

Lecture 6: Ch 11 Strategic Cost Mgt & Ch 12 ABM

IE618 Eng Cost & Production Economics

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Chapter 11 Objectives

1. Explain what strategic cost management is and how it can be used to help a firm create a competitive advantage.
2. Discuss value-chain analysis and the strategic role of activity-based customer and supplier costing.
3. Tell what life-cycle cost management is and how it can be used to maximize profits over a product's life cycle.
4. Identify the basic features of JIT purchasing and manufacturing.
5. Describe the effect JIT has on cost traceability and product costing.

Strategic Cost Management: Basic Concepts

Strategic Decision Making: choosing among alternative strategies with the goal of selecting a strategy for long term growth and survival

Strategic Cost Management: use of cost data to develop and identify superior strategies that will help produce a sustainable competitive advantage

Strategic Cost Management: Basic Concepts

Competitive Advantage

- creating better customer value for the same or lower cost than offered by competitors

OR

- Creating equivalent value for lower cost than offered by competitors

Customer Value

- The difference between customer realization (what a customer receives) and customer sacrifice (what the customer gives up)

Strategic Cost Management: Basic Concepts

A cost leadership strategy happens when the same or better value is provided to customers at a lower cost than a company's competitors.

Example: A company might redesign a product so that fewer parts are needed, lowering production costs and the costs of maintaining the product after purchase.

Strategic Cost Management: Basic Concepts

A differentiation strategy strives to increase customer value by increasing what the customer receives (customer realization).

Example: A retailer of computers might offer an on-site repair service, a feature not offered by other rivals in the local market.

Strategic Cost Management: Basic Concepts

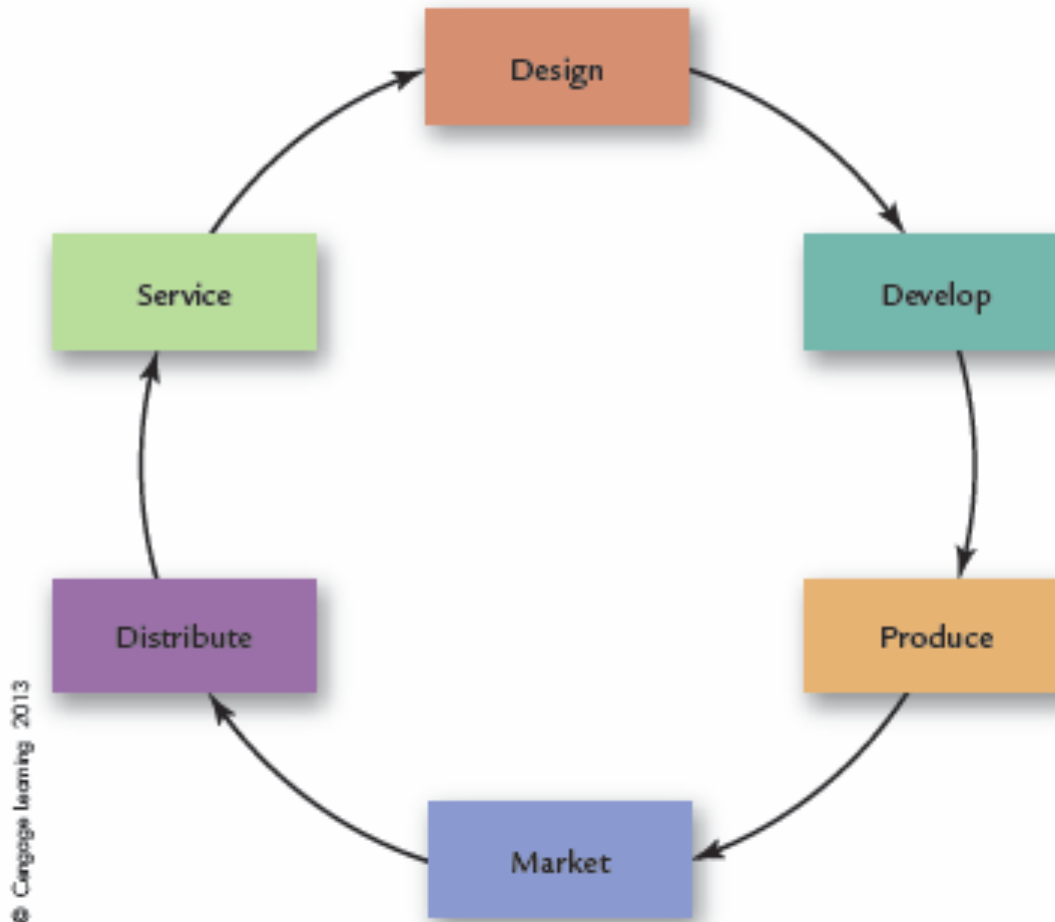
A focusing strategy happens when a firm selects or emphasizes a market or customer segment in which to compete.

Strategic positioning: the process of selecting the optimal mix of these three general strategic approaches.

Value Chain Analysis

(EXHIBIT 11.5)

Internal Value Chain



Identifying and exploiting internal and external linkages with the objective of strengthening a firm's strategic position

Objective 2

Value-Chain Analysis

Internal Linkage Analysis Example

Consider new product design to reduce number of parts from 20 down to 8 for total qty of 10,000 units.

			<i>20 part Current</i>	<i>8 part Expected</i>
		<i>Activity</i>	<i>Activity</i>	<i>Activity</i>
<i>Activities</i>	<i>Activity Driver</i>	<i>Capacity</i>	<i>Demand</i>	<i>Demand</i>
Material usage	Number of parts	200,000	200,000	80,000
Assembling parts	Direct labor hours	10,000	10,000	5,000
Purchasing parts	Number of orders	15,000	12,500	6,500
Warranty repair	Number of defective products	1,000	800	500

Additionally, the following activity cost data are provided:

Value-Chain Analysis

Internal Linkage Analysis Example

Material usage: \$3 per part used; no fixed activity cost.

Assembly: \$12 per direct labor hour; no fixed activity cost

Purchasing: Three salaried clerks, each earning a \$30,000 annual salary; each clerk is capable of processing 5,000 purchase orders annually. Variable activity costs: \$0.50 per purchase order processed for forms, postage, etc.

Warranty: Two repair agents, each paid a salary of \$28,000 per year; each repair agent is capable of repairing 500 units per year. Variable activity costs: \$20 per product repaired.

