Performance Evaluation

Chapter 10

Objective 1

Understand decentralization and describe different types of responsibility centers

Decentralization

- What is decentralization?

Splitting operations into different operating segments

- Why decentralization?

It is impossible for a single person to manage the entire organization's operations.

Decentralization

- Advantages
  - Frees top management’s time
  - Use of expert knowledge
  - Improves customer relations
  - Provides training
  - Improves motivation and retention
- Disadvantages
  - Duplication of costs
  - Potential problems achieving goal congruence

Decentralization

- How decentralization?

1) Geographic area
2) Product line
3) Distribution channel (such as retail sales versus online sales)
4) Customer base
5) Business function

Performance Evaluation Systems

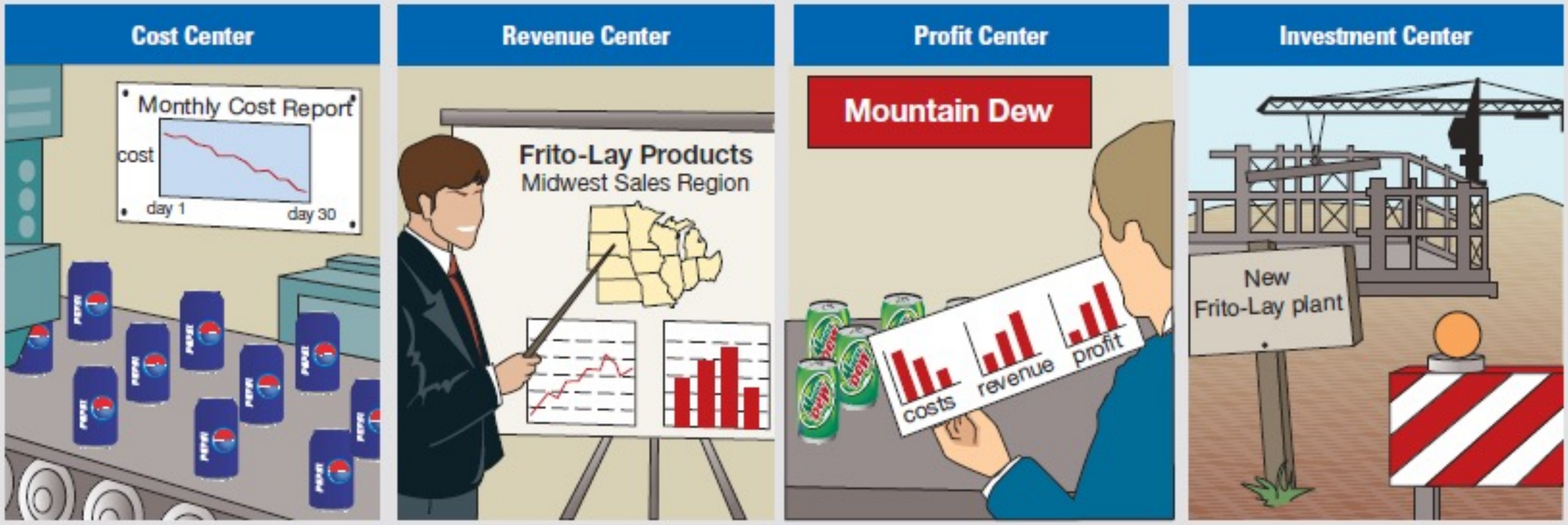
- Provide upper management with feedback
- To be effective, performance evaluation systems should:
  - Clearly communicate expectations
  - Provide benchmarks that promote goal congruence and coordination between segments
  - Motivate segment managers

Responsibility Accounting

- <u>Responsibility Center</u>—part of an organization whose manger is accountable for planning and controlling activities.

- <u>Responsibility Accounting</u>—system for evaluating performance of each responsibility center and its manger.

Types of Responsibility Centers



In a **cost center**, such as a manufacturing plant, managers are responsible for controlling costs.

In a **revenue center**, such as the Midwest sales region, managers are responsible for generating sales revenue.

In a **profit center**, such as a line of products, managers are responsible both for generating income and controlling costs.

In an **investment center**, such as the Frito-Lay division, managers are responsible for income and invested capital.

