An Introduction to Cost Terms and Purposes

CHAPTER 2

BASIC COST TERMINOLOGY

Cost—sacrificed resource to achieve a specific objective

Actual cost—a cost that has occurred

Budgeted cost—a predicted cost

Cost object—anything of interest for which a cost is desired

COST OBJECT EXAMPLES AT BMW

Cost Object	Illustration
Product	BMW X 5 sports activity vehicle
Service	Dealer-support telephone hotline
Project	R&D project on DVD system enhancement
Customer	Herb Chambers Motors, a dealer that purchases a broad range of BMW vehicles
Activity	Setting up production machines
Department	Environmental, Health and Safety

BASIC COST TERMINOLOGY

Cost accumulation—a collection of cost data in an organized manner

Cost assignment—a general term that includes gathering accumulated costs to a cost object. This includes:

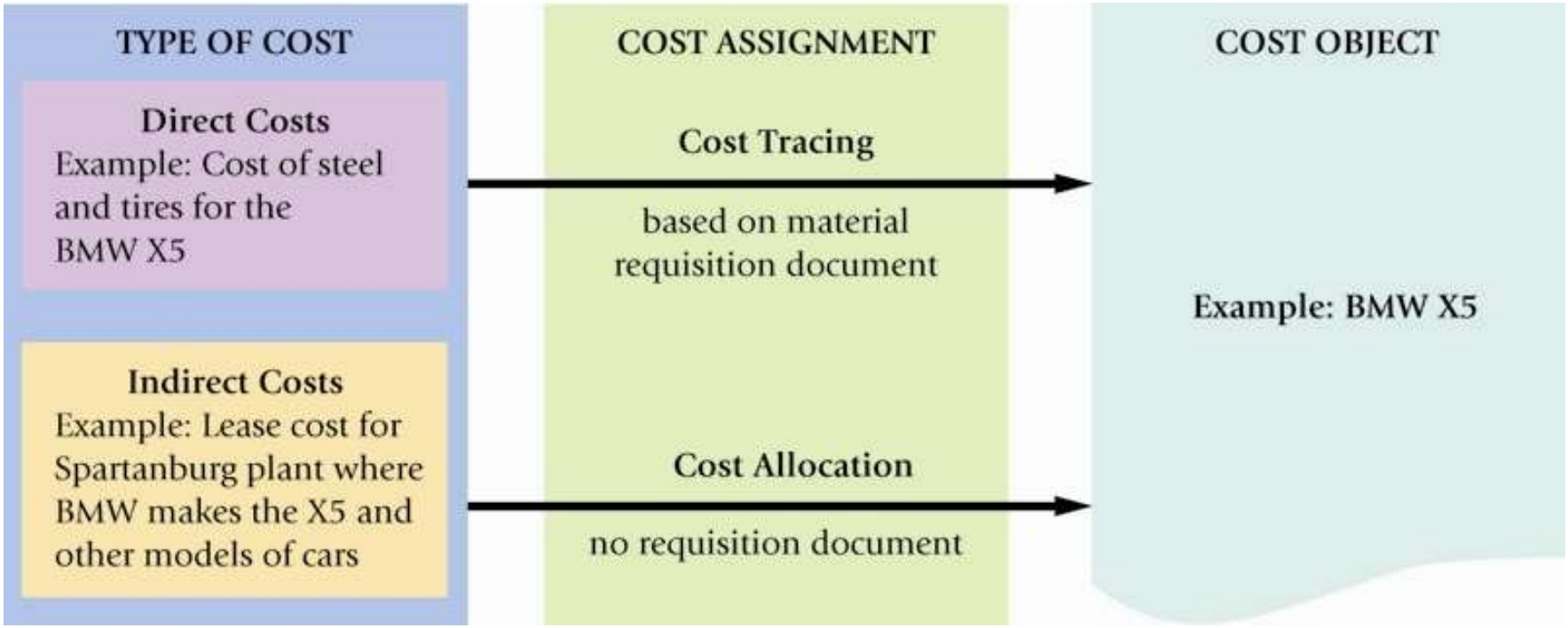
- Tracing accumulated costs with a direct relationship to the cost object and
- Allocating accumulated costs with an indirect relationship to a cost object

DIRECT AND INDIRECT COSTS

Direct costs can be conveniently and economically traced (tracked) to a cost object.