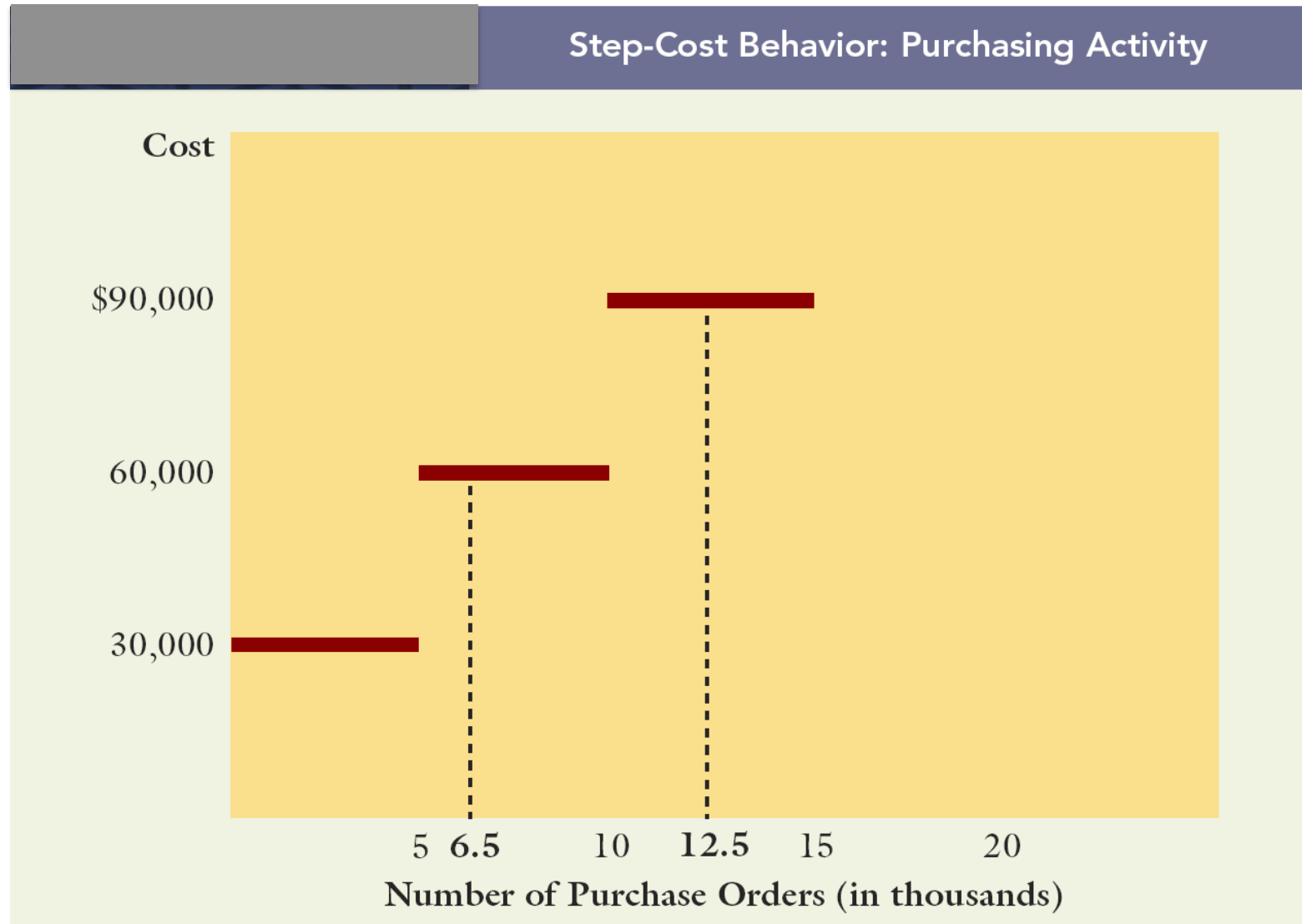
Value-Chain Analysis

Internal Linkage Analysis Example

Cost Reduction from Exploiting Internal Linkages

Material usage	\$ 360,000
(200,000 - 80,000)\$3	
Labor usage	60,000
(10,000 - 5,000)\$12	
Purchasing	33,000
[\$30,000 + \$0.50(12,500 - 6,500)]	
Warranty repair	34,000
[\$28,000 + \$20(800 - 500)]	
Total	<u>\$ 487,000</u>
Units	10,000
Unit savings	\$ 48.70

Value-Chain Analysis



Value-Chain Analysis

Consider 2 components from 2 different suppliers

Data for Supplier Costing Example

I. Activity Costs

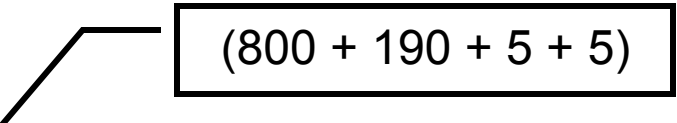
Activity	Component Failure/Late Delivery	Process Failure
Reworking products	\$200,000	\$40,000
Expediting products	50,000	10,000

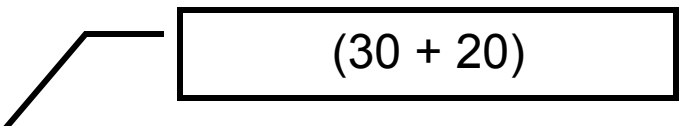
II. Supplier Data

	Fielding Electronics		Oro Limited	
	X1Z	Y2Z	X1Z	Y2Z
Unit purchase price	\$10	\$26	\$12	\$28
Units purchased	40,000	20,000	5,000	5,000
Failed units	800	190	5	5
Late shipments	30	20	0	0

Value-Chain Analysis

External Linkage Analysis Example


$$\begin{aligned}\text{Reworking rate} &= \$200,000 \div 1,000 \\ &= \$200 \text{ per failed component}\end{aligned}$$


$$\begin{aligned}\text{Expediting rate} &= \$50,000 \div 50 \\ &= \$1,000 \text{ per late delivery}\end{aligned}$$

Value-Chain Analysis

		Supplier Costing			
		Fielding Electronics		Oro Limited	
		X1Z	Y2Z	X1Z	Y2Z
Purchase cost:					
\$10 × 40,000		\$400,000			
\$26 × 20,000			\$520,000		
\$12 × 5,000				\$60,000	
\$28 × 5,000					\$140,000
Reworking products:					
\$200 × 800		160,000			
\$200 × 190			38,000		
\$200 × 5				1,000	
\$200 × 5					1,000
Expediting products:					
\$1,000 × 30		30,000			
\$1,000 × 20			20,000		
Total costs		\$590,000	\$578,000	\$61,000	\$141,000
Units		÷ 40,000	÷ 20,000	÷ 5,000	÷ 5,000
Total unit cost		<u>\$ 14.75</u>	<u>\$ 28.90</u>	<u>\$ 12.20</u>	<u>\$ 28.20</u>

15 Note: higher first cost, higher quality supplier is the lower total cost supplier

Value-Chain Analysis

Big customer claims competitor price is \$0.50 less than ours...so??

	One Large Customer	Ten Smaller Customers
Units purchased	500,000	500,000
Orders placed	2	200
Manufacturing cost	\$ 3,000,000	\$ 3,000,000
Order-filling cost allocated*	\$ 303,000	\$ 303,000
Order cost per unit	\$ 0.6060	\$ 0.6060

- *Order-filling capacity is purchased in blocks of 45 (225 capacity), each block costing \$40,400; variable order-filling activity costs are \$2,000 per order; thus, the cost is*

$$[(5 \times \$40,400) + (202 \times \$2,000)] = \$606,000$$
- Activity driver: units purchased
- Realize that number of orders is more appropriate cost driver, so
 $\$606 \text{ k} / 202 = \3k per order and larger customer cost now \$6k and reduce by \$0.59 per unit + 20% markup = \$0.71

