

**GLOBAL EDITION**

**Weygandt's**  
**MANAGERIAL**  
**ACCOUNTING**  
**TOOLS FOR BUSINESS DECISION MAKING**

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**WILEY**

# 1

## Managerial Accounting

### Learning Objectives

1.1

Identify the features of managerial accounting and the functions of management.

1.2

Describe the classes of manufacturing costs and the differences between product and period costs.

1.3

Demonstrate how to compute cost of goods manufactured and prepare financial statements for a manufacturer.

1.4

Discuss trends in managerial accounting.

**Managerial accounting** provides economic and financial information for managers and other internal users.

# Comparing Managerial and Financial Accounting

Feature	Financial Accounting	Managerial Accounting
Primary Users of Reports	External users: shareholders, creditors, and regulators.	Internal users: officers and managers.
Types and Frequency of Reports	Financial statements. Quarterly and annually.	Internal reports. As frequently as needed.
Purpose of Reports	General-purpose.	Special-purpose for specific decisions.
Content of Reports	Pertains to business as a whole. Highly aggregated (condensed). Limited to double-entry accounting and cost data. Accounting standards.	Pertains to subunits of the business. Very detailed. Extends beyond double-entry accounting to any relevant data. Standard is relevance to decisions.
Verification Process	Audited by accountants.	No independent audits.

**Illustration 1-1**

Differences between financial and managerial accounting

# Management Functions

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## Planning

- ◆ Maximize short-term profit and market share.
- ◆ Commit to environmental protection and social programs.
- ◆ Add value to the business.

## Directing

- ◆ Coordinate diverse activities and human resources.
- ◆ Implement planned objectives.
- ◆ Provide incentives to motivate employees.
- ◆ Hire and train employees.
- ◆ Produce a smooth-running operation.

## Controlling

- ◆ Keeping activities on track.
- ◆ Determine whether goals are met.
- ◆ Decide changes needed to get back on track.
- ◆ May use an informal or formal system of evaluations.



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### Even the Best Have to Get Better

Luxury-goods manufacturers used to consider stockouts to be a good thing. But recently, **Louis Vuitton** (FRA), a manufacturer of high-end handbags, wallets, and suitcases, changed its attitude. The company adopted “lean” processes used by car manufacturers and electronics companies to speed up production of “hot” products. Work is done by flexible teams, with jobs

organized based on how long a task takes. By reducing wasted time and eliminating bottlenecks, what used to take 20 to 30 workers eight days to do now takes only 6 to 12 workers one day.

Other efforts included organizing 10-person factory teams into U-shaped clusters. This arrangement freed up floor space, allowing Louis Vuitton to hire 300 additional employees. The company

also selectively employs robots to bring items to human workers, saving valuable time. In addition, computer programs are now used to identify flaws in leather skins, enabling the company to identify the best way to cut pieces from the leather to increase quality and minimize waste.

Finally, Louis Vuitton stores around the world feed sales information to the company’s headquarters in France. Production is then adjusted accordingly to ensure that would-be buyers aren’t left empty-handed. With these new production processes, Louis Vuitton is already seeing improved results—returns of some products are down by two-thirds.

