

Concepts in Enterprise Resource Planning

Fourth Edition

Chapter One *Business Functions and Business Processes*

Objectives

After completing this chapter, you will be able to:

- Name the main functional areas of operation used in business
- Differentiate between a business process and a business function
- Identify the kinds of data each main functional area produces
- Identify the kinds of data each main functional area needs
- Define integrated information systems, and explain why they are essential in today's globally competitive business environment

Introduction

- **Enterprise Resource Planning (ERP)** programs:
Core software used by companies to coordinate information in every area of business
 - Help manage companywide business processes
 - Use common database and shared management reporting tools
- **Business process:** Collection of activities that takes some input and creates an output that is of value to the customer

Functional Areas and Business Processes

- To understand ERP, you must understand how a business works
 - Functional areas of operation
 - Business processes

Functional Areas of Operation

- Marketing and Sales (M/S)
- Supply Chain Management (SCM)
- Accounting and Finance (A/F)
- Human Resources (HR)
- **Business functions:** Activities specific to a functional area of operation

Functional Areas of Operation (cont'd.)

Functional area of operation	Marketing and Sales	Supply Chain Management	Accounting and Finance	Human Resources
Business functions	Marketing a product	Purchasing goods and raw materials	Financial accounting of payments from customers and to suppliers	Recruiting and hiring
	Taking sales orders	Receiving goods and raw materials	Cost allocation and control	Training
	Customer support	Transportation and logistics	Planning and budgeting	Payroll
	Customer relationship management	Scheduling production runs	Cash-flow management	Benefits
	Sales forecasting	Manufacturing goods		Government compliance
	Advertising	Plant maintenance		

Figure 1-1 Examples of functional areas of operation and their business functions

Functional Areas of Operation (cont'd.)

- Functional areas are interdependent
 - Each requires data from the others
- Better integration of functional areas leads to improvements in communication, workflow, and success of company
- **Information system (IS):** Computers, people, procedures, and software that store, organize, and deliver information

Business Processes

- Collection of activities that takes one or more kinds of input and creates an output that is of value to customer
 - Customer can be traditional external customer or internal customer
- Thinking in terms of business processes helps managers to look at their organization from the customer's perspective

Business Processes (cont'd.)

Input	Functional area responsible for input	Process	Output
Request to purchase smartphone	Marketing and Sales	Sales order	Order is generated
Financial help for purchase	Accounting and Finance	Arranging financing in-house	Customer finances through the smartphone company
Fulfillment of order	Supply Chain Management	Shipping and delivery	Customer receives smartphone
Technical support	Marketing and Sales	24-hour help line available	Customer's technical query is resolved

Figure 1-2 Sample business processes related to the sale of a personal smartphone

Business Processes (cont'd.)

- Businesses must always consider customer's viewpoint in any transaction
- Successful customer interaction
 - Customer (either internal or external) is not required to interact with each business function involved in the process
- Successful business managers view business operations from the perspective of a satisfied customer

Business Processes (cont'd.)

- Sharing data effectively and efficiently between and within functional areas leads to more efficient business processes
- **Integrated information systems:** Systems in which functional areas share data

Business Processes (cont'd.)