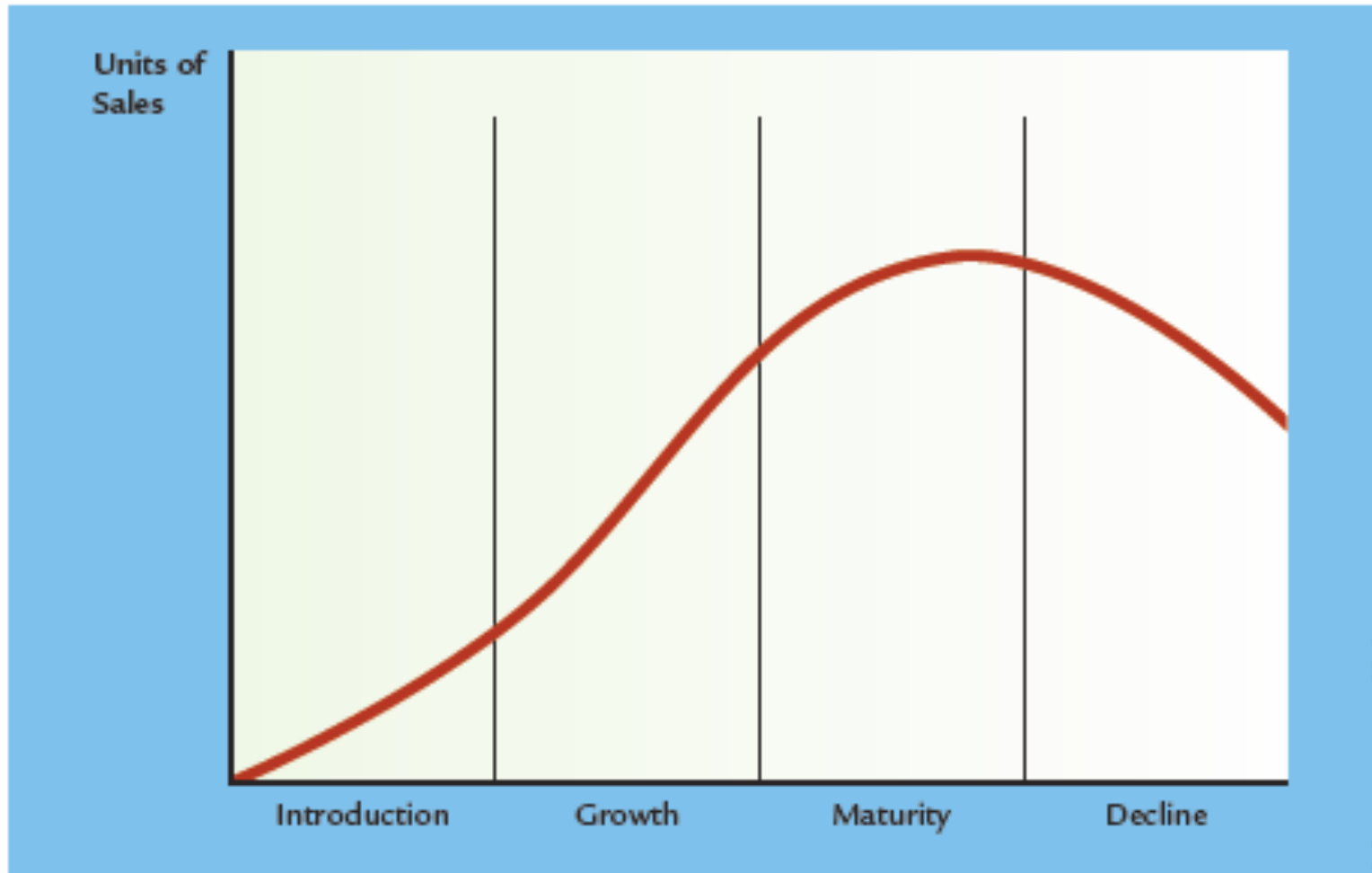
Life Cycle Cost Management

Product Life Cycle

- the time a product exists - from conception to abandonment
- Revenue producing life: the time a product generates revenue for a company
- Consumable life: the length of time a product serves the needs of a customer

Life Cycle Cost Management

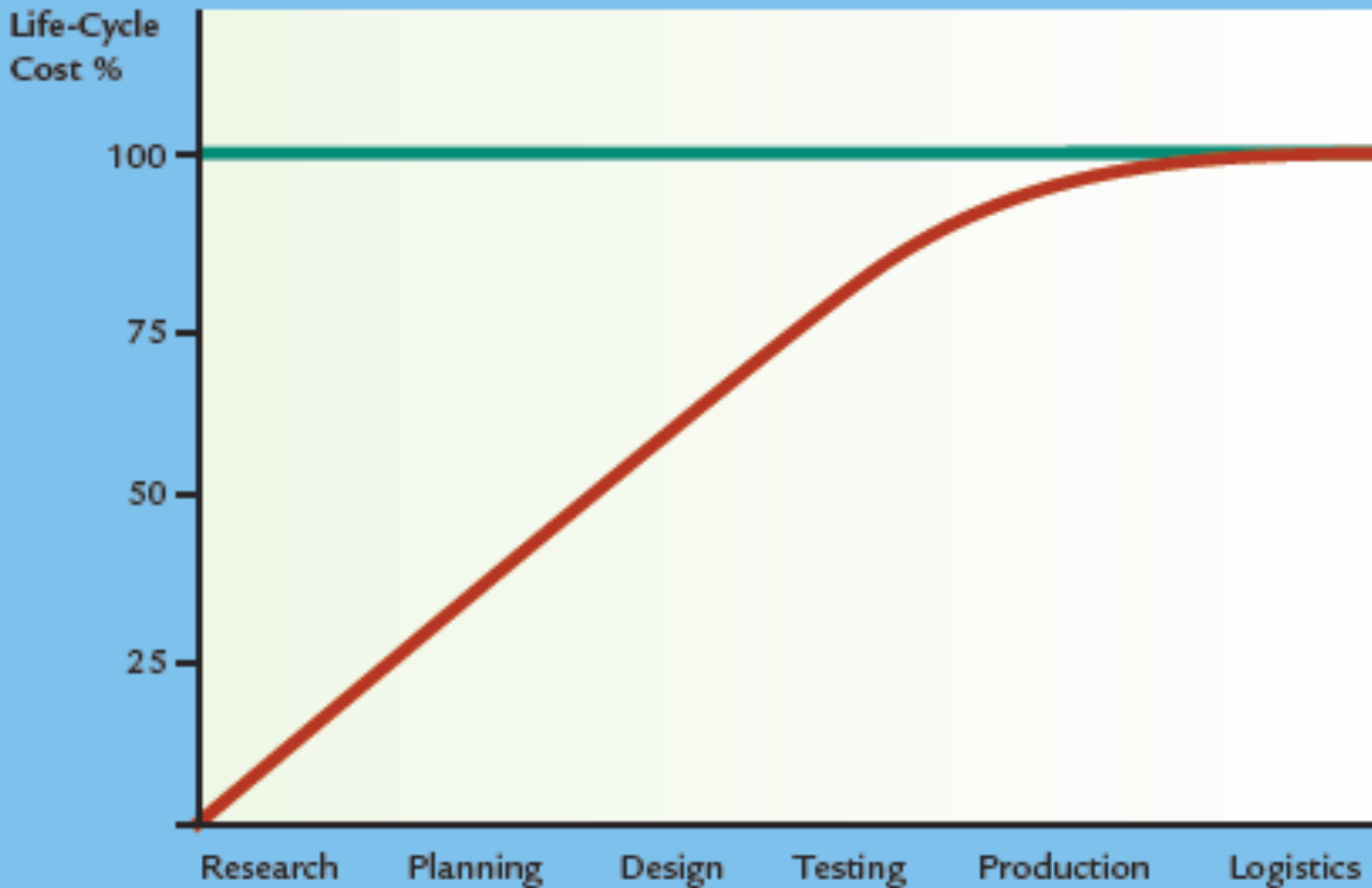
General Pattern of Product Life Cycle: Marketing Viewpoint



Objective 3

Life Cycle Cost Management

Product Life Cycle: Production Viewpoint



Life-Cycle Cost Management

Design engineers are considering two new product designs that reduce direct materials and direct labor content. Data for both unit-based and ABC systems are provided below.