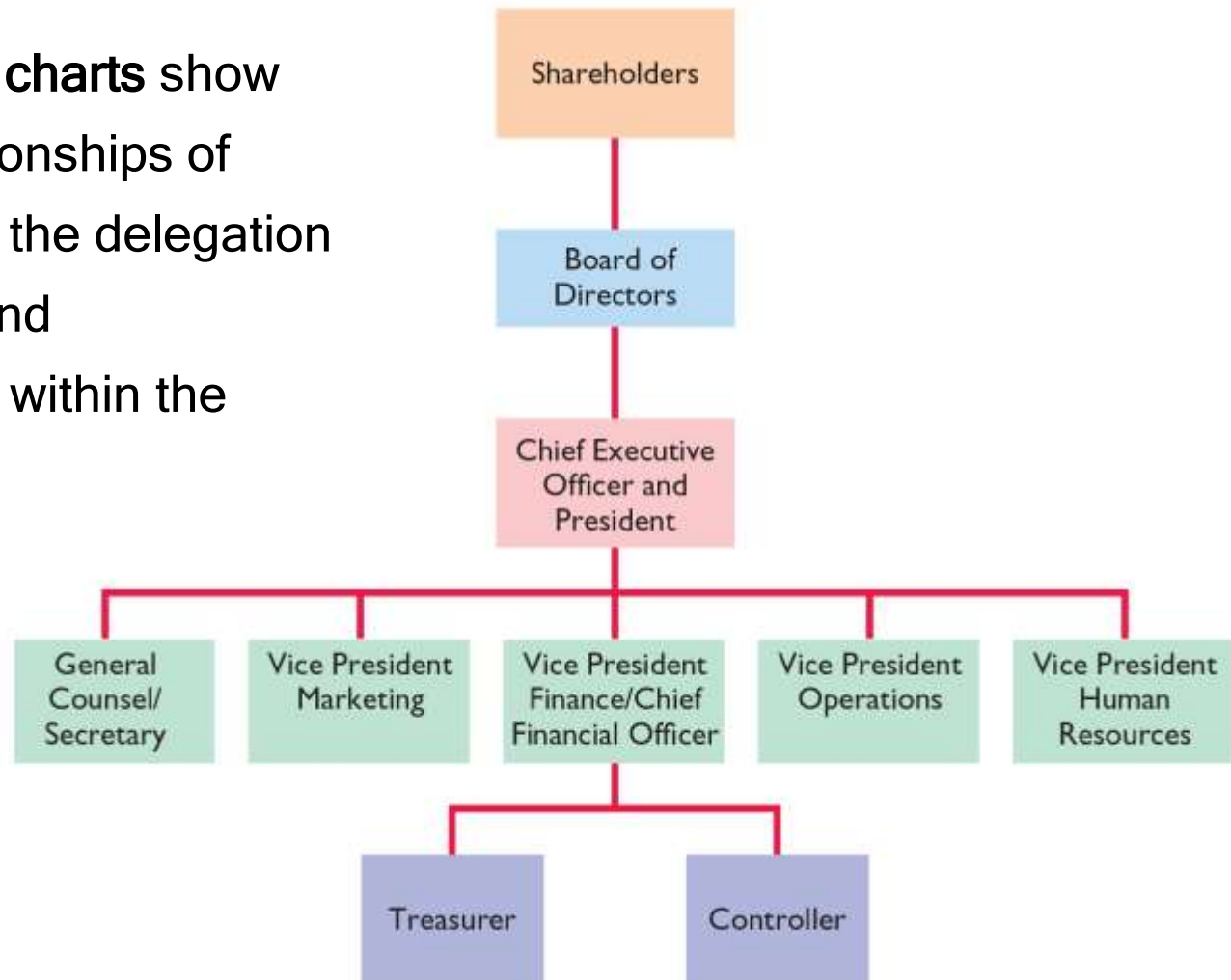
**Sources:** Christina Passariello, “Louis Vuitton Tries Modern Methods on Factory Lines,” *Wall Street Journal* (October 9, 2006); and Christina Passariello, “At Vuitton, Growth in Small Batches,” *Wall Street Journal* (June 27, 2011).

**What are some of the steps that this company has taken in order to ensure that production meets demand? (Go to the book’s companion website for this answer and additional questions.)**



# Organizational Structure

Organization charts show the interrelationships of activities and the delegation of authority and responsibility within the company.



**Illustration 1-2**  
A typical company organization chart

Indicate whether the following statements are **true** or **false**.

☐

1. Managerial accountants have a single role within an organization, collecting and reporting costs to management.

☐

2. Financial accounting reports are general-purpose and intended for external users.

☐

3. Managerial accounting reports are special-purpose and issued as frequently as needed.



Indicate whether the following statements are **true** or **false**.

☐

4. Managers' activities and responsibilities can be classified into three broad functions: cost accounting, budgeting, and internal control.

☐

5. Managerial accounting reports must comply with accounting standards.

Managers should ask questions such as the following.

1. What costs are involved in making a product or performing a service?
2. If we decrease production volume, will costs decrease?
3. What impact will automation have on total costs?
4. How can we best control costs?