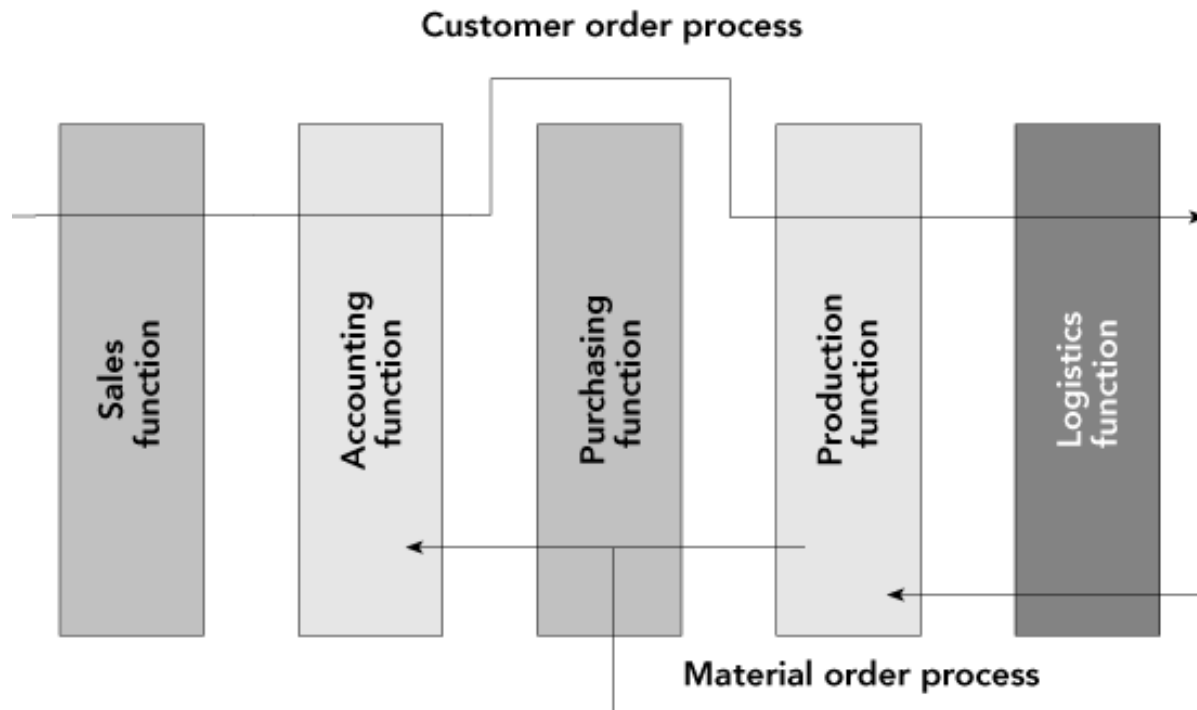


Figure 1-3 A process view of business

Business Processes (cont'd.)

- Businesses take inputs (resources) and transform these inputs into goods and services for customers
 - Inputs: Material, people, equipment
- Managing inputs and business processes effectively requires accurate and up-to-date information

Functional Areas and Business Processes of a Very Small Business

- Example: A fictitious coffee shop
 - Examine business processes of the coffee shop
 - See why coordination of functional areas helps achieve efficient and effective business processes
 - Look at how integration of the information system improves the business

Marketing and Sales

- Functions of Marketing and Sales
 - Developing products
 - Determining pricing
 - Promoting products to customers
 - Taking customers' orders
 - Helping create a sales forecast

Marketing and Sales (cont'd.)

- Marketing and Sales tasks for the coffee shop
 - Formal recordkeeping not required
 - Need to keep track of customers
 - Product development can be done informally
 - Good repeat customers allowed to charge purchases—up to a point
 - Records must show how much each customer owes and his or her available credit

Supply Chain Management

- Functions within Supply Chain Management
 - Making the coffee (manufacturing/production)
 - Buying raw materials (purchasing)
- Production planning requires sales forecasts from M/S functional area
 - **Sales forecasts:** Analyses that attempt to predict the future sales of a product

Supply Chain Management (cont'd.)

- Production plans used to develop requirements for raw materials and packaging
 - Raw materials: Bottled spring water, fresh lemons, artificial sweetener, raw sugar
 - Packaging: Cups, straws, napkins
- SCM and M/S must choose a recipe for each coffee product sold

Accounting and Finance

- Functions within Accounting and Finance
 - Recording raw data about transactions (including sales), raw material purchases, payroll, and receipt of cash from customers
- **Raw data:** Numbers collected from sales, manufacturing and other operations, without any manipulation, calculation, or arrangement for presentation

Accounting and Finance (cont'd.)

- Data from Accounting and Finance used by Marketing and Sales and Supply Chain Management
 - Sales records are important component of sales forecast
 - Sales forecast is used in making staffing decisions and in production planning
 - Records from accounts receivable used to monitor the overall credit-granting policy of the coffee shop

Human Resources

- Functions of Human Resources
 - Recruit, train, evaluate, and compensate employees
- HR uses sales forecasts developed by the individual departments to plan personnel needs
- Systems integrated using ERP software provide the data sharing necessary between functional areas

Functional Area Information Systems

- Potential inputs and outputs for each functional area described next
- Note the kinds of data needed by each area and how people use the data
- Information systems maintain relationships between all functional areas and processes

Marketing and Sales

- Needs information from all other functional areas
- Customers communicate orders to M/S in person or by telephone, e-mail, fax, the Web, etc.
- M/S has a role in determining product prices
 - Pricing might be determined based on a product's unit cost, plus some percentage markup
 - Requires information from Accounting and Finance, and Supply Chain Management data

Marketing and Sales (cont'd.)