Unit-based system:

Variable conversion activity rate: \$40 per direct labor hour

Material usage rate: \$8 per part

ABC system:

Labor usage: \$10 per direct labor hour

Material usage (direct materials): \$8 per part

Machining: \$28 per machine hour

Purchasing activity: \$60 per purchase order

Setup activity: \$1,000 per setup hour

Warranty activity: \$200 per returned unit (usually requires extensive rework)

Customer repair cost: \$10 per repair hour

Activity and Resource Information (annual estimates)

	Design A	Design B
Units produced	10,000	10,000
Direct material usage	100,000 parts	60,000 parts
Labor usage	50,000 hours	80,000 hours
Machine hours	25,000	20,000
Purchase orders	300	200
Setup hours	200	100
Returned units	400	75
Repair time (customer)	800	150

Life-Cycle Cost Management

1.	Design A	Design B
Direct materials ^a	\$ 800,000	\$ 480,000
Conversion cost ^b	2,000,000	3,200,000
Total manufacturing costs	<u>\$2,800,000</u>	<u>\$3,680,000</u>
Units produced	<u>÷ 10,000</u>	<u>÷ 10,000</u>
Unit cost	<u><u>\$ 280</u></u>	<u><u>\$ 368</u></u>

^a \$8 × 100,000; \$8 × 60,000

^b \$40 × 50,000; \$40 × 80,000

Life-Cycle Cost Management

2.	Design A	Design B
Direct materials	\$ 800,000	\$ 480,000
Direct labor ^a	500,000	800,000
Machining ^a	700,000	560,000
Purchasing ^b	18,000	12,000
Setups ^b	200,000	100,000
Warranty ^b	80,000	15,000
Total product costs	<u>\$2,298,000</u>	<u>\$1,967,000</u>
Units produced	<u>÷ 10,000</u>	<u>÷ 10,000</u>
Unit cost	<u>\$ 230*</u>	<u>\$ 197*</u>
Post-purchase costs ^c	<u><u>\$ 8,000</u></u>	<u><u>\$ 1,500</u></u>

^a \$10 × 50,000; \$10 × 80,000; \$28 × 25,000; \$28 × 20,000

^b \$60 × 300; \$60 × 200; \$1,000 × 200; \$1,000 × 100; \$200 × 400; \$200 × 75

^c \$10 × 800; \$10 × 150

* Rounded to the nearest dollar.

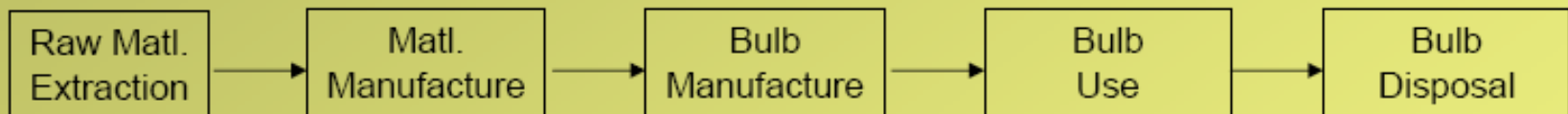
LCA Example: Comparison of Light Bulbs

❖ Life Cycle Assessment

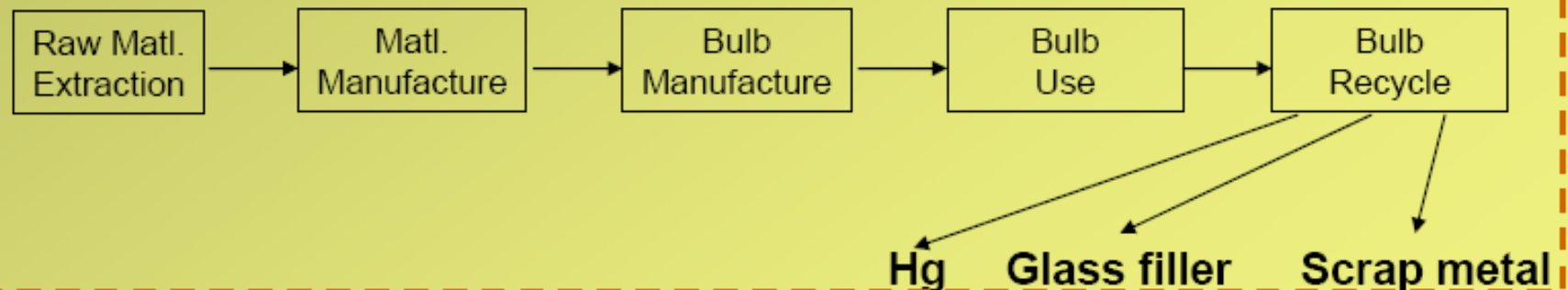
- ❑ Comparison of light bulb systems
- ❑ System boundaries
- ❑ Goal and scope: cost and energy



Incandescent Bulb



Fluorescent Bulb



LCA Example: Comparison of Light Bulbs

❖ Life Cycle Assessment

- ❑ Comparison of light bulb systems
- ❑ System data:



	Fluorescent Bulb	Incandescent Bulb
Light Output, (lumens)	1,700	1,690
Life (hr)	8,000	750
Energy Use Rate (Watt)	26	100
Purchase Cost (\$/bulb)	4.22	0.25
Energy Cost (\$/kWh)	0.12	0.12
Disposal/Recycle Cost (\$/bulb)	0.4	0.0

Data for light, life, and energy use rate from General Electric.

Purchase cost based on Wal-Mart price.

Energy cost is from Dr. Shonnard's UPPCO bill, Aug. 2004

Disposal / Recycle cost from Mike Kimmel, CheanLites Recycling, Inc., Mason, MI 48854

LCA Example: Comparison of Light Bulbs

❖ Light Bulb Systems

❑ Functional unit and equivalence

Functional Unit Definition: The comparison is based on bulb light output and lifetime of service. Both bulbs provide equivalent light output. The *fluorescent* bulb lasts 8,000 hours while the *incandescent* bulb lasts 750 hours.



data	light output of incandescent bulb			1690	lumens
data	light output of fluorescent bulb			1700	lumens
data	lifetime of incandescent bulb			750	hr
data	lifetime of fluorescent bulb			8000	hr
ans.	equivalence incandescent bulbs / fluorescent bulb			10.67	

$$\text{Functional Equivalence} = 8000 \text{ hr} / 750 \text{ hr} = 10.67$$

LCA Example: Comparison of Light Bulbs

❖ Light Bulb Systems

❑ Life cycle costs

Most of the cost is during bulb use



data	cost of one fluorescent bulb			4.22	\$
data	cost of one incandescent bulb			0.25	\$
data	number of incandescent bulbs			10.67	
data	cost of electricity			0.12	\$/kWhr
data	cost of recycle of one fluorescent bulb			0.4	\$
data	lifetime of bulb(s) operation			8000	hr
data	fluorescent bulb elec. usage rate			26	
data	incandescent bulb elec. usage rate			100	
				Fluorescent	Incandescent
ans.	Purchase (\$)			4.22	2.67
	Use (\$)			24.96	96.00
	Recycle/Disposal (\$)			0.4	0
	Total (\$)			29.58	98.67

$$\text{Fluorescent Use (\$)} = 8000 \text{ hr} \times 26 \text{ Watts} / 1000 \text{ W/kW} \times 0.12 \text{ \$/kWhr} = \$24.96$$

LCA Example: Comparison of Light Bulbs

❖ Light Bulb Systems

❑ Production energy assessment

packaging: 4.5 g cardboard	0.117	MJ/bulb
packaging: 33 g plastic	3.925	MJ/bulb
bulb: 50 g white glass	0.604	MJ/bulb
bulb: 40 g steel	1.013	MJ/bulb
bulb: 10 g plastic	1.189	MJ/bulb
Total Energy per Fluorescent Bulb, Production	6.849	MJ

packaging: 5.25 g cardboard	0.171	MJ/bulb
bulb: 20 g white glass	0.242	MJ/bulb
bulb: 10 g steel	0.253	MJ/bulb
Total Energy per Incandescent Bulb, Production	0.666	MJ/bulb
Total Energy 10.67 Incandescent Bulbs, Production	7.104	MJ

