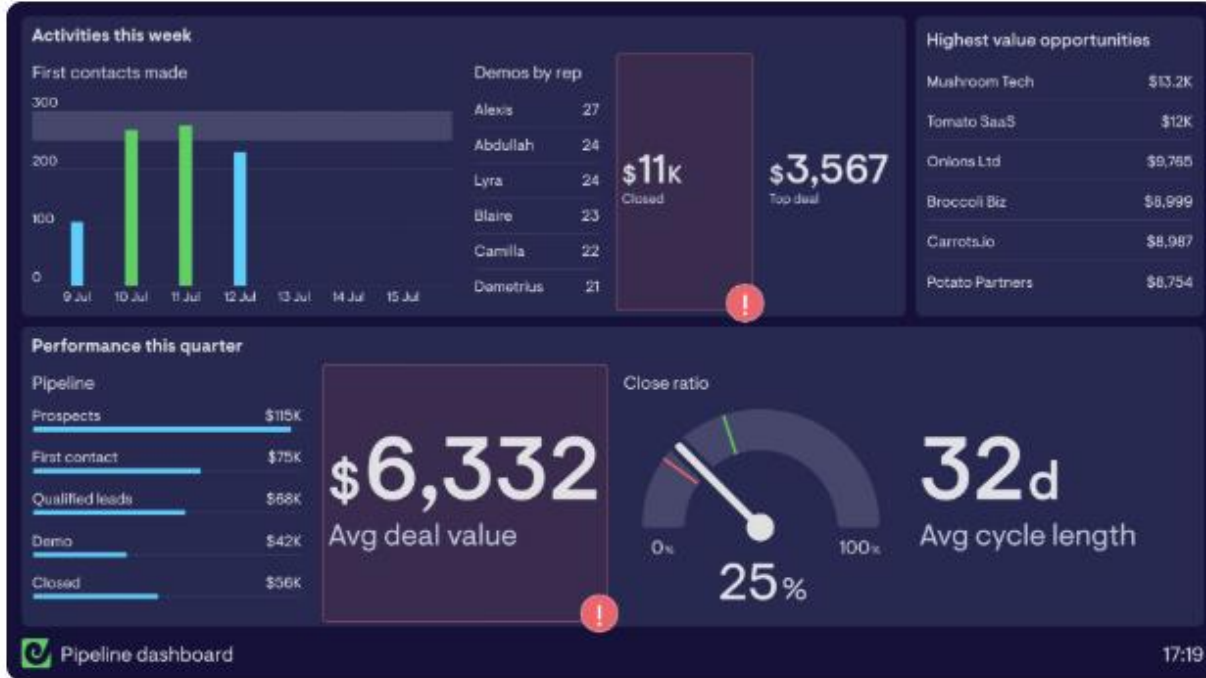
Support senior management

Address non-routine decisions (Requiring judgment, evaluation, and insight)

Incorporate data about external events (e.g., new tax laws or competitors) as well as summarized information from internal M I S and D S S.

Example: Digital dashboard with real-time view of firm's financial performance

Sample ESS Report



Enterprise Applications

- Systems for linking the enterprise
- Span functional areas
- Execute business processes across the firm
- Include all levels of management
- Four major applications