Indirect costs cannot be conveniently or economically traced (tracked) to a cost object. Instead of being traced, these costs are allocated to a cost object in a rational and systematic manner.

BMW: ASSIGNING COSTS TO A COST OBJECT



COST EXAMPLES

Direct Costs

- Parts
- Assembly line wages

Indirect Costs

- Electricity
- Rent
- Property taxes

FACTORS AFFECTING DIRECT/INDIRECT COST CLASSIFICATION

Cost materiality

Availability of information-gathering technology

Operational design

COST BEHAVIOR

Variable costs—changes in total in proportion to changes in the related level of activity or volume.

Fixed costs—remain unchanged in total regardless of changes in the related level of activity or volume.

Costs are fixed or variable only with respect to a specific activity or a given time period.

COST BEHAVIOR

Variable costs are constant on a per-unit basis. If a product takes 5 pounds of materials each, it stays the same per unit regardless if one, ten, or a thousand units are produced.

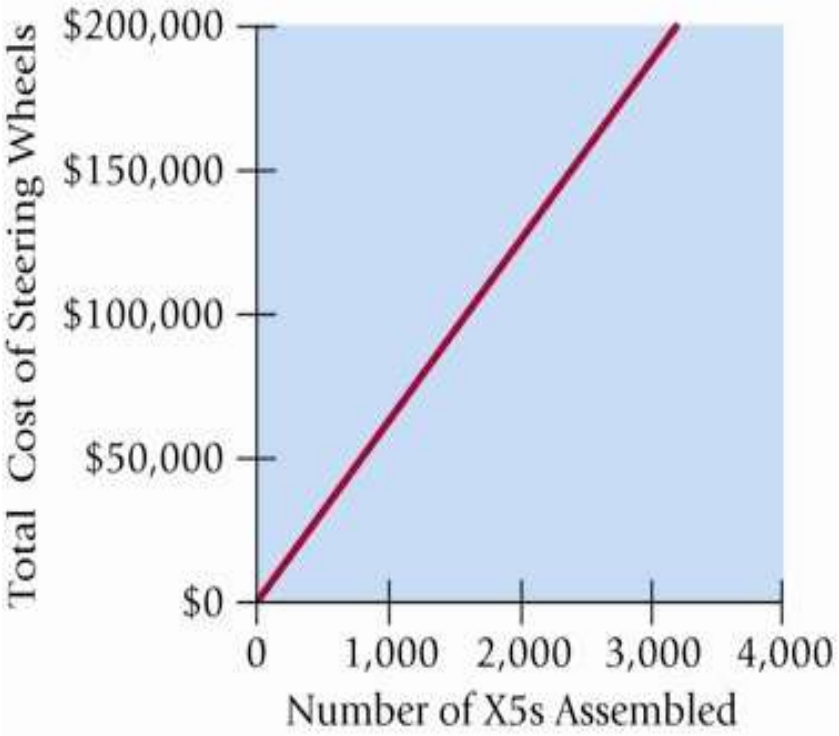
Fixed costs change inversely with the level of production. As more units are produced, the same fixed cost is spread over more and more units, reducing the cost per unit.