# Manufacturing Costs

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Manufacturing consists of activities and processes that convert raw materials into finished goods.



# Manufacturing Costs

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## Direct Materials

### Raw Materials

Basic materials and parts used in manufacturing process.



### Direct Materials

Raw materials that can be physically and directly associated with the finished product during the manufacturing process.

# Manufacturing Costs

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## Direct Materials

## Indirect Materials

1. Not physically part of the finished product or
2. they are an impractical to trace to the finished product because their physical association with the finished product is too small in terms of cost.

Considered part of **manufacturing overhead**.

# Manufacturing Costs

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## Direct Labor

Work of factory employees that can be physically and directly associated with converting raw materials into finished goods.



## Indirect Labor

Work of factory employees that has no physical association with the finished product or for which it is impractical to trace costs to the goods produced.

# Manufacturing Costs

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## Manufacturing Overhead

- ◆ Costs that are indirectly associated with manufacturing the finished product (see Alternative Terminology).
- ◆ Includes all manufacturing costs except direct materials and direct labor.
- ◆ Also called factory overhead, indirect manufacturing costs, or burden.







bikeriderlondon/Shutterstock

### Why Manufacturing Matters for U.S. Workers

Prior to 2010, U.S. manufacturing employment fell at an average rate of 0.1% per year for 60 years. At the same time, U.S. factory output increased by an average rate of 3.4%. As manufacturers relied more heavily on automation, the number of people they needed declined. However, factory jobs are important because the average hourly wage of

a factory worker is \$22, twice the average wage of employees in the service sector. Fortunately, manufacturing jobs in the United States increased by 1.2% in 2010, and they were forecast to continue

to increase through at least 2015. Why? Because U.S. companies like **Whirlpool**, **Caterpillar**, and **Dow** are building huge new plants to replace old, inefficient facilities. For many products that are ultimately sold in the United States, it makes more sense to produce them domestically and save on the shipping costs. In addition, these efficient new plants, combined with an experienced workforce, will make it possible to compete with manufacturers in other countries, thereby increasing export potential.


**Sources:** Bob Tita, "Whirlpool to Invest in Tennessee Plant," *Wall Street Journal Online* (September 1, 2010); and James R. Hagerty, "U.S. Factories Buck Decline," *Wall Street Journal Online* (January 19, 2011).

**In what ways does the shift to automated factories change the amount and composition of product costs? (Go to the book's companion website for this answer and additional questions.)**

# Product Versus Period Costs

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## Product Costs

- ◆ Components: 
  - Direct materials
  - Direct labor
  - Manufacturing overhead
- ◆ Costs that are an integral part of producing the product (see Alternative Terminology).
- ◆ Recorded in “inventory” account.
- ◆ Not an expense (COGS) until the goods are sold.