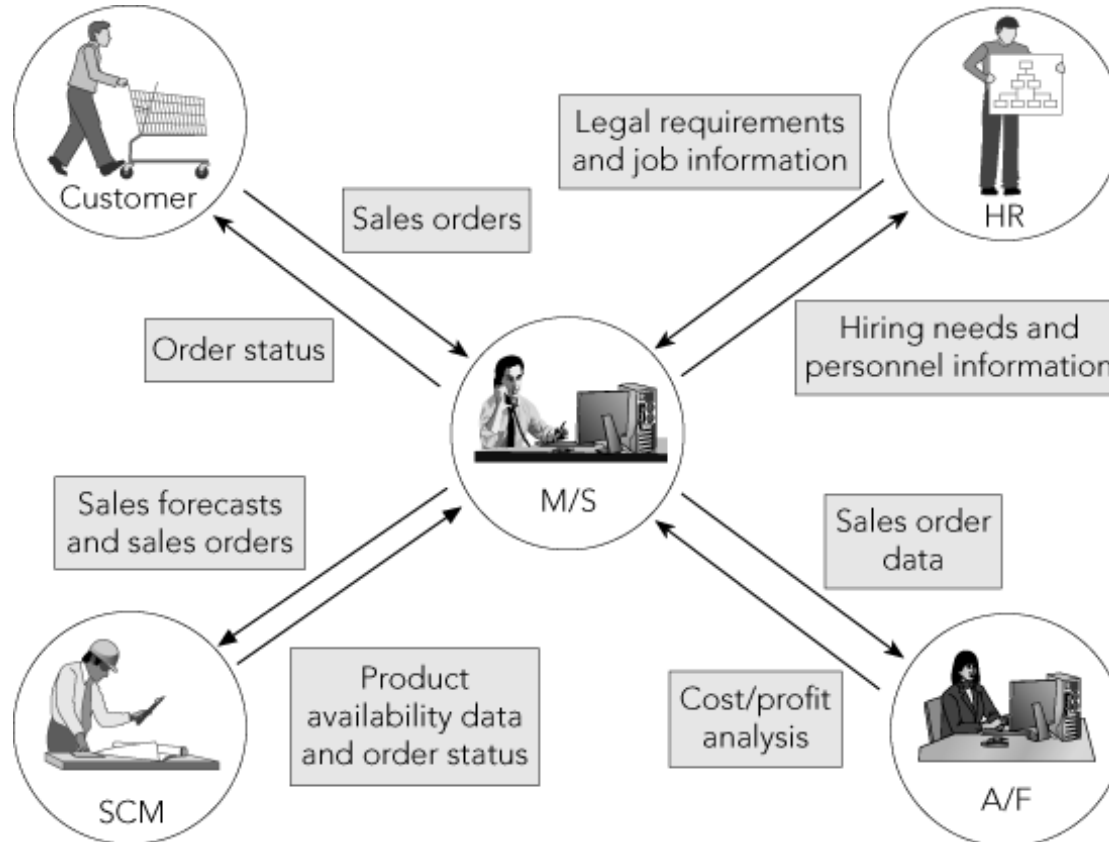


Figure 1-4 The Marketing and Sales functional area exchanges data with customers and with the Human Resources, Accounting and Finance, and Supply Chain Management functional areas

Marketing and Sales (cont'd.)

- M/S needs to interact with Human Resources to exchange information on hiring needs, legal requirements, etc.
- Inputs for M/S
 - Customer data
 - Order data
 - Sales trend data
 - Per-unit cost
 - Company travel expense policy

Marketing and Sales (cont'd.)

- Outputs for M/S
 - Sales strategies
 - Product pricing
 - Employment needs

Supply Chain Management

- Needs information from various functional areas
- Production plans based on information about product sales (actual and projected) that comes from Marketing and Sales
- With accurate data about required production levels:
 - Raw material and packaging can be ordered as needed
 - Inventory levels can be kept low, saving money

Supply Chain Management (cont'd.)

