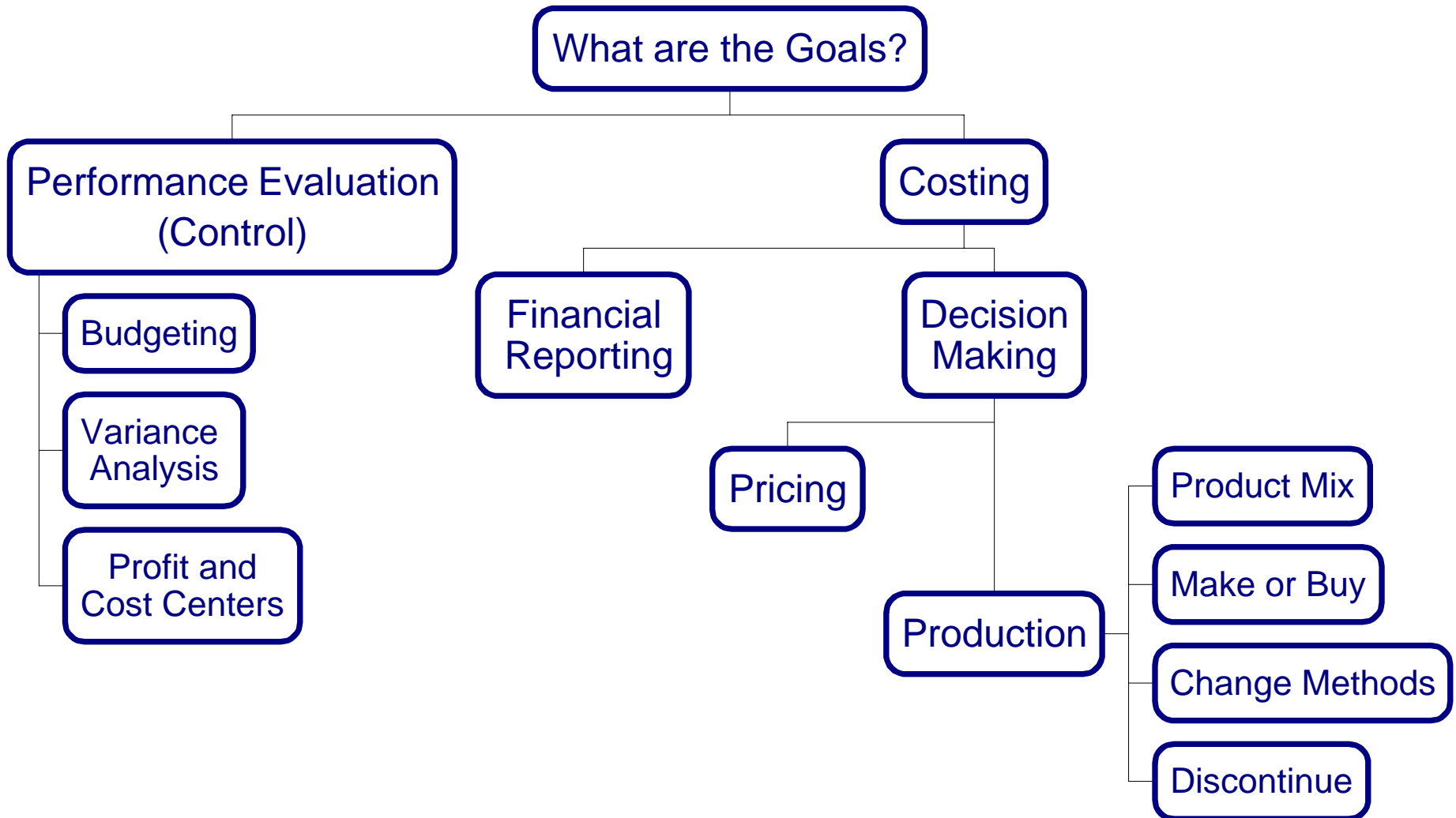


Managerial Accounting



BASIC COST TERMS

Cost

A sacrifice of resources. Distinguish from “expense”

Cost Object

Any activity or item for which a separate measurement of costs is desired.

Cost objects are the “something” in the statement: “We need the cost of ‘something’”!

Cost Driver

Any factor whose change “causes” a change in the total cost of a related cost object.

Note: Cost drivers can be factors other than volume

BASIC COST TERMS (contd.)

Direct Costs

Costs that can be traced to a given cost object (product, department, etc.) in an economically feasible way.

Indirect Costs

Costs that cannot be traced to a given cost object in an economically feasible way. These costs are also known as “overhead” or “burden.”