# Product Versus Period Costs

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## Period Costs

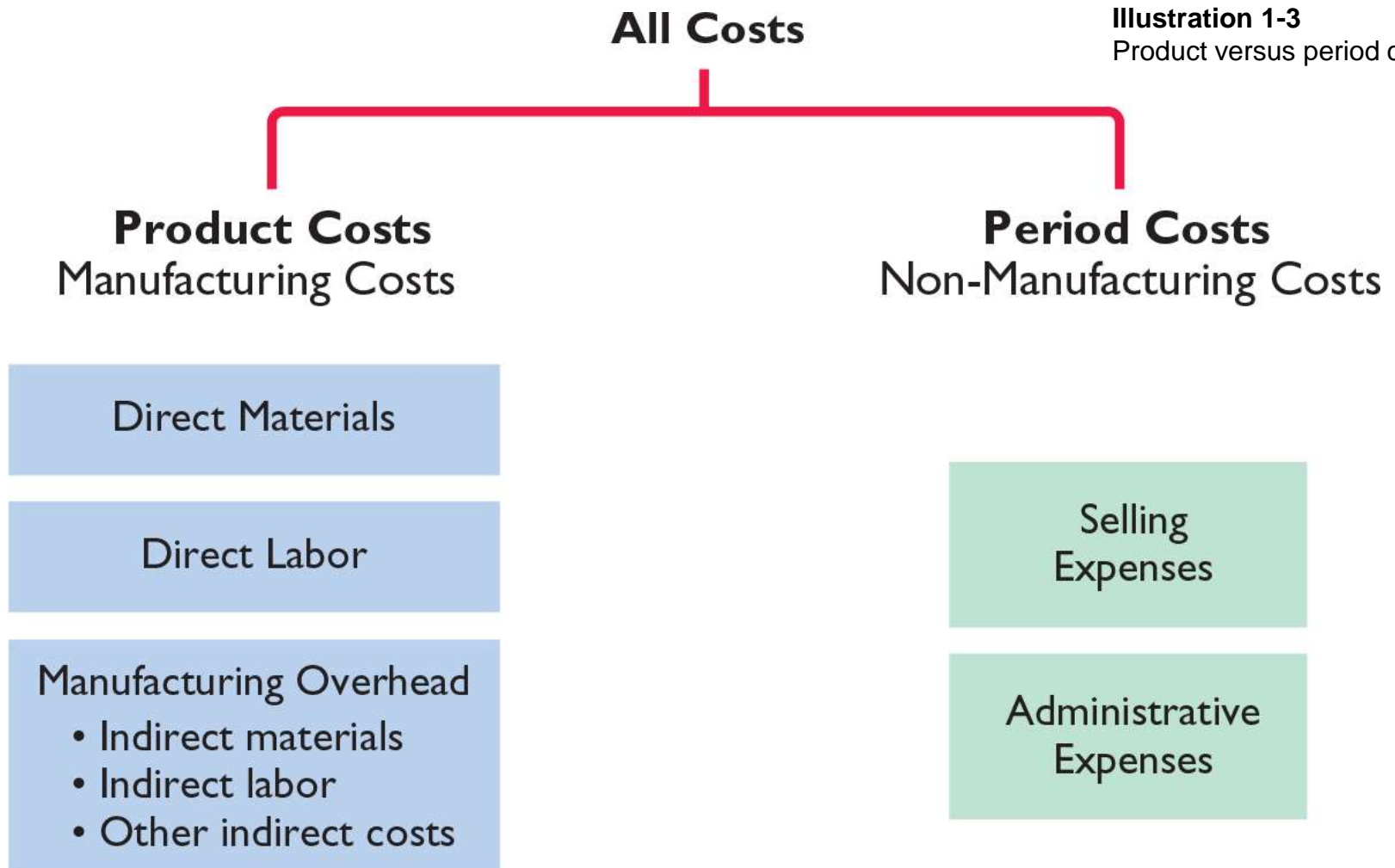
- ◆ Charged to expense as incurred.
- ◆ Non-manufacturing costs.
- ◆ Includes all selling and administrative expenses.

# Product Versus Period Costs

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**Illustration 1-3**

Product versus period costs



# Product Versus Period Costs

**Illustration:** Suppose you started your own snowboard factory, Lapland Boards. Here are some of the costs that your snowboard factory would incur. Assign the following costs:



Cost Item	Product Costs			Period Costs
	Direct Materials	Direct Labor	Manufacturing Overhead	
1. Material cost (€30 per board)				
2. Labor costs (€40 per board)				
3. Depreciation on factory equipment (€25,000 per year)				

# Product Versus Period Costs

Cost Item	Product Costs			Illustration 1-4
	Direct Materials	Direct Labor	Manufacturing Overhead	Period Costs
4. Property taxes on factory building (€6,000 per year)				
5. Advertising costs (€60,000 per year)				
6. Sales commissions (€20 per board)				
7. Maintenance salaries (factory facilities, €45,000 per year)				
8. Salary of plant manager (€70,000 per year)				
9. Cost of shipping boards (€8 per board)				

# Product Versus Period Costs

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If Lapland Boards produces 10,000 snowboards the first year, what would be the total manufacturing costs?



<u>Cost Number and Item</u>	<u>Manufacturing Cost</u>
<b>Total manufacturing costs</b>	

**Illustration 1-5**

Computation of total  
manufacturing costs



A bicycle company has these costs: tires, salaries of employees who put tires on the wheels, factory depreciation, advertising expenditures, lubricants, spokes, salary of factory manager, salary of accountant, handlebars, and salaries of factory maintenance employees. Classify each cost as direct materials, direct labor, overhead, or a period cost.