Note: bulb assembly is not included in this analysis- no data



**Energy inventory
provided by
modules in
SimaPro6.0**

Production Energy for 1 kg of steel=8.7GJ/t (secondary) & 31.3GJ/t (Primary)
Assume avg of 25 GJ/t; so, Energy for steel production=0.025 MJ/g

LCA Example: Comparison of Light Bulbs

❖ Light Bulb Systems

❑ Use cycle energy assessment



Data: efficiency of electricity generation	35	%
Data: conversion of kWh to MJ	3.6	MJ/kWh
Data: conversion of W to kWh	1,000	W/kWh
Data: incandescent bulb usage rate	100	Watts
Data: fluorescent bulb usage rate	26	Watts
Data: lifetime of fluorescent bulb	8,000	hr

Total Energy per Fluorescent Bulb, Use stage	2,139.4	MJ
Total Energy 10.67 Incandescent Bulbs, Use stage	8,228.6	MJ

>99% of bulb energy is consumed during use

Note: bulb recycle and disposal are not included in this analysis – no data

Fluorescent Use (MJ) = 8000 hr x 26 Watts / 1000 W/kW x 3.6 MJ/kWh / 0.35 = 2,139.4

LCA Example: Comparison of Light Bulbs

Fluorescent Bulb superior to Incandescent Bulb for equivalent source of light

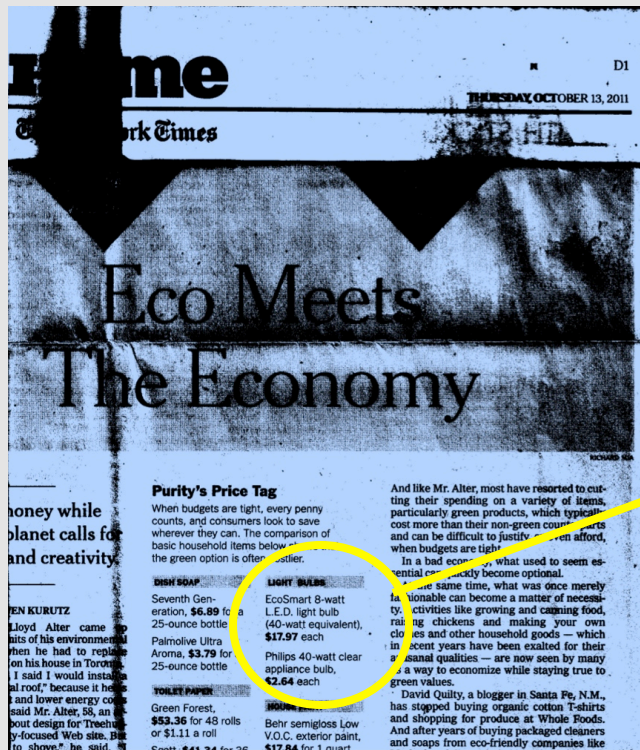
Lower Lifecycle Cost: Save 70% over lifetime.
Less Energy Consumption: Save 75% over lifetime.



LCA Example: Comparison of Light Bulbs

L.E.D Bulb superior to Incandescent Bulb for equivalent source of light

Lower Lifecycle Cost: Save ??% over lifetime.
Less Energy Consumption: Save ??% over lifetime.



Is NYTimes conclusion correct or misleading?

LIGHT BULBS	
EcoSmart 8-watt L.E.D. light bulb (40-watt equivalent),	\$17.97 each
Philips 40-watt clear appliance bulb,	\$2.64 each

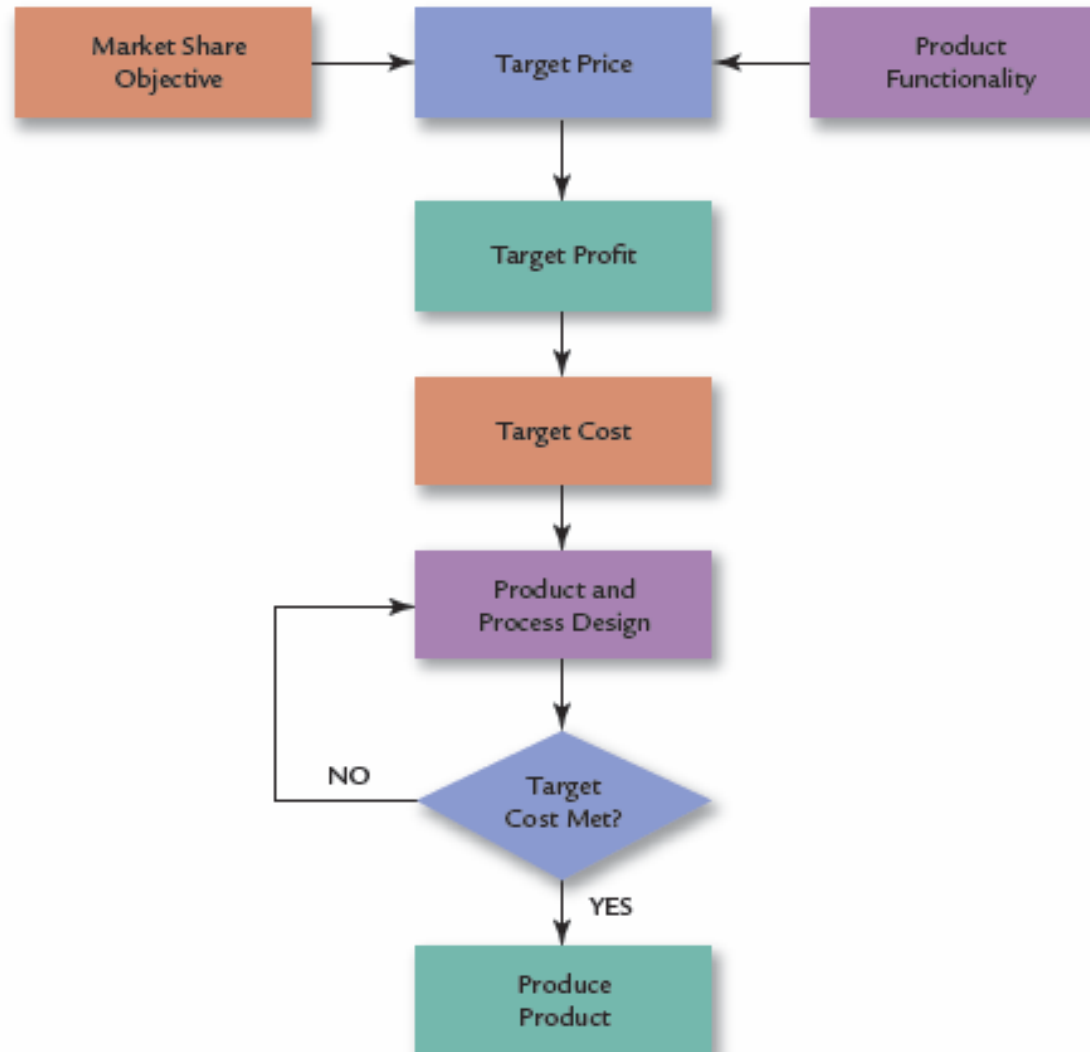
Life Cycle Cost Management

Target Costing

- Useful tool for establishing cost reduction goals during the design stage
- Target cost: difference between the sales price needed to capture a predetermined market share and the desired per unit profit
- The sales price must reflect product functionality – if the target cost is less than what is currently achievable, then the company must find cost reductions to move the actual cost toward the target cost
 - Reverse engineering
 - Value analysis
 - Process improvement