- Supply Chain Management data and records can:
 - Provide data needed by Accounting and Finance to determine how much of each resource was used
 - Support the M/S function by providing information about what has been produced and shipped
- Supply Chain Management interacts in some ways with Human Resources

Supply Chain Management (cont'd.)

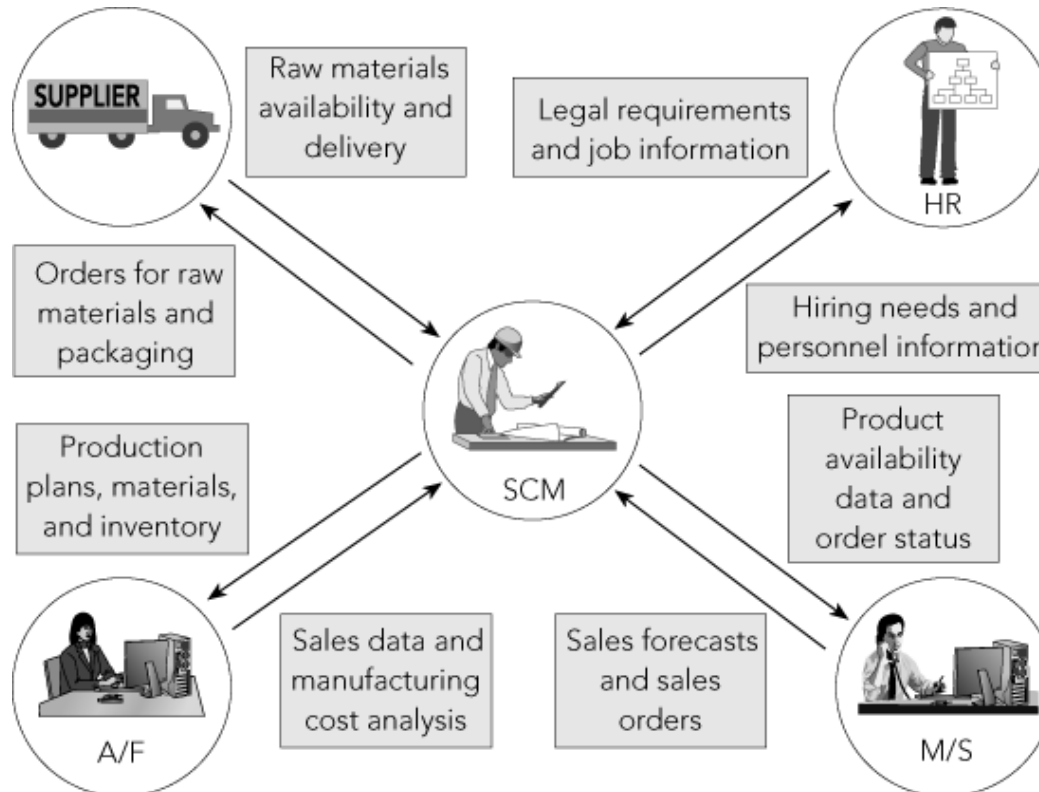


Figure 1-5 The Supply Chain Management functional area exchanges data with suppliers and with the Human Resources, Marketing and Sales, and Accounting and Finance functional areas

Supply Chain Management (cont'd.)

- Inputs for SCM
 - Product sales data
 - Production plans
 - Inventory levels
 - Layoff and recall company policy

Supply Chain Management (cont'd.)

- Outputs for SCM
 - Raw material orders
 - Packaging orders
 - Resource expenditure data
 - Production and inventory reports
 - Hiring information

Accounting and Finance

- Needs information from all other functional areas
- A/F personnel:
 - Record company's transactions in the books of account
 - Record accounts payable when raw materials are purchased and cash outflows when they pay for materials
 - Summarize transaction data to prepare reports about company's financial position and profitability

Accounting and Finance (cont'd.)

- People in other functional areas provide data to A/F
 - M/S provides sales data
 - SCM provides production and inventory data
 - HR provides payroll and benefit expense data
- M/S personnel require data from A/F to evaluate customer credit

Accounting and Finance (cont'd.)