COST BEHAVIOR SUMMARIZED

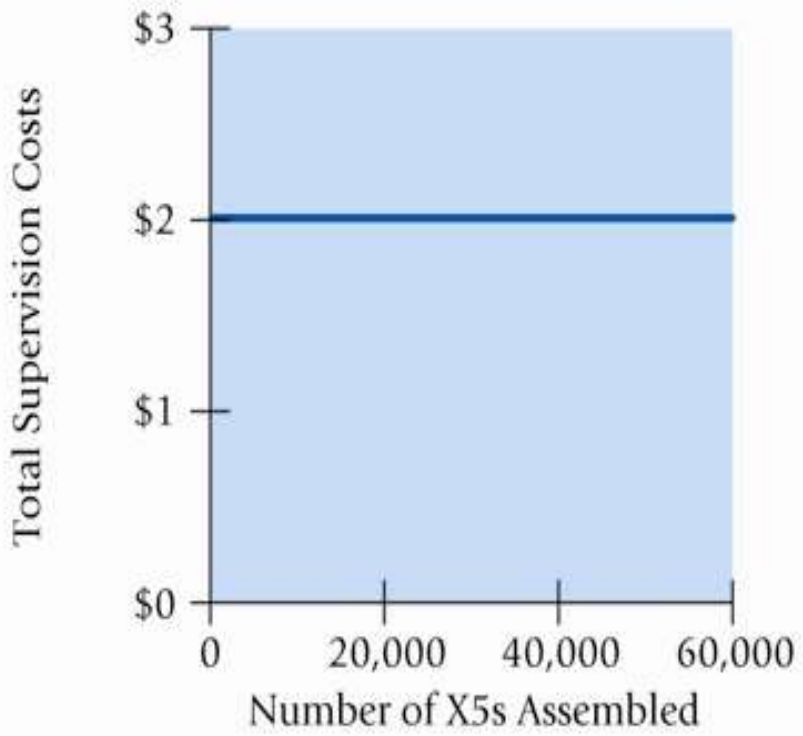
	Total Dollars	Cost Per Unit
Variable Costs	Change in proportion with output More output = More cost	Unchanged in relation to output
Fixed Costs	Unchanged in relation to output	Change inversely with output More output = lower cost per unit

COST BEHAVIOR VISUALIZED

PANEL A: Variable Cost of Steering Wheels at $60 per BMW X5 Assembled



PANEL B: Supervision Costs for the BMW X5 assembly line (in millions)