### Direct Materials

- ◆ Tires.
- ◆ Spokes.
- ◆ Handlebars.

### Direct Labor

- ◆ Salaries of employees who put tires on the wheels.

### Overhead

- ◆ Factory depreciation.
- ◆ Lubricants.
- ◆ Factory manager salary.
- ◆ Factory maintenance employees salary.

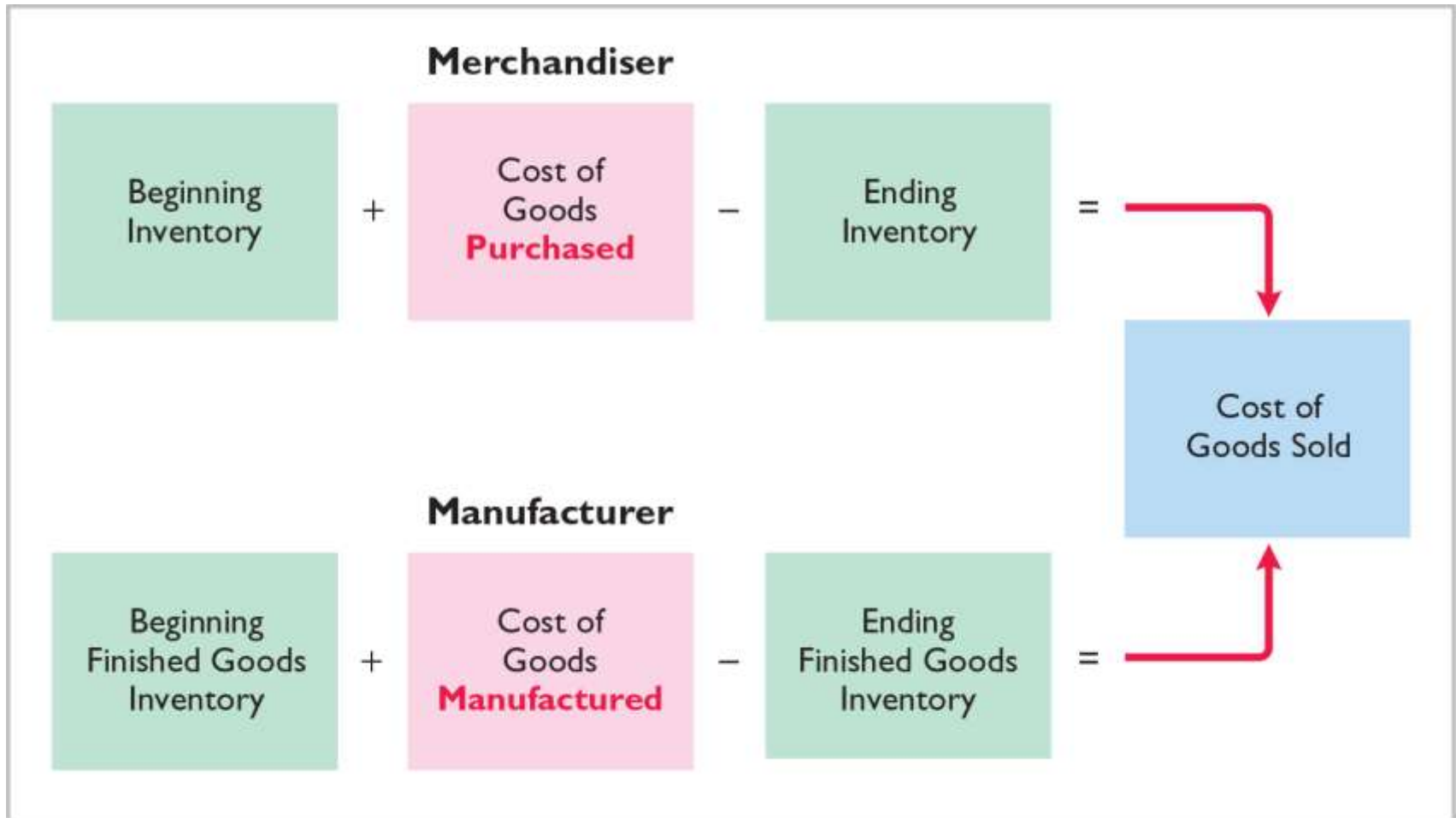
Advertising expenditures and salary of accountant are **period costs**.