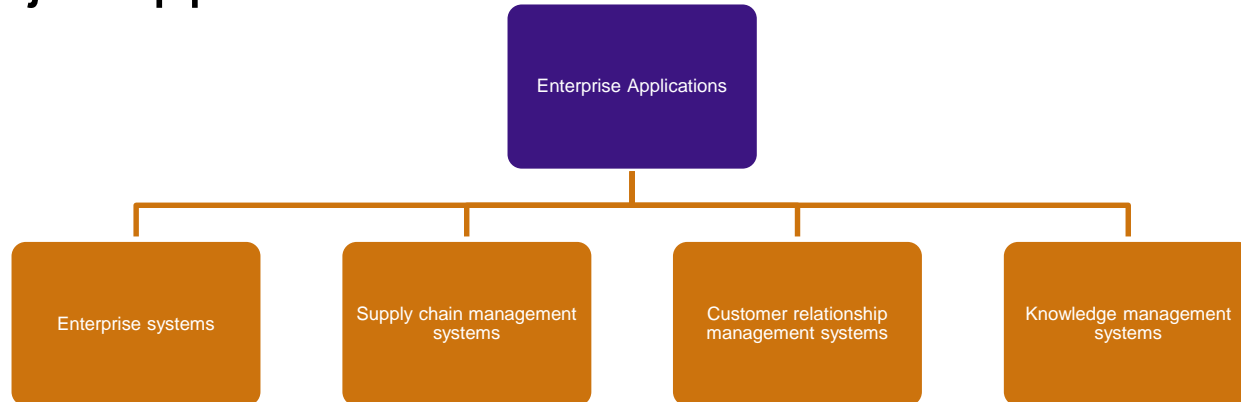
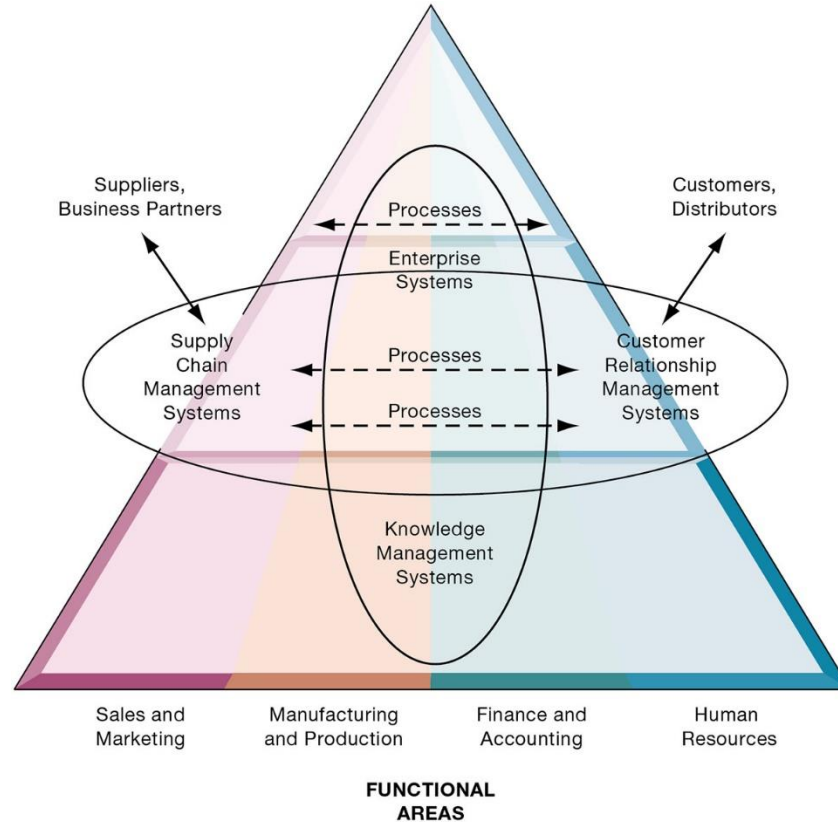


Figure 2.6 Enterprise Application Architecture



Enterprise Systems

Also called enterprise resource planning (E R P) systems

Integrate data from key business processes into single system

Speed communication of information throughout firm

Enable greater flexibility in responding to customer requests, greater accuracy in order fulfillment

Enable managers to assemble overall view of operations

Supply Chain Management (SCM) Systems

Manage relationships with suppliers, purchasing firms, distributors, and logistics companies

Manage shared information about orders, production, inventory levels, and so on

Goal is to move correct amount of product from source to point of consumption as quickly as possible and at lowest cost

Type of inter-organizational system:

Automating flow of information across organizational boundaries

Customer Relationship Management (CRM) Systems

- Help manage relationship with customers
- Coordinate business processes that deal with customers in sales, marketing, and customer service
- Goals:

Optimize revenue

Improve customer satisfaction

Increase customer retention

Identify and retain most profitable customers

Increase sales

Knowledge Management Systems (KMS)

Manage processes for capturing and applying knowledge and expertise

Collect relevant knowledge and make it available wherever needed in the enterprise to improve business processes and management decisions

Link firm to external sources of knowledge

Intranets and Extranets

Technology platforms that increase integration and expedite the flow of information

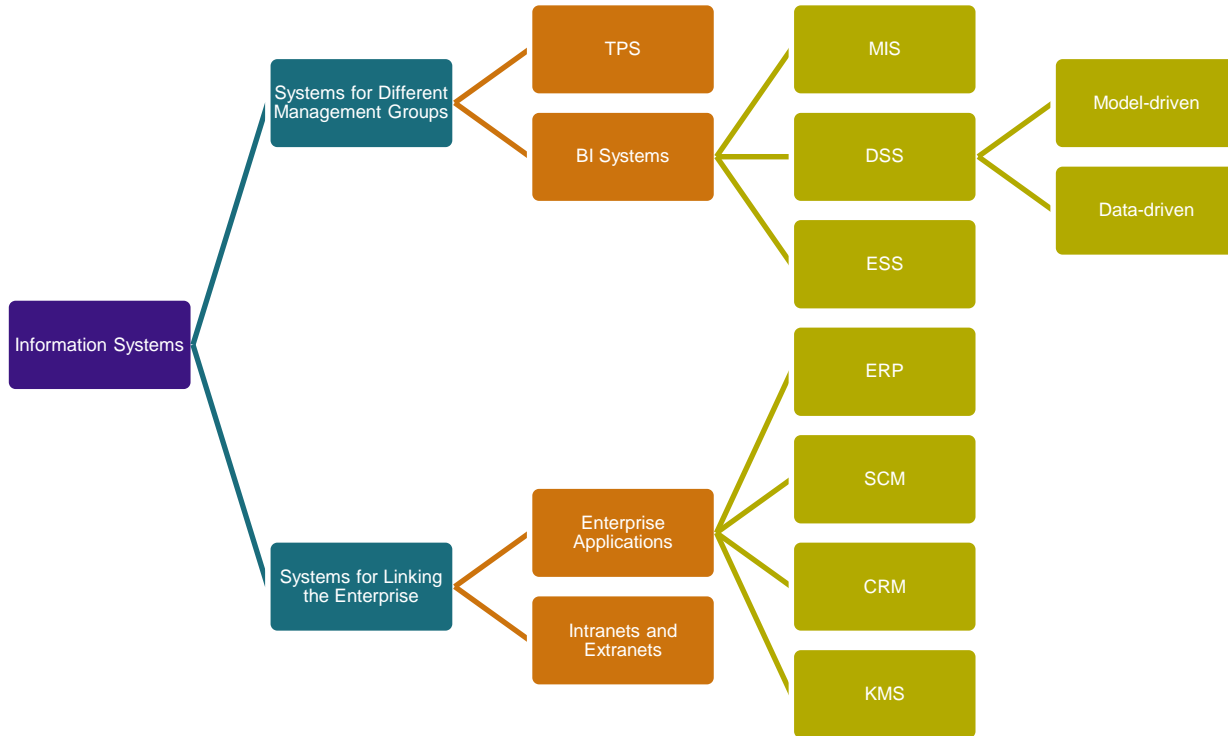
Intranets:

- Internal networks based on Internet standards
- Often are private access area in company's website

Extranets:

- Company websites accessible only to authorized vendors and suppliers
- Facilitate collaboration

Summarizing Information Systems Types



E-business, E-commerce, and E-government

E-business

- Use of digital technology and Internet to drive major business processes

E-commerce

- Subset of e-business
- Buying and selling goods and services through Internet

E-government

- Using Internet technology to deliver information and services to citizens, employees, and businesses

End of Chapter 2