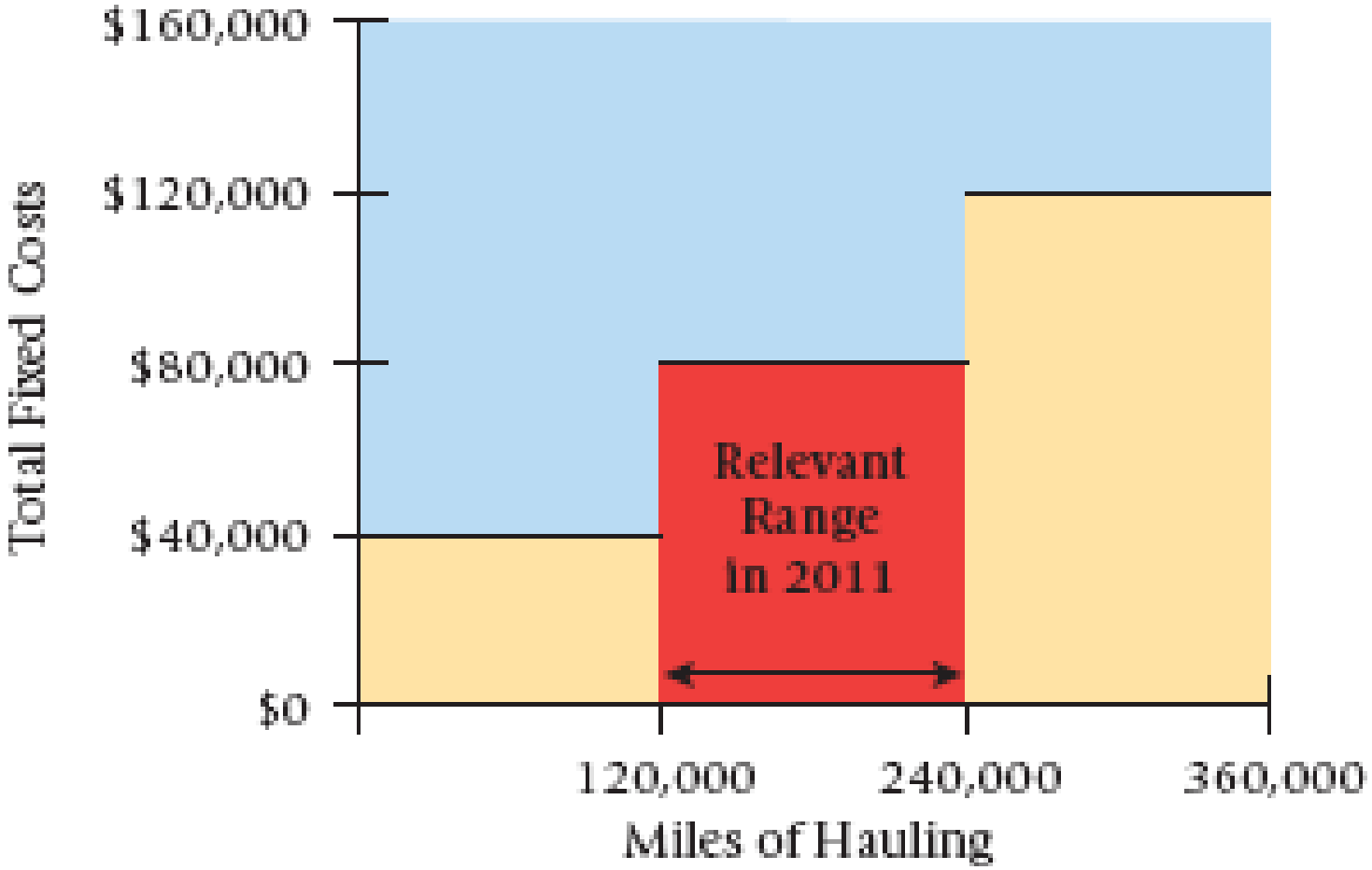
OTHER COST CONCEPTS

Cost driver—a variable that causally affects costs over a given time span

Relevant range—the band of normal activity level (or volume) in which there is a specific relationship between the level of activity (or volume) and a given cost

- For example, fixed costs are considered fixed only within the relevant range.

RELEVANT RANGE VISUALIZED



A COST CAVEAT

Unit costs should be used cautiously. Because unit costs change with a different level of output or volume, it may be more prudent to base decisions on a total dollar basis.

- Unit costs that include fixed costs should always reference a given level of output or activity.
- Unit costs are also called average costs.
- Managers should think in terms of total costs rather than unit costs.