## Income Statement

Under a **periodic inventory system**, the income statements of a merchandiser and a manufacturer differ in the **cost of goods sold** section.

“COGS”

# Income Statement



**Illustration 1-6**  
Cost of goods sold components

# Income Statement

Cost of goods sold sections of merchandising and manufacturing income statements

<b>Merchandising Company</b> <b>Income Statement (partial)</b> <b>For the Year Ended December 31, 2020</b>		<b>Manufacturing Company</b> <b>Income Statement (partial)</b> <b>For the Year Ended December 31, 2020</b>	
Cost of goods sold		Cost of goods sold	
<b>Inventory, Jan. 1</b>	<b>£ 70,000</b>	<b>Finished goods inventory, Jan. 1</b>	<b>£ 90,000</b>
<b>Cost of goods purchased</b>	<b>650,000</b>	<b>Cost of goods manufactured</b>	
		<b>(see Illustration 1.9)</b>	<b>370,000</b>
Cost of goods available for sale	720,000	Cost of goods available for sale	460,000
<b>Less: Inventory,</b>		<b>Less: Finished goods inventory,</b>	
<b>Dec. 31</b>	<b>400,000</b>	<b>Dec. 31</b>	<b>80,000</b>
Cost of goods sold	<u>£ 320,000</u>	Cost of goods sold	<u>£380,000</u>

## Illustration 1-7

Cost of goods sold sections of  
merchandising and manufacturing  
Income statements

# Cost of Goods Manufactured

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**Total Manufacturing Costs** - sum of direct material costs, direct labor costs, and manufacturing overhead in the current year.

**Total Work in Process** - (1) cost of beginning work in process and (2) total manufacturing costs for the current period.



Illustration 1-8

Cost of goods manufactured formula

# Current Designs

## Cost of Goods Manufactured Schedule

### For the Year Ended December 31, 2020

**Illustration 1-9**  
Cost of goods  
manufactured schedule

<b>Work in process, January 1</b>			<b>\$ 18,400</b>
<b>Direct materials</b>			
Raw materials inventory, January 1	\$ 16,700		
Raw materials purchases	152,500		
	<u>169,200</u>		
Total raw materials available for use	169,200		
Less: Raw materials inventory, December 31	<u>22,800</u>		
Direct materials used		\$146,400	
<b>Direct labor</b>		175,600	
<b>Manufacturing overhead</b>			
Indirect labor	14,300		
Factory repairs	12,600		
Factory utilities	10,100		
Factory depreciation	9,440		
Factory insurance	<u>8,360</u>		
Total manufacturing overhead		<u>54,800</u>	
<b>Total manufacturing costs</b>			<b>376,800</b>
Total cost of work in process			395,200
<b>Less: Work in process, December 31</b>			<b>25,200</b>
<b>Cost of goods manufactured</b>			<b>\$370,000</b>

# DO IT!

## 1.3

# Cost of Goods Manufactured

The following information is available for Kim Ltd. (amounts are in thousands).

		<u>March 1</u>	<u>March 31</u>
Raw materials inventory		₩12,000	₩10,000
Work in process inventory		2,500	4,000
Materials purchased in March	₩ 90,000		
Direct labor in March	75,000		
Manufacturing overhead in March	220,000		

Prepare the cost of goods manufactured schedule for the month of March 2020.



**DO IT!**

**1.3**

## Cost of Goods Manufactured

**Kim Ltd.**  
**Cost of Goods Manufactured Schedule**  
**For the Month Ended March 31, 2020**  
**(amounts in thousands)**

Work in process, March 1

Direct materials

Direct materials used

Direct labor

Manufacturing overhead

Cost of goods manufactured

# Statement of Financial Position

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## Inventory accounts for a manufacturer

Illustration 1-10

### Raw Materials Inventory



Shows the cost of raw materials on hand.