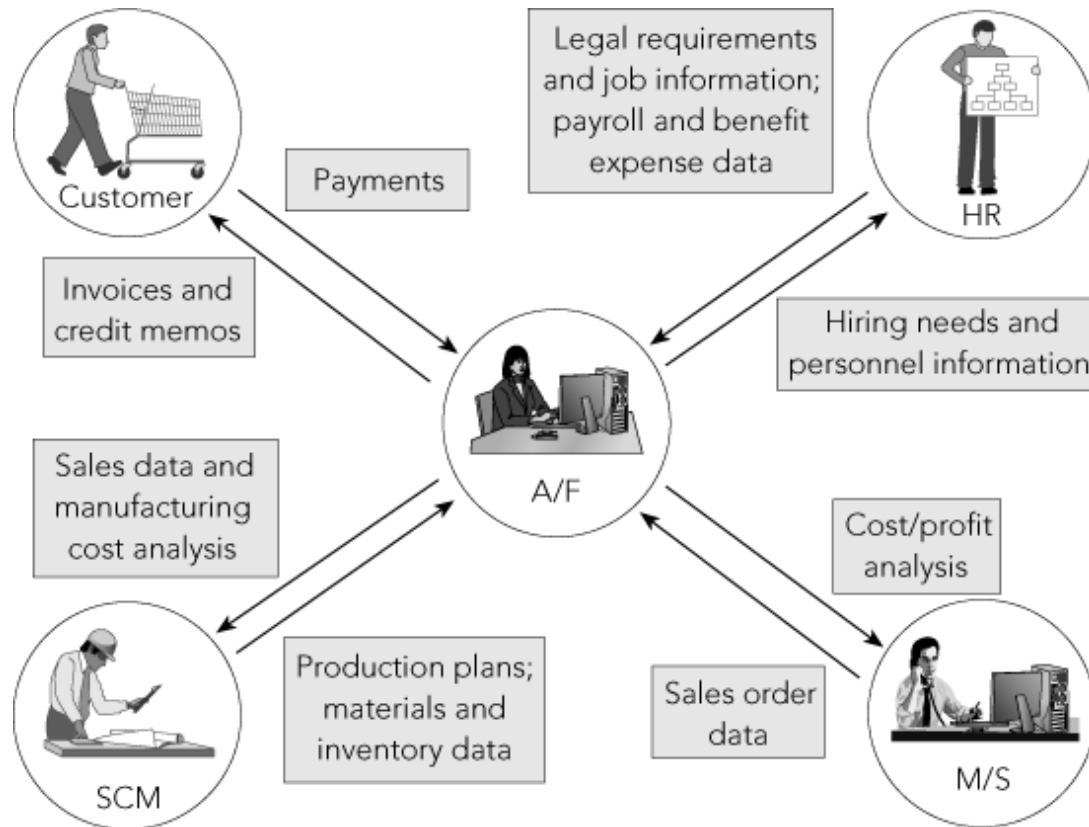


Figure 1-6 The Accounting and Finance functional area exchanges data with customers and with the Human Resources, Marketing and Sales, and Supply Chain Management functional areas

Accounting and Finance (cont'd.)

- Inputs for A/F
 - Payments from customers
 - Accounts receivable data
 - Accounts payable data
 - Sales data
 - Production and inventory data
 - Payroll and expense data

Accounting and Finance (cont'd.)

- Outputs for A/F
 - Payments to suppliers
 - Financial reports
 - Customer credit data

Human Resources

- HR needs information from the other departments
- Tasks related to employee hiring, benefits, training, and government compliance are all responsibilities of HR
- HR needs accurate forecasts of personnel needs from all functional units
- HR needs to know what skills are needed to perform a particular job and how much the company can afford to pay employees

Human Resources (cont'd.)