MULTIPLE CLASSIFICATION OF COSTS

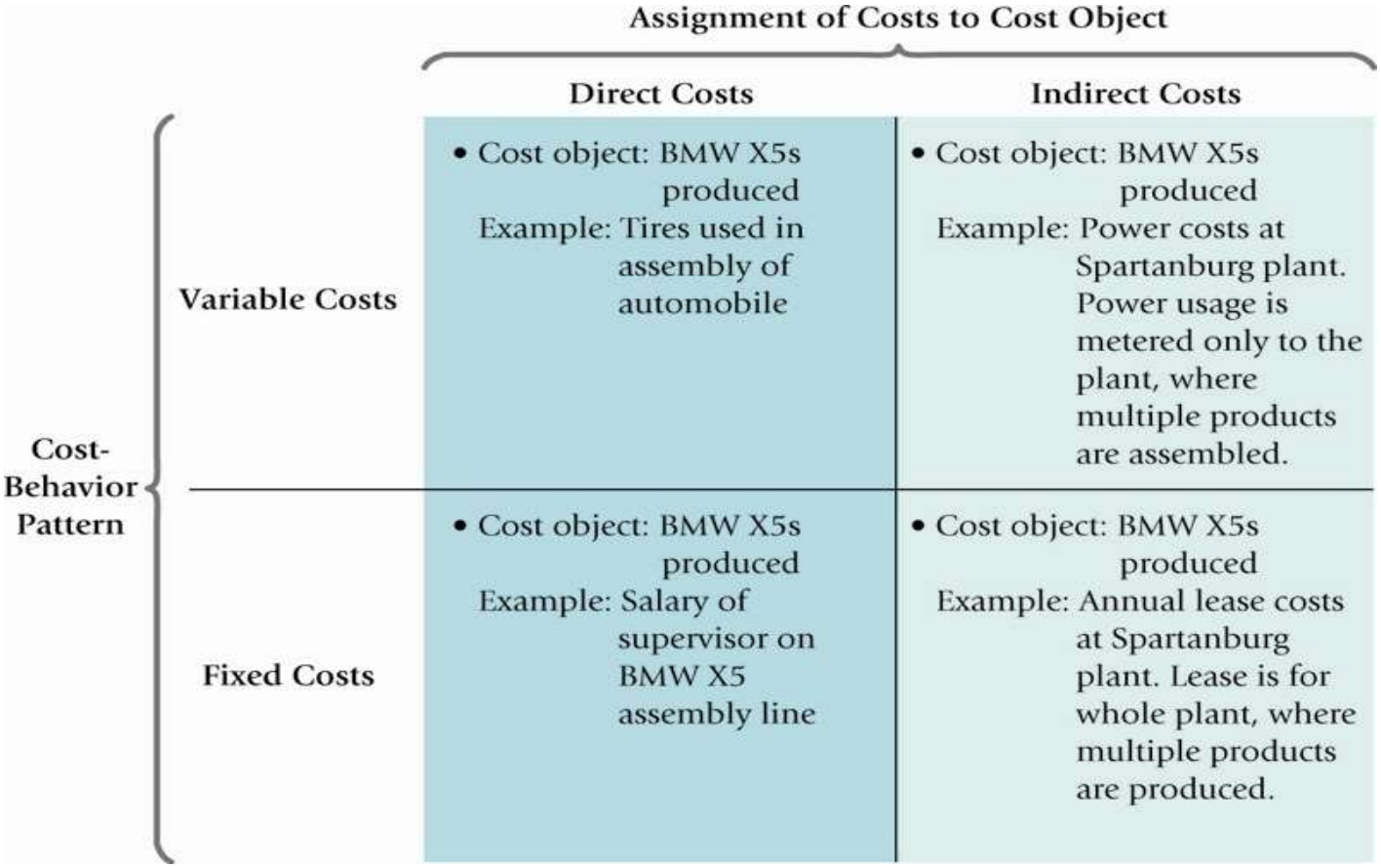
Costs may be classified as:

- Direct/Indirect, and
- Variable/Fixed

These multiple classifications give rise to important cost combinations:

- Direct and variable
- Direct and fixed
- Indirect and variable
- Indirect and fixed

MULTIPLE CLASSIFICATION OF COSTS, VISUALIZED



DIFFERENT TYPES OF FIRMS

Manufacturing-sector companies purchase materials and components and convert them into finished products.

Merchandising-sector companies purchase and then sell tangible products without changing their basic form.

Service-sector companies provide services (intangible products).

TYPES OF MANUFACTURING INVENTORIES

Direct materials—resources in-stock and available for use

Work-in-process (or progress)—products started but not yet completed, often abbreviated as WIP

Finished goods—products completed and ready for sale

TYPES OF PRODUCT COSTS

Also known as inventoriable costs

- Direct materials—acquisition costs of all materials that will become part of the cost object.
- Direct labor—compensation of all manufacturing labor that can be traced to the cost object.
- Indirect manufacturing—factory costs that are not traceable to the product in an economically feasible way. Examples include lubricants, indirect manufacturing labor, utilities, and supplies.