### Work in Process Inventory



Shows the cost applicable to units that have been started into production but are only partially completed.

### Finished Goods Inventory



Shows the cost of completed goods on hand.

The statement of financial position for a **merchandising** company shows just **one category** of inventory.

# Statement of Financial Position

Current assets sections of merchandising and manufacturing statements of financial position

Merchandising Company Statement of Financial Position December 31, 2020		Manufacturing Company Statement of Financial Position December 31, 2020	
Current assets		Current assets	
Prepaid expenses	£ 22,000	Prepaid expenses	£ 18,000
<b>Inventory</b>	<b>400,000</b>	<b>Inventory</b>	
Accounts receivable (net)	210,000	<b>Finished goods</b>	<b>£80,000</b>
Cash	100,000	<b>Work in process</b>	<b>25,200</b>
Total current assets	<u>£732,000</u>	<b>Raw materials</b>	<b>22,800</b>
		Accounts receivable (net)	210,000
		Cash	180,000
		Total current assets	<u>£536,000</u>

## Illustration 1-11

Current assets sections of  
merchandising and manufacturing  
statements of financial position

## Service Industries

- ◆ Much of the global economy has shifted toward an **emphasis on providing services** rather than goods.
- ◆ Most of the techniques learned for manufacturing firms are applicable to service companies.

## Service Company Insight Allegiant Airlines



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### Low Fares but Decent Profits

When other airlines were cutting flight service due to recession, **Allegiant Airlines** (USA) increased capacity by 21%. Sounds crazy, doesn't it? But it must know something because while the other airlines were losing money, it was generating profits. In fact, it often has the industry's highest profit margins. Consider also that its

average one-way fare is only \$83. So how does it make money? As a low-budget airline, it focuses on controlling costs.

Allegiant purchases used planes for \$3 million each rather than new planes for \$40 million. It flies out of small towns, so

wages are low and competition is non-existent. It minimizes hotel costs by having its flight crews finish their day in their home cities. The company also only flies a route if its 150-passenger planes are nearly full (it averages about 90% of capacity). The bottom line is that Allegiant knows its costs to the penny. Knowing what your costs are might not be glamorous, but it sure beats losing money.

**Sources:** Susan Carey, "For Allegiant, Getaways Mean Profits," *Wall Street Journal Online* (February 18, 2009); and Scott Mayerowitz, "Tiny Allegiant Air Thrives on Low Costs, High Fees," <http://bigstory.ap.org> (June 28, 2013).

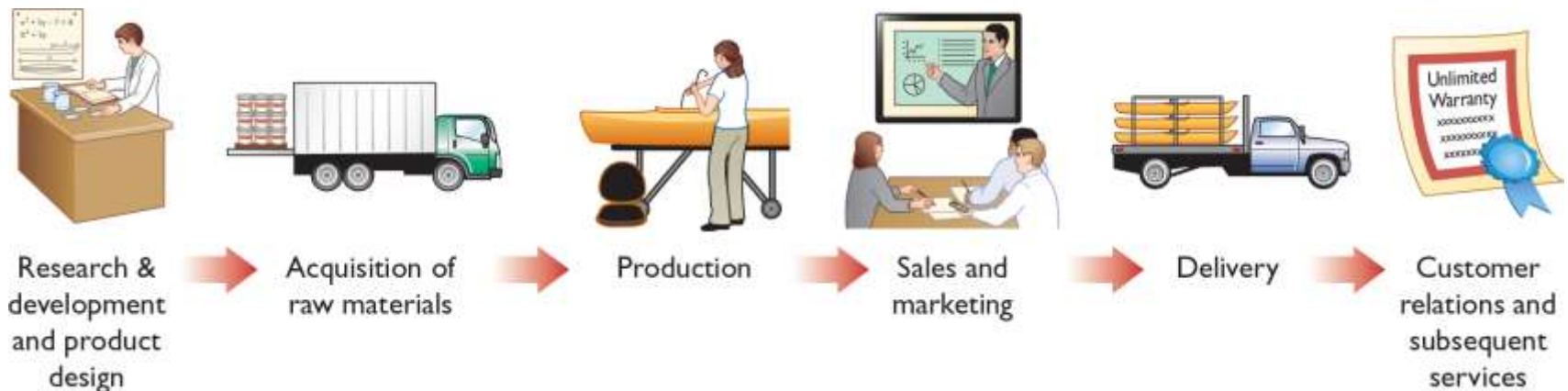
**What are some of the line items that would appear in the cost of services performed schedule of an airline? (Go to the book's companion website for this answer and additional questions.)**

# Focus on the Value Chain

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Refers to all business processes associated with providing a product or service.