Cost Assignment

Direct costs are traced to a cost object.

Indirect costs are allocated or assigned to a cost object.

Product Costs

All costs that “attach” to the units that are produced and are not reported as expenses until the goods are sold (e.g., direct materials, direct labor, applied overhead).

BASIC COST TERMS (contd.)

Period costs

Costs that must be charged against income in the period incurred and cannot be inventoried (e.g., selling and administrative expenses).

Manufacturing Costs

The sum of direct materials, direct labor, and indirect manufacturing costs

Unit Costs

Total cost of units divided by units produced.

Controllable Costs

Any cost that is primarily subject to the influence of a given manager of a given responsibility center for a given time period.

COST BEHAVIOR

Variable Costs

Costs that change directly in proportion to changes in the related cost driver

Fixed Costs

Costs that remain unchanged for a given time period regardless of changes in the related cost driver.

Other Common Functions for Cost Behavior

- Semivariable Costs (part variable and part fixed)
- Step costs

Major Assumptions Needed to Define Fixed and Variable Costs

- Cost object, Time span, Linear functional form
- Relevant range- the band of cost driver activity in which a specific relationship between a cost and a driver holds.

The “Ins” of Inventory Accounting

What costs are assigned to inventory as products are manufactured?

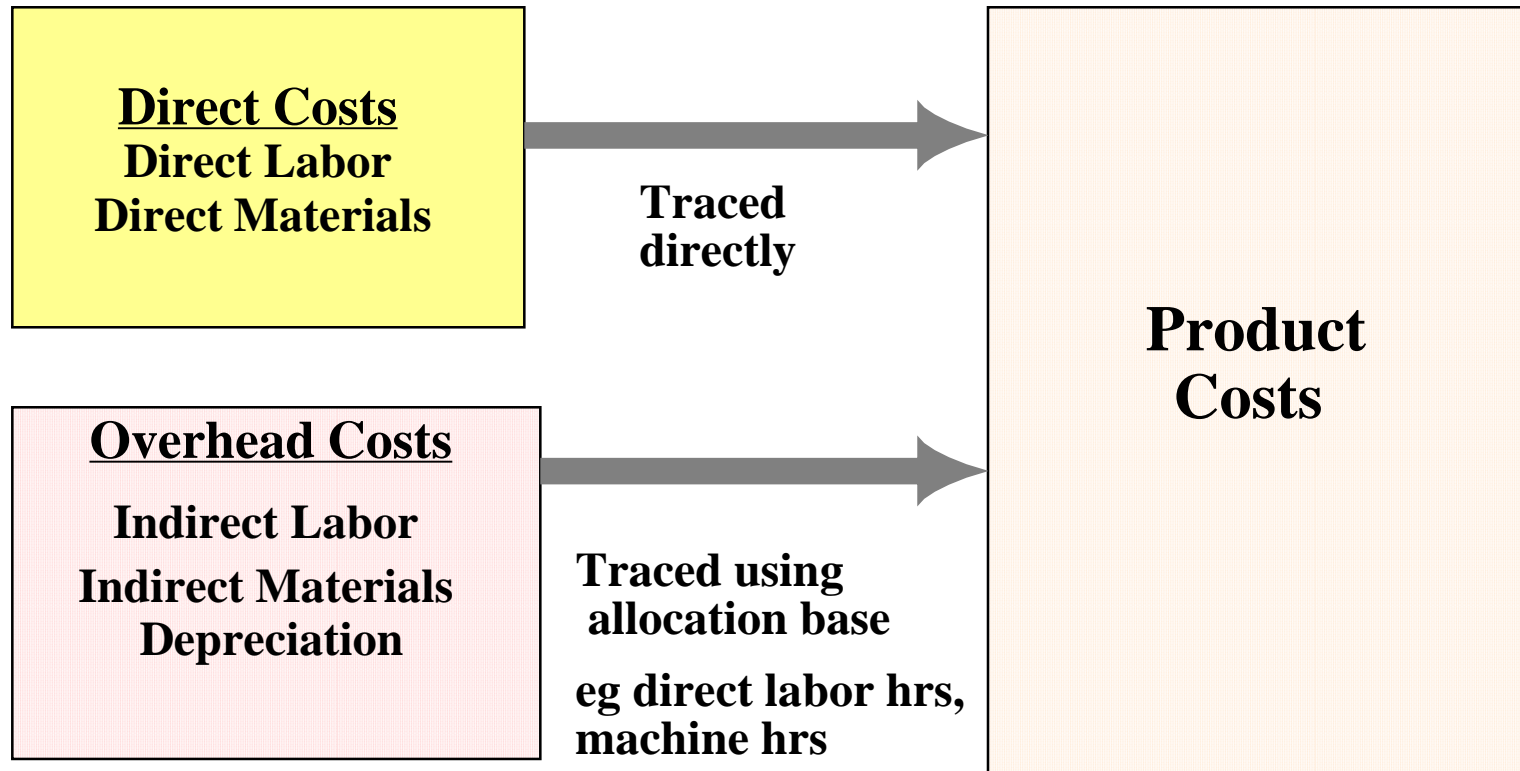
GAAP requires *Full Absorption Costing*: the products *fully absorb* all manufacturing costs, including:

Variable manufacturing Costs: Material, Labor

Fixed manufacturing Costs: Overhead

Results in *unitizing* fixed costs: convert total fixed costs (TFC) to a unit cost by allocating TFC to the units produced.

Traditional Costing System



Example of Product Costing

Electron, Inc. produces 10,000 units in one month.

- Variable manufacturing costs are:
 - \$6/unit for material,
 - \$1/unit for direct labor, and
 - \$1/unit for variable overhead.
- Fixed mfg overhead is \$50,000/month.
- Unit costs are \$8 (variable) + $\$50,000/10,000$ (fixed) or \$13/unit.
- How do these costs flow through Inventory Accounts?

Product Costing Events

First half of November:

- 11/ 1: Purchase and receive \$60,000 of material (Nov. supply)
- 11/ 2: Requisition half of the materials to the factory floor (\$30,000)
- 11/ 5: Apply labor to the materials (\$5,000)
- 11/ 7: Recognize depreciation expense for the month (\$50,000)
- 11/ 8: Apply variable OH to the materials (\$5,000)
- 11/ 9: Transfer 5,000 completed calculators from WIP to FG Inventory
- 11/10: Ship 2,000 completed calculators to customer

How do Costs Flow through Inventory Accounts?

	Cash	Raw Mat's Inv	WIP Inv	Fin Goods Inv	Net PP&E	=	Wages Payable	RE
Buy Materials	-60	60				=		
Requisition half of maerials to factory		-30	30			=		
Apply labor			5			=	5	
Apply fixed OH (PP&E depreciation)			50		-50	=		
Apply variable OH	-5		5			=		
Transfer to FG inventory			-65	65		=		
Sell 2,000 units				-26		=		-26

Key Strategic Management Decisions

- ! Pricing
- ! Dropping unprofitable products
- ! Re-engineering/restructuring
- ! Making new investments
- ! Mergers & acquisitions
- ! Targeting customer groups

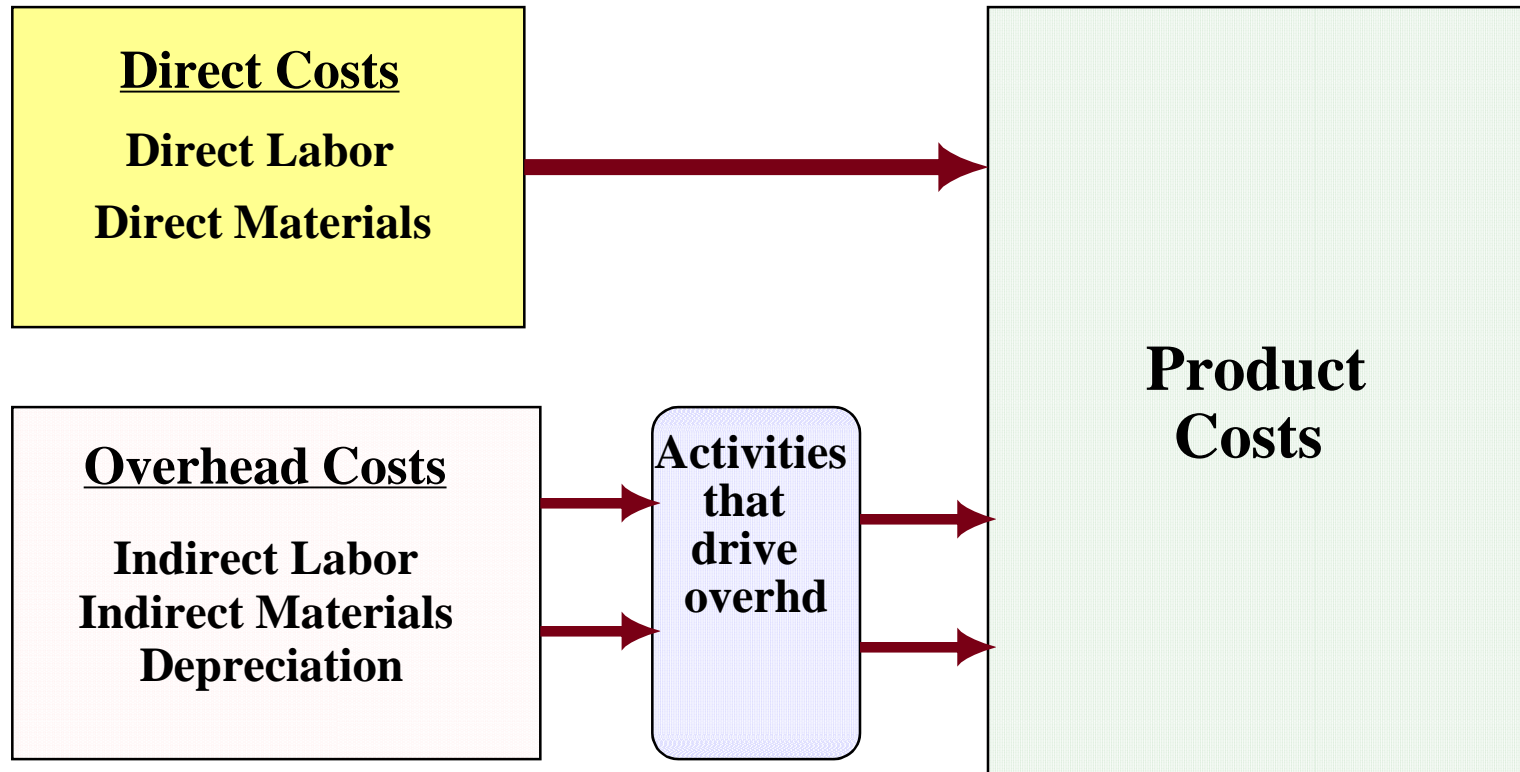
Cost Information for Strategic Decisions