ACCOUNTING DISTINCTION BETWEEN COSTS

Inventoriable costs—product manufacturing costs. These costs are capitalized as assets (inventory) until they are sold and transferred to Cost of Goods Sold.

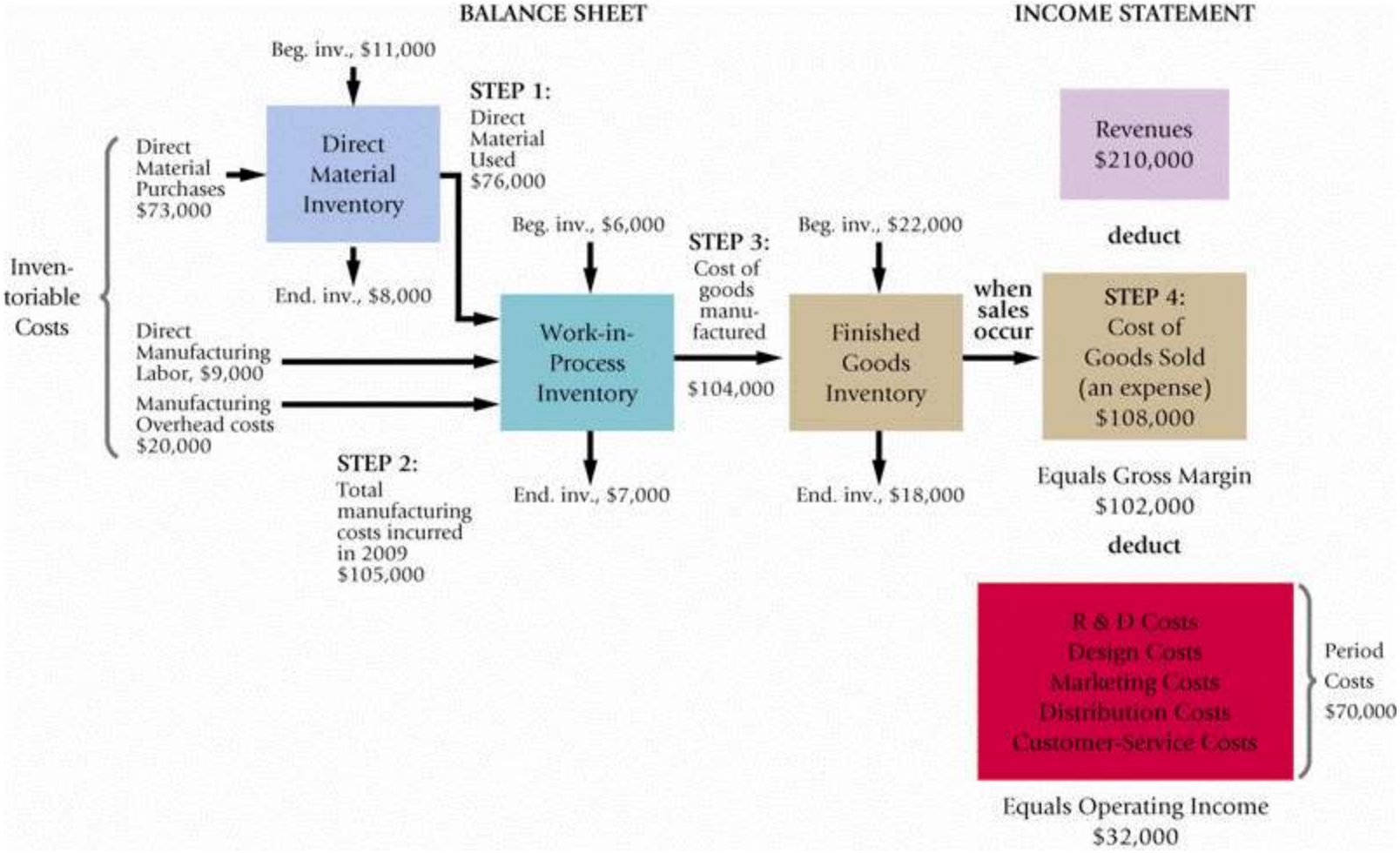
Period costs—have no future value and are expensed in the period incurred.

