



Chapter 2

Global E-business and Collaboration

VIDEO CASES

Case 1: Walmart's Retail Link Supply Chain

Case 2: Salesforce.com: The Emerging Social Enterprise

Case 3: How FedEx Works: Inside the Memphis Hub


Instructional Video 1: US Foodservice Grows Market with Oracle CRM on Demand



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Learning Objectives

- Define and describe business processes and their relationship to information systems.
- Evaluate the role played by systems serving the various levels of management in a business and their relationship to each other.
- Explain how enterprise applications improve organizational performance.




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Learning Objectives (cont.)

- **Explain the importance of collaboration and teamwork in business and how they are supported by technology.**
- **Assess the role of the information systems function in a business.**

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TELUS Embraces Social Learning

- **Problem:** Need to capture employee knowledge as 40% of workforce nears retirement
- **Solutions:** New technology for collaborative knowledge sharing
- **Microsoft SharePoint Server 3010** provided companywide platform for collaboration, knowledge acquisition and transfer, and social tools
- Demonstrates IT' s role in collaboration and documenting knowledge
- Illustrates the need for changing organizational culture and business processes to use information systems effectively

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Business Processes and Information Systems

- **Business processes:**
 - Flows of material, information, knowledge
 - Sets of activities, steps
 - May be tied to functional area or be cross-functional
- **Businesses: Can be seen as collection of business processes**
- **Business processes may be assets or liabilities**

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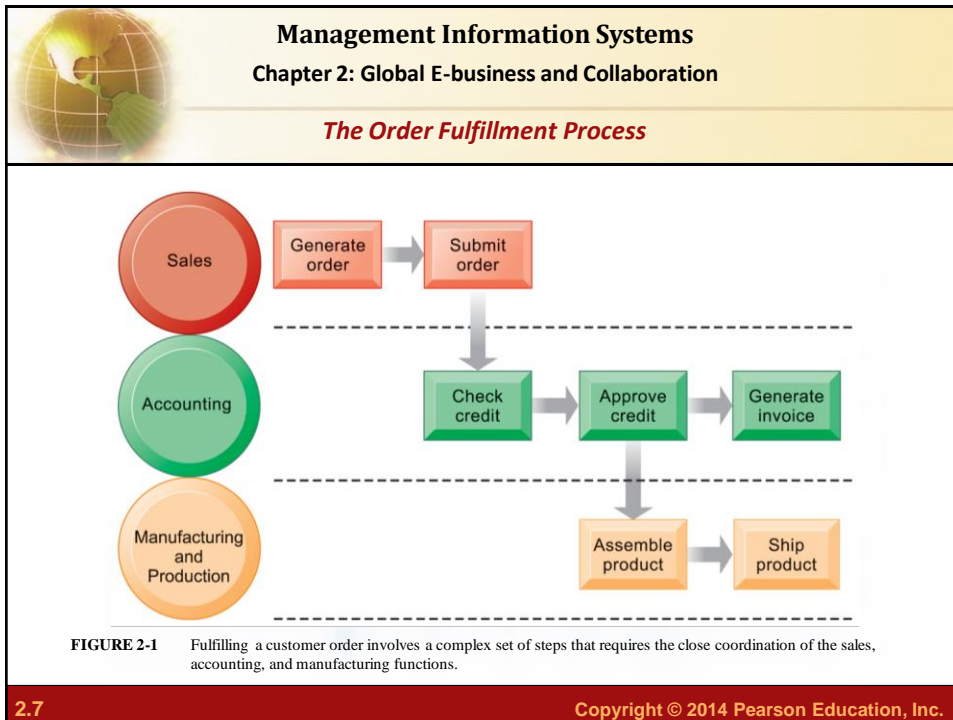


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Business Processes and Information Systems

- **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

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Business Processes and Information Systems

- **Information technology enhances business processes by:**
 - **Increasing efficiency of existing processes**
 - Automating steps that were manual
 - **Enabling entirely new processes**
 - Change flow of information
 - Replace sequential steps with parallel steps
 - Eliminate delays in decision making
 - Support new business models

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Types of Information Systems

- **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

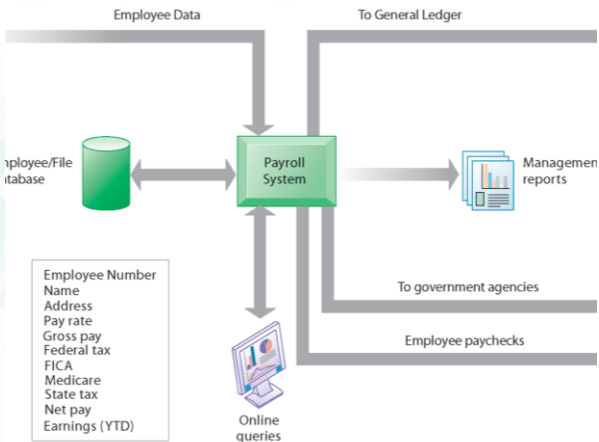
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A Payroll TPS