Objective 2

Develop performance reports

Responsibility Center Performance Reports

- Performance report—Compares actual revenues and expenses to budgeted figures
- Variance—Difference between actual and budget
  - Favorable variance: Causes operating income to be higher than budgeted
  - Unfavorable variance: Causes operating income to be lower than budgeted
- Management by exception

Exhibit 10-3: Partial Performance Report for Revenue Center

	A	B	C	D	E	F	G
1	**Midwest Sales Region**						
2	**Monthly Performance Report**						
3	**For the Month Ended March 31**						
4	**Product**	**Actual Sales**	**Budgeted Sales**	**Variance**		**Variance Percentage**	
5	Sun Chips	$ 2,367,200	$ 2,400,000	$ 32,800	U	1.37%	U
6	Doritos	15,896,000	15,000,000	896,000	F	5.97%	F
7	Lay's	9,325,500	9,000,000	325,500	F	3.62%	F
8	Tostitos	1,374,300	1,500,000	125,700	U	8.38%	U
9	Cheetos	13,678,400	13,500,000	178,400	F	1.32%	F
10	Fritos	4,683,100	4,500,000	183,100	F	4.07%	F
11	Total revenues	$ 47,324,500	$ 45,900,000	$ 1,424,500	F	3.10%	F
12							

NOTE: The budget variance is calculated as the variance divided by the budgeted amount. All figures in this report are hypothetical and do not reflect PepsiCo's actual sales or budgets for these products. These hypothetical figures are used strictly for teaching purposes.

Segment Margin

- The performance reports of profit and investment centers include both revenues and expenses.
- Performance reports are often presented in the contribution margin format.
- Segment Margin: The operating income generated by a profit or investment center *before subtracting common fixed costs that have been allocated to the center.*

Exhibit 10-4: Performance Report Highlighting Segment Margin

	A	B	C	D	E	F	G
1	**Tropicana Products**						
2	**Segment Margin Performance Report for the Fiscal Year Ended December 31**						
3	***(all figures in millions of dollars)***						
4	**Product**	**Actual**	**Budgeted**	**Variance**		**Variance %**	
5	Sales revenue	$ 4,314	$ 4,300	$ 14	F	0.3%	F
6	Less variable expenses:						
7	Variable cost of goods sold	1,728	1,720	8	U	0.5%	U
8	Variable operating expenses	508	515	7	F	1.4%	F
9	Contribution Margin	2,078	2,065	13	F	0.6%	F
10	Less direct fixed expenses:						
11	Fixed manufacturing overhead	1,228	1,215	13	U	1.1%	U
12	Fixed operating expenses	405	415	10	F	2.4%	F
13	Segment Margin	445	435	10	F	2.3%	F
14	Less: Common fixed expenses allocated to the profit center	36	35	1	U	2.9%	U
15	Operating income	$ 409	$ 400	$ 9	F	2.3%	F
16							

NOTE: All figures in this report are hypothetical and do not reflect the actual or budgeted sales and expense data for Tropicana products. These hypothetical figures are used strictly for teaching purposes.

Fixed Expense

- Direct fixed expenses:

Direct fixed expense include those fixed expense that can be traced to the profit center.

(e.g., Advertisement fee)

- Common fixed expenses:

Those fixed expense that cannot be traced to the profit center.

(e.g., HR, payroll, legal department)

Organization-Wide Performance Reports

- Performance reports for each level of management flow <u>up</u>

- The operating income from each **profit** center flows into the <u>performance</u> report for an **investment** center.
- The operating income from each **investment** center flows into the performance report for the **entire** company.
- Costs incurred by corporate **headquarters** are treated as a cost center and are typically **not** allocated to any of the divisions.

Organization-Wide Performance Reports

- Controllable vs. uncontrollable variances
- For example, managers have no control over the general economic conditions of the country that may reduce sales

Objective 3

Calculate ROI, sales margin, and capital turnover

Evaluation of Investment Centers

- Investment center managers are responsible for both generating profit and making the best use of the investment center's asset.
- Duties of investment center manager similar to CEO
- To assess performance
  - Return on Investment (ROI)
  - Residual Income (RI)

Return on Investment (ROI)

- Measures the amount of income an investment center earns relative to the size of its assets
- $$\text{ROI} = \frac{\text{Operating income}}{\text{Total assets}}$$

Sales Margin and Capital Turnover

- $\text{ROI} = \dfrac{\text{Operating income}}{\text{Sales}} \times \dfrac{\text{Sales}}{\text{Total assets}}$

(ROI = Sales margin x Capital turnover)

- Sales margin: profitability
- Capital turnover: efficiency

S10-6

Racer Chemical Corporation has three divisions. To follow is division information from the most recent year.