Life Cycle Cost Management

Target-Costing Model



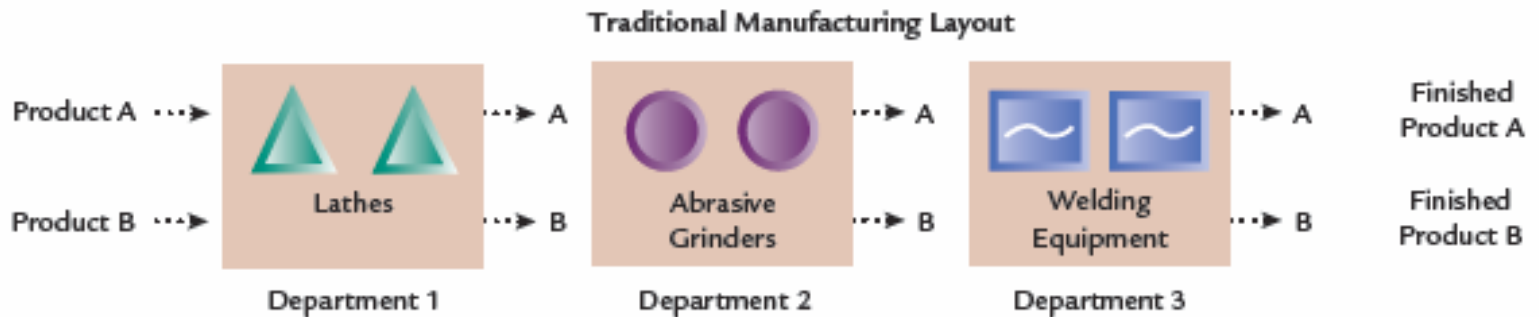
Just-in-Time (JIT) Manufacturing and Purchasing

- JIT manufacturing is a demand-pull system
- Object is to eliminate waste by producing a product only when it is needed and only in the quantities demanded by the customers
- Demand pulls products through the manufacturing process
- No production takes place until a signal from a succeeding process indicates a need to produce
- Parts and materials arrive just in time to be used in production
- JIT purchasing requires suppliers to deliver parts and materials just in time to be used in production.

Just-in-Time (JIT) Manufacturing and Purchasing

(EXHIBIT 11.11)

Plant Layout Pattern: Traditional versus JIT



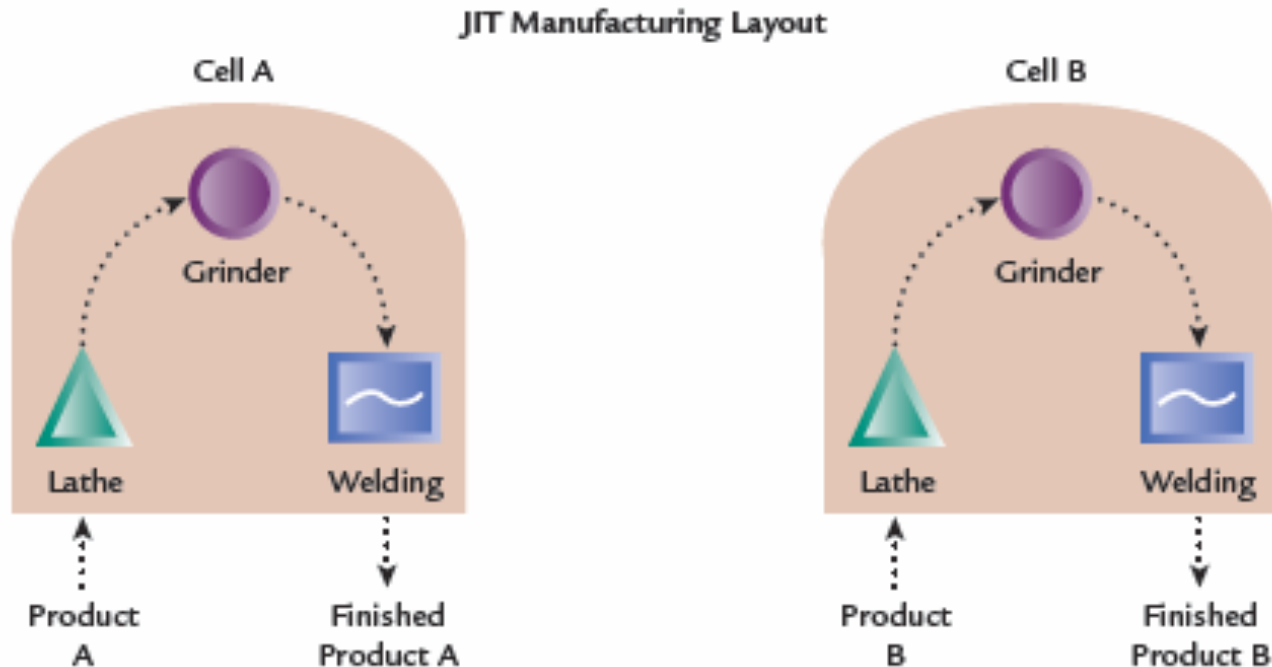
Each product passes through departments that specialize in one process. Departments process multiple products.

(continued)

Just-in-Time (JIT) Manufacturing and Purchasing

(EXHIBIT 11.11)

Plant Layout Pattern: Traditional versus JIT



Notice that each product passes through its own cell. All machines necessary to process each product are placed within the cell. Each cell is dedicated to the production of one product or one subassembly.

Just-in-Time (JIT) Manufacturing and Purchasing

EXHIBIT 11.12

Comparison of JIT Approaches with Traditional Manufacturing and Purchasing

JIT	Traditional
1. Pull-through system	1. Push-through system
2. Insignificant inventories	2. Significant inventories
3. Small supplier base	3. Large supplier base
4. Long-term supplier contracts	4. Short-term supplier contracts
5. Cellular structure	5. Departmental structure
6. Multiskilled labor	6. Specialized labor
7. Decentralized services	7. Centralized services
8. High employee involvement	8. Low employee involvement
9. Facilitating management style	9. Supervisory management style
10. Total quality control	10. Acceptable quality level
11. Buyers' market	11. Sellers' market
12. Value-chain focus	12. Value-added focus