The diagram illustrates the data flow of a Payroll TPS. It features a central 'Payroll System' box. To its left is a green cylinder representing the 'Employee/File Database'. An arrow points from the database to the system, and another from the system back to the database. To the right of the system, several arrows point outwards: one to 'Management reports', one to 'To government agencies', and one to 'Employee paychecks'. Above the system, an arrow labeled 'Employee Data' points to the system, and another labeled 'To General Ledger' points away from it. Below the system, an arrow labeled 'Online queries' points to a computer monitor icon. A box below the system lists the data stored on the master file: Employee Number, Name, Address, Pay rate, Gross pay, Federal tax, FICA, Medicare, State tax, Net pay, and Earnings (YTD).

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

FIGURE 2-2

Payroll data on master file

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Types of Information Systems

- **Business intelligence**
 - Data and software tools for organizing and analyzing data
 - Used to help managers and users make improved decisions
- **Business intelligence systems**
 - Management information systems
 - Decision support systems
 - Executive support systems

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Interactive Session: Technology

CAN AIRLINES SOLVE THEIR BAGGAGE HANDLING PROBLEMS?
Read the Interactive Session and discuss the following questions

- What types of transactions are handled by baggage handling systems?
- What are the management, organization, and technology components of baggage handling systems?
- What is the problem these baggage handling systems are trying to solve? Discuss the business impact of this problem. Are today's baggage handling systems a solution to this problem?
- What kinds of management reports can be generated from the data from these systems?

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Types of Information Systems

- **Management information systems**
 - **Serve middle management**
 - **Provide reports on firm's current performance, based on data from TPS**
 - **Provide answers to routine questions with predefined procedure for answering them**
 - **Typically have little analytic capability**

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How MIS Obtain Their Data from the Organization's TPS











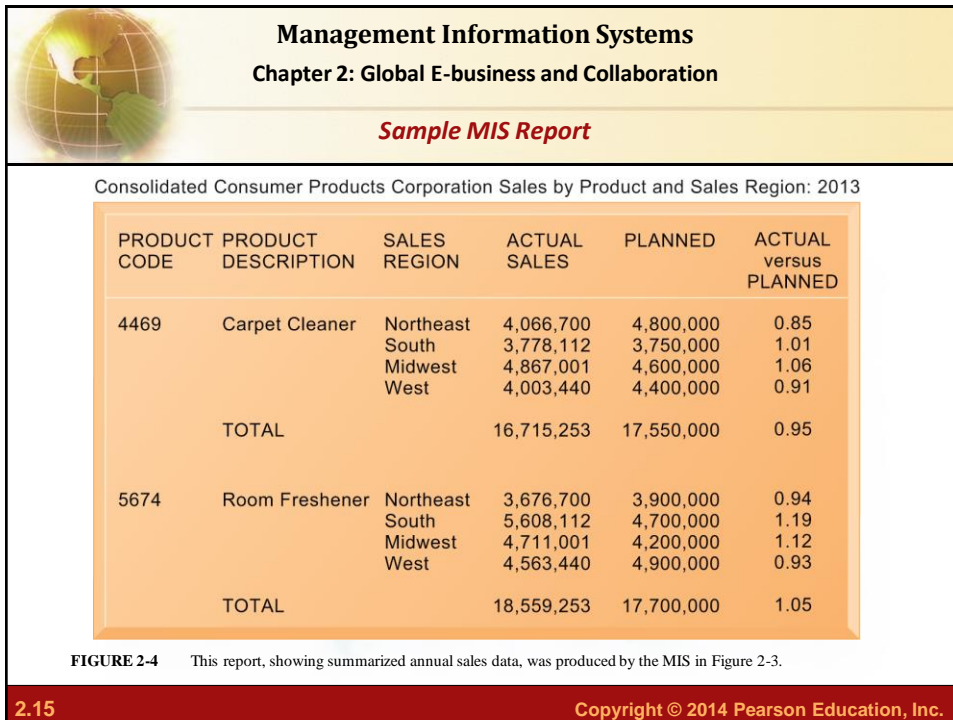

Transaction Processing Systems	Management Information Systems	
Order file  ↔ Order processing system	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> MIS FILES  Sales data  Unit product cost data  Product change data  Expense data </div>	
Production master file  ↔ Materials resource planning system		
Accounting files  ↔ General ledger system		
	 →  →  → Managers	

FIGURE 2-3 In the system illustrated by this diagram, three TPS supply summarized transaction data to the MIS reporting system at the end of the time period. Managers gain access to the organizational data through the MIS, which provides them with the appropriate reports.