Division Information for Racer Chemical
For the Year Ending December 31

(All information is in millions of dollars)	Operating Income	Assets	Sales Revenue
Functional Ingredients	$5,720	$10,000	$22,000
Consumer Markets	$2,675	$10,700	$21,400
Performance Materials	$4,810	$18,500	$18,500

For each of the three divisions, calculate sales margin, capital turnover, and return on investment (ROI).

S10-6

Functional ingredients

- Sales margin $5,720 / $22,000 = 26.0%
- Capital turnover $22,000 / $10,000 = 2.2
- ROI 26.0% x 2.2 = 57.2%

Consumer markets

- Sales margin $2,675 / $21,400 = 12.5%
- Capital turnover $21,400 / $10,700 = 2.0
- ROI 12.5% x 2.0 = 25%

Performance markets

- Sales margin $4,810 / $18,500 = 26.0%
- Capital turnover $18,500 / $18,500 = 1.0
- ROI 26.0% x 1.0 = 26.0%

Residual Income

- Determines whether the division has created any excess (residual) income above management's expectations
- Incorporates target rate of return

RI = Operating income - minimal acceptable income

RI = Operating income - (target rate of return x total assets)

S10-9

Sunburst Sports Company makes snowboards, downhill skis, cross-country skis, skateboards, surfboards, and in-line skates. The company has found it beneficial to split operations into two divisions based on the climate required for the sport: Snow Sports and Non-Snow Sports. The following divisional information is available for the past year:

	Sales	Operating Income	Total Assets	Current Liabilities
Snow Sports	$5,000,000	$ 950,000	$4,900,000	$500,000
Non-Snow Sports	$7,800,000	$1,482,000	$7,100,000	$750,000

Sunburst's management has specified a target 13% rate of return.

Refer to the Sunburst Sports Data Set. Compute each division's residual income. Interpret your results. Are your results consistent with each division's ROI?

S10-9

Snow Sports RI = $950,000 − ($4,900,000 × 13%) = $313,000

Non-Snow Sports RI = $1,482,000 − ($7,100,000 × 13%) = $559,000

Goal Congruence

Residual Income enhances goal congruence, whereas ROI may or may not

Measurement Issues

- Which balance sheet data should we use? (fiscal-begin/ fiscal-end)
- Should we include all assets? (nonproductive assets)
- Should we use gross book value or net book value of the assets? (depreciation)
- Should we make other adjustments to income or assets? (Economic Value Added- EVA)

Limitations of Financial Performance Evaluation

- Short-term focus
- Potential Remedy: management can measure financial performance using a longer time horizon
  - Incentivizes segment managers to think long term rather than short term

Objective 4

Describe strategies and mechanisms for determining a transfer price

Transfer Pricing

- One division will often buy products or components from another division rather than buying them from an outsider supplier.
- **Transfer price**: The price charged for the internal sale between two different divisions of the same company

Transfer Pricing

- Management’s ultimate goal should be to optimize the company’s overall profitability.
- Encourage transfer only if the company would benefit by the exchange
- Vertical Integration: purchase other companies within one’s supply chain.

Strategies to Determine Transfer Price

- Market price:

Sale price/ fair price

- Negotiated price:

Between variable cost and sale price

- Cost:

If no outside market for the product exists

Global Considerations

- Do the divisions operate under different taxing authorities such that income tax rates are higher for one division?
- Would the amount paid to customs and duties be impacted by the transfer price used?

Objective 5

Prepare and evaluate flexible budget performance reports

Flexible Budget

- Actual results against master planning budget
- Alternative: Actual results against a **flexible budget**
- **flexible budget**: A budget prepared for a different level of volume than that which was originally anticipated
- Master Budget Variance—Difference between the actual revenues and expenses and the master budget
  - "Apples-to-oranges" comparison

Flexible Budget

- Many companies compare actual results to a flexible budget prepared for the actual volume achieved.

Exhibit 10-11 Creating a Flexible Budget Performance Report

	A	B	C	D	E	F	G	H
1	**Tucson Tortilla**							
2	**Flexible Budget Performance Report: Sales and Operating Expenses**							
3	**For the Month Ended March 31**							
4								
5		**Actual**	**Flexible Budget Variance**		**Flexible Budget**	**Volume Variance**		**Master Budget**
6	**Sales volume (number of cases sold)**	**28,724**			**28,724**			**25,000**
7								
8	Sales revenue ($20 per case)	$ 603,225			**$ 574,480**			$ 500,000
9	Operating expenses:							
10	*Variable operating expenses:*							
11	Sales commission ($1.50 per case sold)	$ 45,960			**$ 43,086**			$ 37,500
12	Shipping expense ($2.00 per case sold)	54,578			**57,448**			50,000
13	Bad debt expense (1% of credit sales)	5,127			**4,596**			4,000
14	*Fixed operating expenses:*							
15	Salaries	21,000			**20,000**			20,000
16	Office rent	4,000			**4,000**			4,000
17	Depreciation	6,000			**6,000**			6,000
18	Advertising	2,800			**2,000**			2,000
19	Telephone and Internet	980			**1,000**			1,000
20	Total operating expenses	$ 140,445			**$ 138,130**			$ 124,500
21								

NOTE: The company expects 80% of sales will be made on credit terms.