Chapter 12

Activity-Based Management

Chapter 12 Objectives

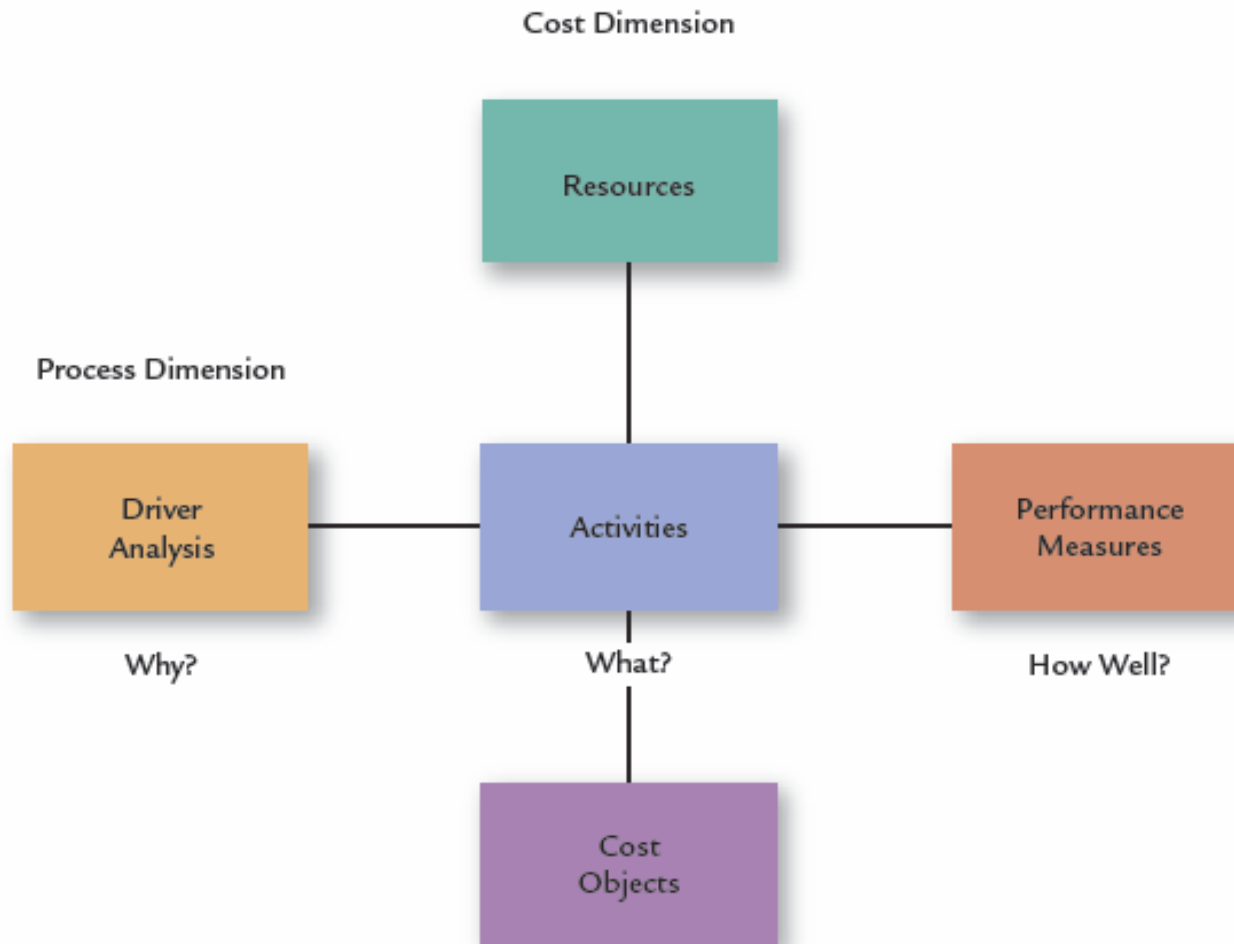
1. Describe how activity-based management and activity-based costing differ.
2. Define process value analysis.
3. Describe activity-based financial performance measurement.
4. Discuss the implementation issues associated with an activity-based management system.
5. Explain how activity-based management is a form of responsibility accounting, and tell how it differs from financial-based responsibility accounting.

The Relationship of Activity-Based Costing and Activity-Based Management

- **Continuous Improvement** is a process of improving performance by constantly searching for ways to eliminate waste.
- **Activity-based management (ABM)**: a systemwide, integrated approach that focuses management's attention on activities with the objectives of improving customer value and the profit achieved by providing this value
- **Activity-Based costing (ABC)** is the major source of information for activity based management.

The Relationship of Activity-Based Costing and Activity-Based Management

The Two-Dimensional Activity-Based Management Model



ABC Objective:
Improve accuracy of cost assignments

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Process Value Analysis with Objective: Improve Customer value and Cost reduction

Process Value Analysis

Driver analysis is the effort expended to identify the factors that are the root causes of activity costs.

Root Causes are identified by asking 'why' questions.

Activity Analysis is the process of identifying, describing, and evaluating the activities an organization performs.

Activity analysis should produce four outcomes:

- 1) What activities are performed
- 2) How many people perform the activities
- 3) The time and resources are required to perform the activities
- 4) An assessment of the value of the activities to the organization.

Activities can be Value Added or Non Value Added.

Process Value Analysis

Value Added Activities:

- Activities necessary to remain in business
- Activities that contribute to customer value and/or help meet an organization's needs

Some activities are discretionary but are also value added:

- The activity produces a change of state
- The change of state was not achievable by preceding activities
- The activity enables other activities to be performed

Value Added costs are the costs to perform value added activities with perfect efficiency.

Process Value Analysis

Non-Value Added Activities:

- All activities other than those essential to remain in business
- These activities fail to produce a change in the product's state or those activities that replicate work because it wasn't done correctly the first time

In manufacturing, five major activities are considered wasteful and unnecessary:

1. Scheduling
 - Uses resources to determine access to processes
2. Moving
 - Uses resources to move inventory among departments
3. Waiting
 - Uses resources while waiting for next process
4. Inspecting
 - Uses resources to ensure conformance to standards
5. Storing
 - Uses resources while goods are held in inventor

Process Value Analysis

Kaizen Costing: characterized by constant, incremental improvements to existing processes and products.

Activity management can reduce costs in four ways:

1. Activity elimination
 - Focus on eliminating nonvalue-added activities
2. Activity selection
 - Choose among sets of competing strategies
3. Activity reduction
 - Decrease time and resources required by an activity
4. Activity sharing
 - Use economies of scale to increase efficiency

Financial Measures of Activity Efficiency

- Reveal the current level of efficiency and the potential for increased efficiency
 - Value- and nonvalue-added activity costs
 - Trends in activity costs
 - Kaizen standard setting
 - Benchmarking
 - Activity flexible budgeting
 - Activity capacity management

Formulas for Value-Added and Non-Value Added Processes

$$\begin{aligned}\text{Value-added costs} &= SQ \times SP \\ \text{Non-value-added costs} &= (AQ - SQ)SP\end{aligned}$$

Where

SQ = The value-added output level for an activity

SP = The standard price per unit of activity output measure

AQ = The actual quantity used of flexible resources or the practical activity capacity acquired for committed resources

Note: Identifying non-value added costs reveals the magnitude of waste the company is currently experiencing; and, therefore, the potential for improvement.

Financial Measures of Activity Efficiency

<u>Activity</u>	<u>Activity Driver</u>	<u>SQ</u>	<u>AQ</u>	<u>SP</u>
Purchasing	Purchasing hours	20,000	23,000	\$20
Molding	Molding hours	30,000	34,000	12
Inspecting	Inspection hours	0	6,000	15
Grinding	Number of units	0	5,000	6

Value-added standards
call for elimination

Note: Grinding is rework,
in this example

Financial Measures of Activity Efficiency

Solution:

1.

Value- and Non-Value-Added Cost Report for the Year Ended 2013

Activity	Value-Added Costs	Non-Value-Added Costs	Total Costs
Purchasing	\$400,000	\$ 80,000	\$ 480,000
Molding	360,000	48,000	408,000
Inspecting	0	90,000	90,000
Grinding	0	30,000	30,000
Total	<u>\$760,000</u>	<u>\$248,000</u>	<u>\$1,008,000</u>

SQxSP

(AQ-SQ)xSP

AQxSP

Financial Measures of Activity Efficiency

Solution:

1. **Trend Report: Non-Value-Added Costs**

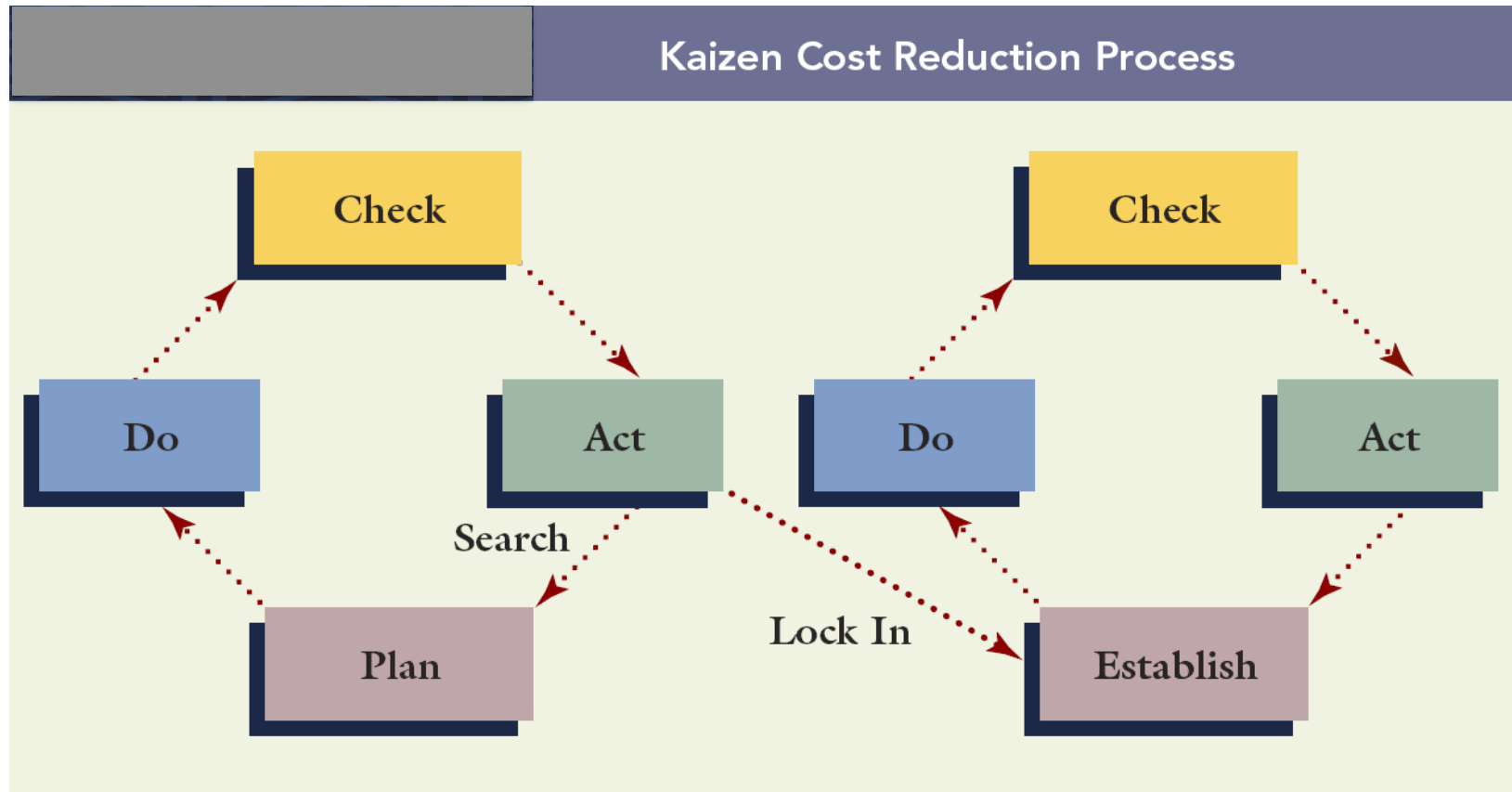
Activity	2013	2014*	Change
Purchasing	\$ 80,000	\$ 40,000	\$ 40,000
Molding	48,000	24,000	24,000
Inspecting	90,000	30,000	60,000
Grinding	30,000	15,000	15,000
Total	<u>\$248,000</u>	<u>\$109,000</u>	<u>\$139,000</u>

* Since the reductions for the purchasing and inspection were in multiples of 2,000, the cost savings is simply SP multiplied by the reduction in AQ.

Financial Measures of Activity Efficiency

- Kaizen costing is concerned with reducing the costs of existing products and processes
 - Controlling this cost reduction process is accomplished through the repetitive use of two major subcycles
 - Kaizen (continuous improvement) cycle
 - Maintenance cycle

Financial Measures of Activity Efficiency



Financial Measures of Activity Efficiency

Benchmarking: a complimentary approach to kaizen costing and activity-based management

- uses best practices found within and outside the organization as the standard for evaluating and improving activity performance.

Internal Benchmarking

Benchmarking against internal operations

External Benchmarking

Benchmarking that involves comparison with others outside the organization

Financial Measures of Activity Efficiency

Activity Flexible Budgeting: the prediction of what activity costs will be as activity output changes

Flexible Budget: Direct Labor Hours

	Cost Formula		Direct Labor Hours	
	Fixed	Variable	10,000	20,000
Direct materials	—	\$10	\$100,000	\$200,000
Direct labor	—	8	80,000	160,000
Maintenance	\$ 20,000	3	50,000	80,000
Machining	15,000	1	25,000	35,000
Inspections	120,000	—	120,000	120,000
Setups	50,000	—	50,000	50,000
Purchasing	220,000	—	220,000	220,000
Total	<u>\$425,000</u>	<u>\$22</u>	<u>\$645,000</u>	<u>\$865,000</u>

Financial Measures of Activity Efficiency

Activity Flexible Budget

DRIVER: DIRECT LABOR HOURS				
	Formula		Level of Activity	
	Fixed	Variable	10,000	20,000
Direct materials	—	\$10	\$100,000	\$200,000
Direct labor	—	8	80,000	160,000
Subtotal	—	<u>\$18</u>	<u>\$180,000</u>	<u>\$360,000</u>
DRIVER: MACHINE HOURS				
	Fixed	Variable	8,000	16,000
Maintenance	\$20,000	\$5.50	\$64,000	\$108,000
Machining	15,000	2.00	31,000	47,000
Subtotal	<u>\$35,000</u>	<u>\$7.50</u>	<u>\$95,000</u>	<u>\$155,000</u>
DRIVER: NUMBER OF SETUPS				
	Fixed	Variable	25	30
Inspections	\$80,000	\$2,100	\$132,500	\$143,000
Setups	—	1,800	45,000	54,000
Subtotal	<u>\$80,000</u>	<u>\$3,900</u>	<u>\$177,500</u>	<u>\$197,000</u>
DRIVER: NUMBER OF ORDERS				
	Fixed	Variable	15,000	25,000
Purchasing	<u>\$211,000</u>	<u>\$1</u>	<u>\$226,000</u>	<u>\$236,000</u>
Total			<u>\$678,500</u>	<u>\$948,000</u>

Financial Measures of Activity Efficiency

Activity-Based Performance Report*

	Actual Costs	Budgeted Costs	Budget Variance
Direct materials	\$101,000	\$100,000	\$ 1,000 U
Direct labor	80,000	80,000	—
Maintenance	55,000	64,000	9,000 F
Machining	29,000	31,000	2,000 F
Inspections	125,500	132,500	7,000 F
Setups	46,500	45,000	1,500 U
Purchasing	220,000	226,000	6,000 F
Total	<u>\$657,000</u>	<u>\$678,500</u>	<u>\$21,500 F</u>

* Activity levels of drivers: 10,000 direct labor hours, 8,000 machine hours, 25 setups, and 15,000 orders.

Implementing Activity-Based Management

- Why ABM Implementations Fail
 - Lack of support of higher-level management
 - Failure to maintain support from higher level management
 - Resistance to change
 - Failure to integrate the new system

Financial-Based Versus Activity-Based Responsibility Accounting

- Financial-based responsibility accounting system
 - Assigns responsibility to organizational units and expresses performance measures in financial terms.
- Activity-based responsibility accounting system
 - Assigns responsibility to processes and uses both financial and nonfinancial measures of performance

Financial-Based Versus Activity-Based Responsibility Accounting

(EXHIBIT 12.9)

Responsibility Assignments Compared

Financial-Based Responsibility	Activity-Based Responsibility
<ol style="list-style-type: none">1. Organizational units2. Local operating efficiency3. Individual accountability4. Financial outcomes	<ol style="list-style-type: none">1. Processes2. Systemwide efficiency3. Team accountability4. Financial outcomes