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Types of Information Systems

- **Decision support systems**
 - **Serve middle management**
 - **Support non-routine decision making**
 - Example: What is the impact on production schedule if December sales doubled?
 - **May use external information as well TPS / MIS data**
 - **Model driven DSS**
 - Voyage-estimating systems
 - **Data driven DSS**
 - Intrawest's marketing analysis systems

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Voyage-Estimating Decision Support System

FIGURE 2-5 This DSS operates on a powerful PC. It is used daily by managers who must develop bids on shipping contracts.


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Types of Information Systems

- **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 MIS and DSS**
 - **Example:** Digital dashboard with real-time view of firm's financial performance: working capital, accounts receivable, accounts payable, cash flow, and inventory

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Interactive Session: Technology

PILOTING PROCTER & GAMBLE FROM DECISION COCKPITS
Read the Interactive Session and discuss the following questions

- **What management, organization, and technology issues had to be addressed when implementing Business Sufficiency, Business Sphere, and Decision Cockpits?**
- **How did these decision-making tools change the way the company ran its business? How effective are they? Why?**
- **How are these systems related to P&G' s business strategy?**

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Types of Information Systems

- **Enterprise applications**
 - Systems for linking the enterprise
 - Span functional areas
 - Execute business processes across firm
 - Include all levels of management
 - Four major applications:
 - Enterprise systems
 - Supply chain management systems
 - Customer relationship management systems
 - Knowledge management systems

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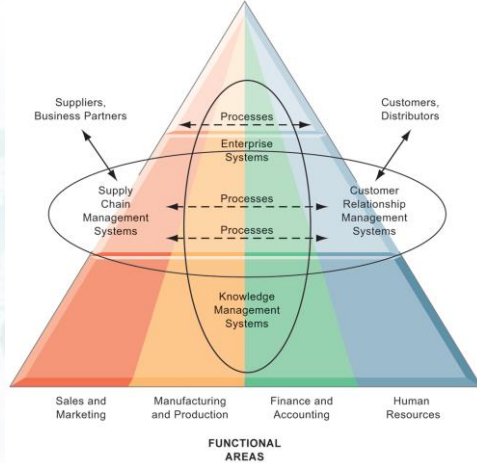
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Enterprise Application Architecture


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

FIGURE 2-6



FUNCTIONAL AREAS

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Types of Information Systems

- **Enterprise systems**
 - Collects data from different firm functions and stores data in single central data repository
 - Resolves problem of fragmented data
 - Enable:
 - Coordination of daily activities
 - Efficient response to customer orders (production, inventory)
 - Help managers make decisions about daily operations and longer-term planning

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Types of Information Systems

- **Supply chain management (SCM) systems**
 - **Manage firm's relationships with suppliers**
 - **Share information about:**
 - Orders, production, inventory levels, delivery of products and services
 - **Goal:**
 - Right amount of products to destination with least amount of time and lowest cost

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Types of Information Systems

- **Customer relationship management systems:**
 - **Provide information to coordinate all of the business processes that deal with customers**
 - Sales
 - Marketing
 - Customer service
 - **Helps firms identify, attract, and retain most profitable customers**

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Types of Information Systems

- **Knowledge management systems (KMS)**
 - **Support processes for capturing and applying knowledge and expertise**
 - How to create, produce, deliver products and services
 - **Collect internal knowledge and experience within firm and make it available to employees**
 - **Link to external sources of knowledge**

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Types of Information Systems

- **Also used to increase integration and expedite the flow of information**
 - **Intranets:**
 - Internal company Web sites accessible only by employees
 - **Extranets:**
 - Company Web sites accessible externally only to vendors and suppliers
 - Often used to coordinate supply chain

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Types of Information Systems

- **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

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Systems for Collaboration and Teamwork

- **Collaboration:**
 - Short-lived or long-term
 - Informal or formal (teams)
- **Growing importance of collaboration:**
 - Changing nature of work
 - Growth of professional work—“interaction jobs”
 - Changing organization of the firm
 - Changing scope of the firm
 - Emphasis on innovation
 - Changing culture of work

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Systems for Collaboration and Teamwork

- **Social business**
 - Use of social networking platforms, internal and external
 - Engage employees, customers, and suppliers
 - Goal is to deepen interactions and expedite information sharing
 - “Conversations”
 - Requires information transparency
 - Driving the exchange of information without intervention from executives or others

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Systems for Collaboration and Teamwork

- **Business benefits of collaboration and teamwork**
 - Investments in collaboration technology can bring organization improvements, returning high ROI
 - **Benefits:**
 - Productivity
 - Quality
 - Innovation
 - Customer service
 - Financial performance
 - Profitability, sales, sales growth