COST FLOWS

The Cost of Goods Manufactured and the Cost of Goods Sold section of the Income Statement are accounting representations of the actual flow of costs through a production system.

- Note the importance of inventory accounts in the following accounting reports, and in the cost flow chart.

COST FLOWS VISUALIZED



MULTIPLE-STEP INCOME STATEMENT

PANEL A: INCOME STATEMENT			
Cellular Products			
Income Statement			
For the Year Ended December 31, 2011 (in thousands)			
Revenues		$210,000	
Costs of goods sold:			
Beginning finished goods inventory, January 1, 2011	$22,000		
Costs of goods available for sale	$104,000		
Costs of goods manufactured (see Panel B)	$126,000		
Ending finished goods inventory, December 31, 2011	$18,000		
Cost of goods sold		$108,000	
Gross margin (or gross profit)		$102,000	
Operating costs			
R&D, design, mktg., dist., & cust.-service cost	$70,000		
Total operating costs		$70,000	
Operating income		$32,000	

STEP 4

COST OF GOODS MANUFACTURED

PANEL B: COST OF GOODS MANUFACTURED			
Cellular Products			
Schedule of Cost of Goods Manufactured*			
For the Year Ended December 31, 2011 (in Thousands)			
Direct materials:			
Beginning inventory, January 1, 2011	$11,000		
Purchases of direct materials	$73,000		
Cost of direct materials available for use	$84,000		
Ending inventory, December 31, 2011	$8,000		
Direct materials used		$76,000	
Direct manufacturing labor		$9,000	
Manufacturing overhead costs:			
Indirect manufacturing labor	$7,000		
Supplies	$2,000		
Heat, light, and power	$5,000		
Depreciation-plant building	$2,000		
Depreciation-plant equipment	$3,000		
Miscellaneous	$1,000		
Total manufacturing overhead costs		$20,000	
Manufacturing cost incurr3ed during 2011		$105,000	
Beginning work-in-progress inventory, January 1, 2011		$6,000	
Total manufacturing costs to account for		$111,000	
Ending work-in-progress inventory, December 31, 2011		$7,000	
Cost of goods manufactured (to income Statement)		$104,000	

* Note that this schedule can become a Schedule of Cost of Goods Manufactured and Sold simply by including the beginning and ending finished goods inventory figures in the supporting schedule rather than in the body of the income statement.

STEP 1

STEP 2

STEP 3

OTHER COST CONSIDERATIONS

Prime cost is a term referring to all direct manufacturing costs (materials and labor).

Conversion cost is a term referring to direct labor and indirect manufacturing costs.

Overtime labor costs are considered part of indirect overhead costs.