Volume Variance

- The difference between the master budget and the flexible budget
  - Arises *only* because the actual volume differs from the volume originally anticipated in the master budget

Exhibit 10-12 Volume Variances

	A	B	C	D	E	F	G	H
1	Tucson Tortilla							
2	Flexible Budget Performance Report: Sales and Operating Expenses							
3	For the Month Ended March 31							
4								
5		Actual	Flexible Budget Variance		Flexible Budget	Volume Variance		Master Budget
6	**Sales volume (number of cases sold)**	**28,724**			**28,724**	3,724	F	**25,000**
7								
8	Sales revenue ($20 per case)	$ 603,225			**$ 574,480**	$ 74,480	F	$ 500,000
9	Operating expenses:							
10	*Variable operating expenses:*							
11	Sales commission ($1.50 per case sold)	$ 45,960			**$ 43,086**	$ 5,586	U	$ 37,500
12	Shipping expense ($2.00 per case sold)	54,578			**57,448**	7,448	U	50,000
13	Bad debt expense (1% of credit sales)	5,127			**4,596**	596	U	4,000
14	*Fixed operating expenses:*							
15	Salaries	21,000			**20,000**	0		20,000
16	Office rent	4,000			**4,000**	0		4,000
17	Depreciation	6,000			**6,000**	0		6,000
18	Advertising	2,800			**2,000**	0		2,000
19	Telephone and Internet	980			**1,000**	0		1,000
20	Total operating expenses	$ 140,445			**$ 138,130**	$ 13,630	U	$ 124,500
21								

NOTE: For determining whether the volume variance is favorable or unfavorable, keep in mind that the master budget was the original goal. Therefore, the flexible budget is evaluated against the master budget goal.

Flexible Budget Variance

The difference between the flexible budget and the actual results

Exhibit 10-13 Flexible Budget and Volume Variances

	A	B	C	D	E	F	G	H
1	Tucson Tortilla							
2	Flexible Budget Performance Report: Sales and Operating Expenses							
3	For the Month Ended March 31							
4								
5		Actual	Flexible Budget Variance		Flexible Budget	Volume Variance		Master Budget
6	**Sales volume (number of cases sold)**	**28,724**	0		**28,724**	3,724	F	**25,000**
7								
8	Sales revenue ($20 per case)	$ 603,225	$ 28,745	F	$ **574,480**	$ 74,480	F	$ 500,000
9	Operating expenses:							
10	*Variable operating expenses:*							
11	Sales commission ($1.50 per case sold)	$ 45,960	$ 2,874	U	$ **43,086**	$ 5,586	U	$ 37,500
12	Shipping expense ($2.00 per case sold)	54,578	2,870	F	**57,448**	7,448	U	50,000
13	Bad debt expense (1% of credit sales)	5,127	531	U	**4,596**	596	U	4,000
14	*Fixed operating expenses:*							
15	Salaries	21,000	1,000	U	**20,000**	0		20,000
16	Office rent	4,000	0		**4,000**	0		4,000
17	Depreciation	6,000	0		**6,000**	0		6,000
18	Advertising	2,800	800	U	**2,000**	0		2,000
19	Telephone and Internet	980	20	F	**1,000**	0		1,000
20	Total operating expenses	$ 140,445	$ 2,315	U	$ **138,130**	$ 13,630	U	$ 124,500
21								

NOTE: For determining whether the volume variance is favorable or unfavorable, keep in mind that the master budget was the original goal. Therefore, the flexible budget is evaluated against the master budget goal.