- ! Product Costs
 - Pricing
 - Dropping unprofitable products

- ! Process/Business Costs
 - Re-engineering/restructuring
 - Making new investments
 - Mergers & acquisitions

- ! Customer Costs
 - Targeting customer groups

Activity-Based Costing System



Examples of Overhead Activities

- ! Purchase order processing
- ! Receiving/Inventorying materials
- ! Inspecting materials
- ! Processing accounts payable
- ! Facility maintenance
- ! Scheduling production
- ! Customer complaints
- ! Quality inspection/testing

Typical Activity Cost Drivers

- ! Number of alteration notices per product
- ! Units produced
- ! Number of receipts for materials/parts
- ! Stockroom transfers
- ! Direct labor hours
- ! Set-up hours
- ! Inspection hours
- ! Facility hours
- ! Number of customer complaints

ABC Example

Dialglow Corporation manufactures travel clocks and watches. Overhead costs are currently allocated using direct labor hours, but the controller has recommended an activity-based costing system using the following data:

<u>Activity</u>	<u>Cost Driver</u>	<u>Cost</u>	<i>Activity Level</i>	
			<u>Clocks</u>	<u>Watches</u>
Production Setup	No. of Setups	\$120,000	10	15
Material Handling & Requisition	No. of Parts	30,000	18	36
Packaging & Shipping	#Units Shipped	<u>60,000</u>	45,000	75,000
Total Overhead		\$210,000		

ABC Example, contd.

Existing Cost System:

Allocate Total OH based on labor hours
(35,000 hours for travel clocks; 105,000 hours for watches.)

OH Rate:

$$\$210,000 / 140,000 \text{ hours} = \$1.50/\text{hour}$$

OH cost per Travel Clock:

$$(\$1.50/\text{hr} * 35,000 \text{ hrs}) / 45,000 \text{ units} = \mathbf{\$1.167}$$

OH cost per Watch:

$$(\$1.50/\text{hr} * 105,000 \text{ hrs}) / 75,000 \text{ units} = \mathbf{\$2.10}$$

ABC Example, contd.

Allocation of :

Production Setup Costs:	$\$120,000 / (10+15)$ setups	=	$\$4,800$ /setup
Material Handl'g Costs:	$\$30,000 / (18+36)$ part numbers	=	$\$555.56$ /part no.
Packing/Shipping Costs:	$\$60,000 / (45,000+75,000)$ units	=	$\$0.50$ /unit shipped

Resulting ABC-based Product Costs:

	<u><i>Clocks</i></u>	<u><i>Watches</i></u>
Production Setup	\$48,000	\$72,000
Material Handling	10,000	20,000
Packing/Shipping	22,500	37,500
Total	\$80,500	\$129,500
Per Unit	\$1.79	\$1.73