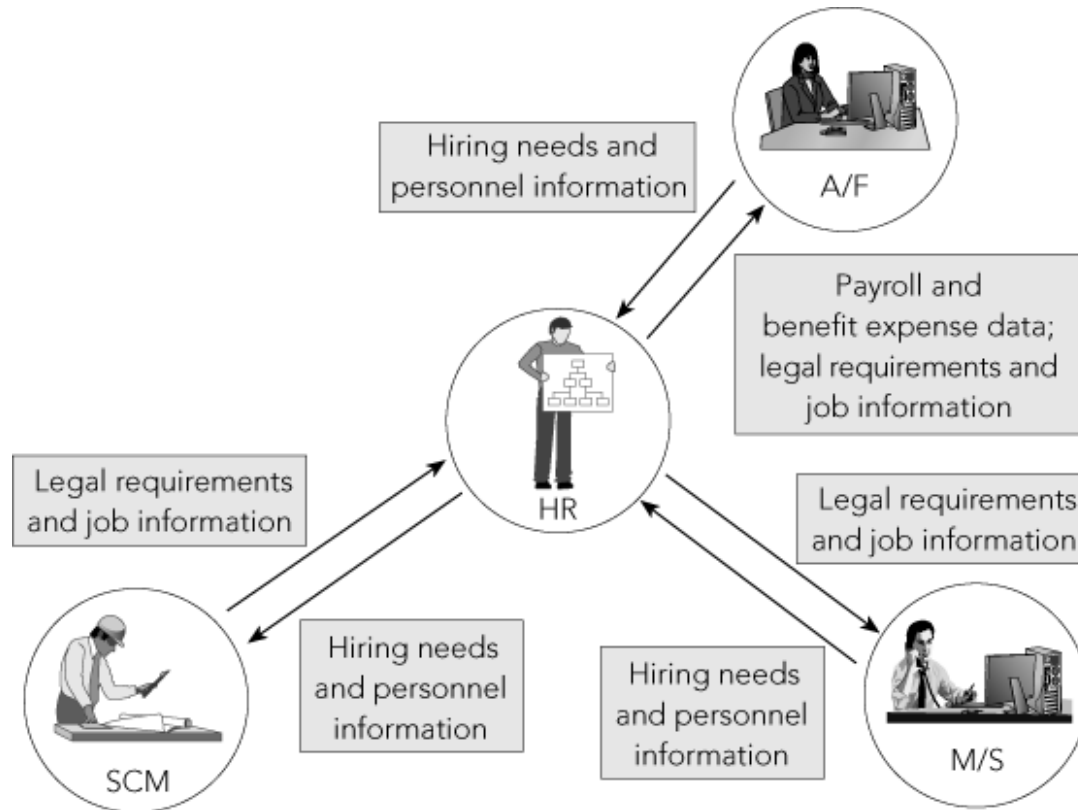


Figure 1-7 The Human Resources functional area exchanges data with the Accounting and Finance, Marketing and Sales, and Supply Chain Management functional areas

Human Resources (cont'd.)

- Observing governmental regulations in recruiting, training, compensating, promoting, and terminating employees
- Inputs for HR
 - Personnel forecasts
 - Skills data

Human Resources (cont'd.)

- Outputs for HR
 - Regulation compliance
 - Employee training and certification
 - Skills database
 - Employee evaluation and compensation

Human Resources (cont'd.)

- Significant amount of data is maintained by and shared among the functional areas
- Timeliness and accuracy of these data critical to each area's success and to company's ability to make a profit and generate future growth
- ERP software allows all functional areas to share a common database
 - Allows accurate, real-time information to be available

Summary

- Basic functional areas: Marketing and Sales, Supply Chain Management, Accounting and Finance, and Human Resources
- Marketing and Sales: Sets product prices, promotes products through advertising and marketing, takes customer orders, supports customers, and creates sales forecasts
- Supply Chain Management: Develops production plans, orders raw materials from suppliers, receives raw material, manufactures products, maintains facilities, and ships products to customers

Summary (cont'd.)

- Accounting and Finance: Financial accounting to provide summaries of operational data in managerial reports, controlling accounts, planning and budgeting, and cash-flow management
- Human Resources: Recruits, hires, trains, and compensates employees, ensures compliance with government regulations, and oversees the evaluation of employees
- Information systems capture, process, and store data to provide information needed for decision making

Summary (cont'd.)

- Employees working in one functional area need data from employees in other functional areas
 - Functional area information systems should be integrated, so shared data are accurate and timely
- Managers think in terms of business processes that integrate the functional areas
 - Need to share information between functions and functional areas
 - ERP software provides this capability by means of a single common database