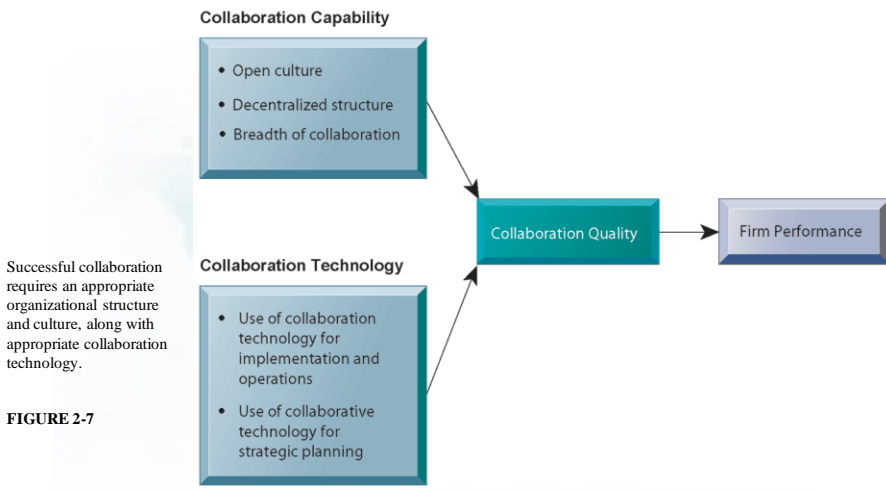
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Requirements for Collaboration



Collaboration Capability

- Open culture
- Decentralized structure
- Breadth of collaboration

Collaboration Technology

- Use of collaboration technology for implementation and operations
- Use of collaborative technology for strategic planning

Collaboration Quality → **Firm Performance**

Successful collaboration requires an appropriate organizational structure and culture, along with appropriate collaboration technology.

FIGURE 2-7

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Systems for Collaboration and Teamwork

- **Building a collaborative culture and business processes**
 - **“Command and control” organizations**
 - No value placed on teamwork or lower-level participation in decisions
 - **Collaborative business culture**
 - Senior managers rely on teams of employees.
 - Policies, products, designs, processes, and systems rely on teams.
 - The managers purpose is to build teams.

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Systems for Collaboration and Teamwork

- **Tools for collaboration and teamwork**
 - E-mail and instant messaging
 - Wikis
 - Virtual worlds
 - **Collaboration and social business platforms**
 - Virtual meeting systems (telepresence)
 - Google Apps/Google sites
 - Cyberlockers
 - Microsoft SharePoint
 - Lotus Notes
 - Enterprise social networking tools

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Systems for Collaboration and Teamwork

- **Enterprise social networking software capabilities**
 - Profiles
 - Content sharing
 - Feeds and notifications
 - Groups and team workspaces
 - Tagging and social bookmarking
 - Permissions and privacy

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Systems for Collaboration and Teamwork

- **Two dimensions of collaboration technologies**
 - Space (or location)—remote or co-located
 - Time—synchronous or asynchronous
- **Six steps in evaluating software tools**
 1. What are your firm's collaboration challenges?
 2. What kinds of solutions are available?
 3. Analyze available products' cost and benefits.
 4. Evaluate security risks.
 5. Consult users for implementation and training issues.
 6. Evaluate product vendors.

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The Time/Space Collaboration Tool Matrix

		Same time synchronous	Different time asynchronous
Different place remote	Same place colocated	Face to face interactions decision rooms, single display groupware, shared table, wall displays, roomware, ...	Continuous task team rooms, large public display, shift work groupware, project management, ...
	Different place remote	Remote interactions video conferencing, instance messaging, charts/MUDs/ virtual words, shared screens, multi-user editors, ...	Communication + coordination email, bulletin boards, blogs, asynchronous conferencing, group calendars, workflow, version control, wikis, ...

Time/Space Collaboration Tool Matrix

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FIGURE 2-8 Collaboration technologies can be classified in terms of whether they support interactions at the same or different time or place or whether these interactions are remote or co-located.




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The Information Systems Function in Business

- **Information systems department:**
 - **Formal organizational unit responsible for information technology services**
 - **Often headed by chief information officer (CIO)**
 - Other senior positions include chief security officer (CSO), chief knowledge officer (CKO), chief privacy officer (CPO)
 - **Programmers**
 - **Systems analysts**
 - **Information systems managers**

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The Information Systems Function in Business

- **End users**
 - Representatives of other departments for whom applications are developed
 - Increasing role in system design, development
- **IT Governance:**
 - Strategies and policies for using IT in the organization
 - Decision rights
 - Accountability
 - **Organization of information systems function**
 - Centralized, decentralized, and so on

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