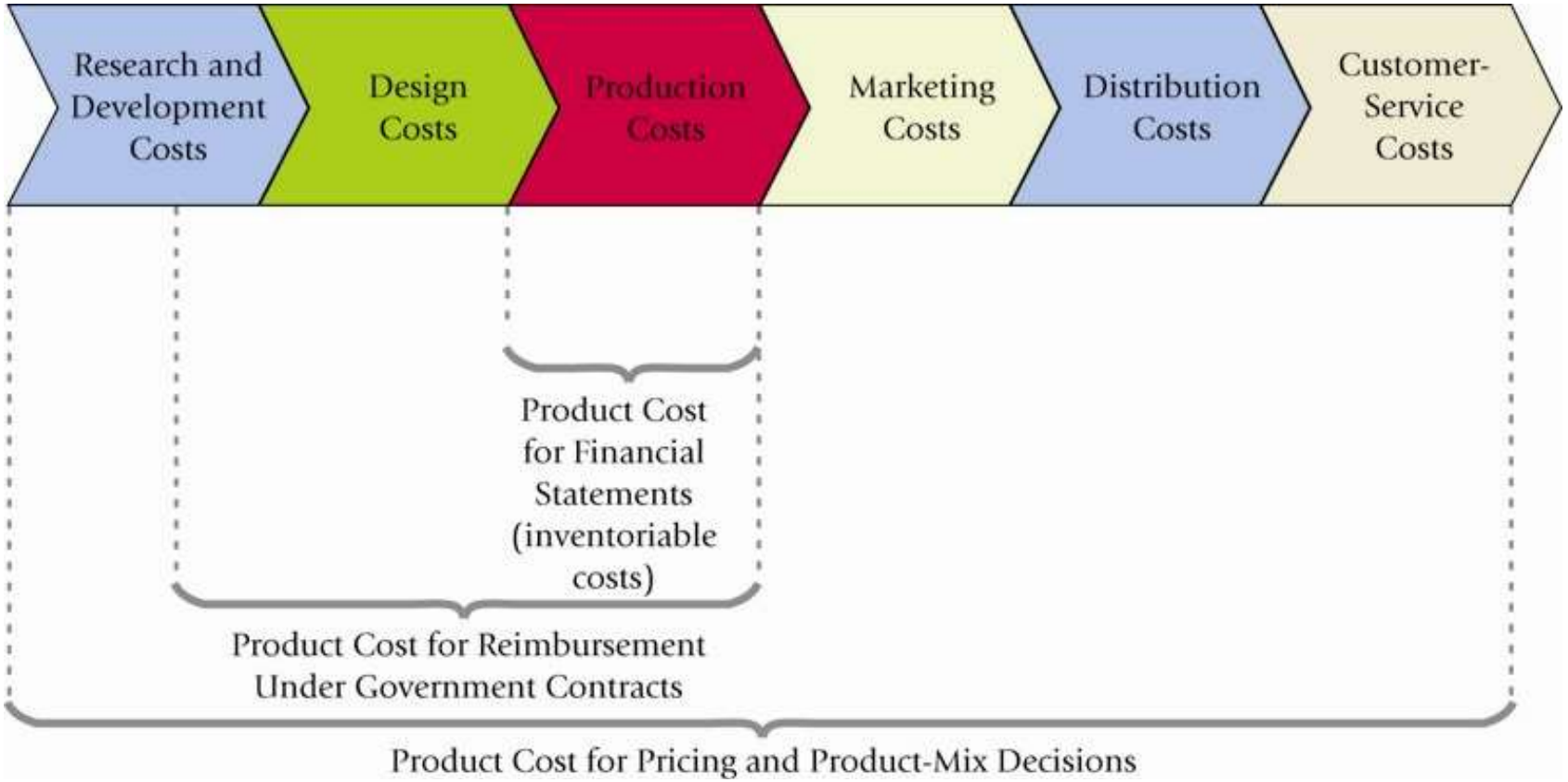
DIFFERENT DEFINITIONS OF COSTS FOR DIFFERENT APPLICATIONS

Pricing and product-mix decisions—decisions about pricing and maximizing profits

Contracting with government agencies—very specific definitions of allowable costs for "cost plus profit" contracts

Preparing external-use financial statements—GAAP-driven product costs only

DIFFERENT DEFINITIONS OF COSTS FOR DIFFERENT APPLICATIONS



THREE COMMON FEATURES OF COST ACCOUNTING AND COST MANAGEMENT

1. Calculating the cost of products, services, and other cost objects
2. Obtaining information for planning and control, and performance evaluation
3. Analyzing the relevant information for making decisions