For a manufacturing firm these include the following:



**Illustration 1-12**  
A manufacturer's value chain

# Focus on the Value Chain

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## Just-In-Time (JIT) Inventory Methods

- ◆ Inventory system in which goods are manufactured or purchased just in time for sale.

## Total Quality Management (TQM)

- ◆ Reduce defects in finished products, with the goal of zero defects.



# Focus on the Value Chain

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## Theory of Constraints

- ◆ Constraints (“bottlenecks” ) limit the company’s potential profitability.
- ◆ A specific approach to identify and manage these constraints in order to achieve company goals.

## Enterprise Resource Planning (ERP)

- ◆ Software programs designed to manage all major business processes.

# Focus on the Value Chain

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## Activity-Based Costing (ABC)

- ◆ Allocates overhead based on use of activities.
- ◆ Results in more accurate product costing and scrutiny of all activities in the value chain.

# Balanced Scorecard

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- ◆ Evaluates operations in an integrated fashion.
- ◆ Uses both financial and non-financial measures.
- ◆ Links performance to overall company objectives.

# Business Ethics

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- ◆ All employees are expected to act ethically.
- ◆ Many organizations have codes of business ethics.
- ◆ Past financial frauds:

- ▶ Enron,



- ▶ Global Crossing,



- ▶ WorldCom



# Business Ethics

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## Creating Proper Incentives

- ◆ Systems and controls sometimes create incentives for managers to take unethical actions.
- ◆ Controls need to be effective and realistic.

# Business Ethics

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## Code of Ethical Standards

### Sarbanes-Oxley Act (SOX)

- ◆ Clarifies management's responsibilities.
- ◆ Requires certifications by CEO and CFO.
- ◆ Selection criteria for Board of Directors and Audit Committee.
- ◆ Substantially increased penalties for misconduct.

# Company Social Responsibility

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- ◆ Considers an entity's efforts to employ sustainable business practices with regard to its employees, society, and the environment.
- ◆ Is sometimes referred to as the triple bottom line because it evaluates a company's performance with regard to people, planet, and profit.
- ◆ Recent reports indicate that over 50% of the 500 largest U.S. companies provide sustainability reports.

Match the descriptions that follow with the corresponding terms.

1.  All activities associated with providing a product or performing service.

2.  A method of allocating overhead based on each product's use of activities in making the product.

3.  Systems implemented to reduce defects in finished products with the goal of achieving zero defects.

**Terms:**

- a. Activity-based costing
- b. Balanced scorecard
- c. Company social responsibility
- d. Just-in-time (JIT) inventory
- e. Total quality management (TQM)
- f. Statement of Ethical Professional Practice
- g. Value chain



Match the descriptions that follow with the corresponding terms.

4.  A performance-measurement approach that uses both financial and non-financial measures, tied to company objectives, to evaluate a company's operations in an integrated fashion.

**Terms:**

- a. Activity-based costing
- b. Balanced scorecard
- c. Company social responsibility
- d. Just-in-time (JIT) inventory
- e. Total quality management (TQM)
- f. Statement of Ethical Professional Practice
- g. Value chain

5.  Inventory system in which goods are manufactured or purchased just as they are needed for use.

Match the descriptions that follow with the corresponding terms.

6.  A company's efforts to employ sustainable business practices with regards to its employees, society, and the environment.
7.  A code of ethical standards developed by the Institute of Management Accountants.

**Terms:**

- a. Activity-based costing
- b. Balanced scorecard
- c. Company social responsibility
- d. Just-in-time (JIT) inventory
- e. Total quality management (TQM)
- f. Statement of Ethical Professional Practice
- g. Value chain

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