Underlying Causes of the Variances

- Management by exception
- Use performance reports to see how operational decisions affected company's finances

Master Budget Variance: A Combination of Variances

Panel A: Sales Revenue Variances (two *favorable* variance)

Flexible Budget Variance (Exhibit 10-13)
$28,745 F

Volume Variance (Exhibit 10-13)
$74,480 F

Master Budget Variance (Exhibit 10-10)
$103,225 F

Panel B: Total Operating Expenses Variances (two *unfavorable* variances)

Flexible Budget Variance (Exhibit 10-13)
$2,315 U

Volume Variance (Exhibit 10-13)
$13,630 U

Master Budget Variance (Exhibit 10-10)
$15,945 U

Panel C: Shipping Expenses Variances (one *favorable* and one *unfavorable* variance)

Flexible Budget Variance (Exhibit 10-13)
$2,870 F

Volume Variance (Exhibit 10-13)
$7,448 U

Master Budget Variance (Exhibit 10-10)
$4,578 U

Objective 6

Describe the balanced scorecard and identify KPIs for each perspective

Nonfinancial Performance Measurement

- Current financial performance tends to reveal the results of *past* decisions and actions rather than indicate *future* performance of the company.
- Lag indicators—Reveal the results of past actions and decisions
- Lead indicators—Predict future performance

The Balanced Scorecard

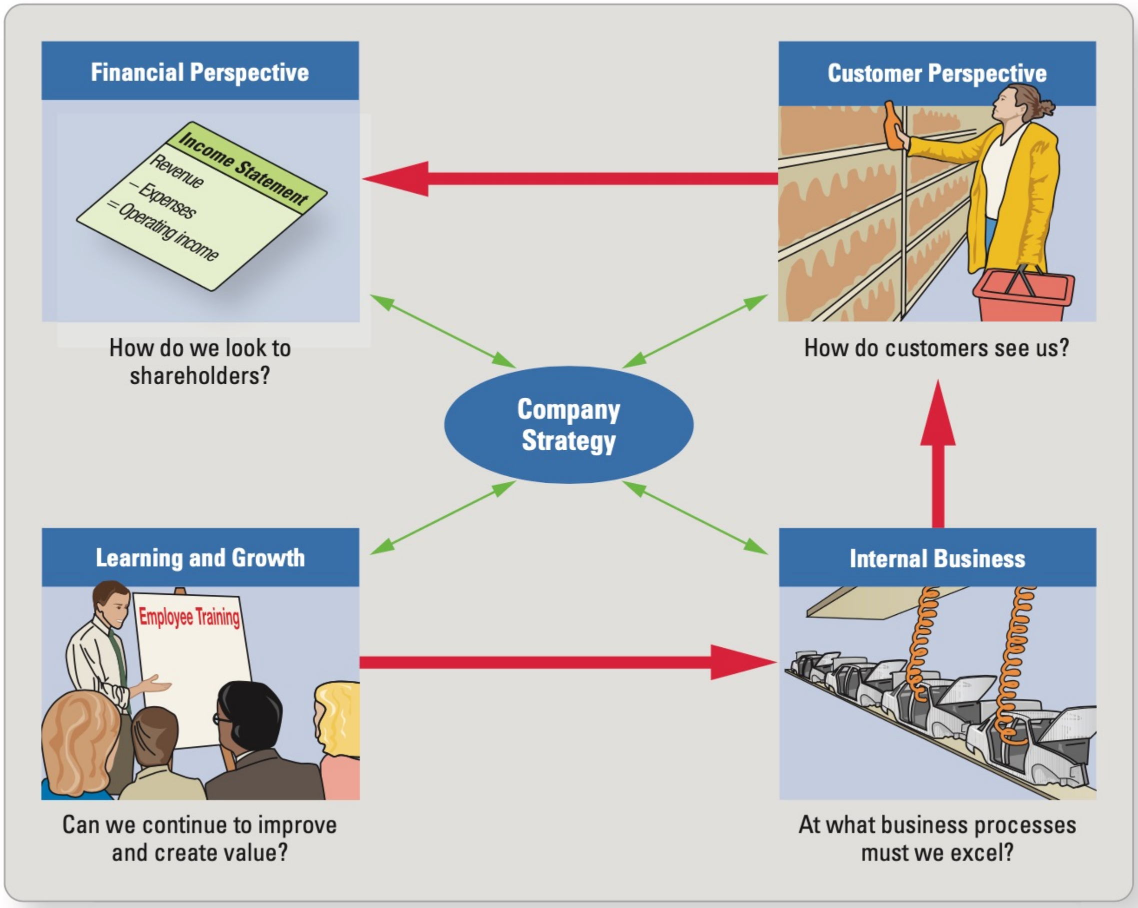
- Management must consider *both* financial and operational performance measures
- Major shift: Financial indicators are no longer the sole measure of performance

Four Perspectives of the Balanced Scorecard

- Financial
- Customer
- Internal business
- Learning and growth

Four Perspectives of the Balanced Scorecard

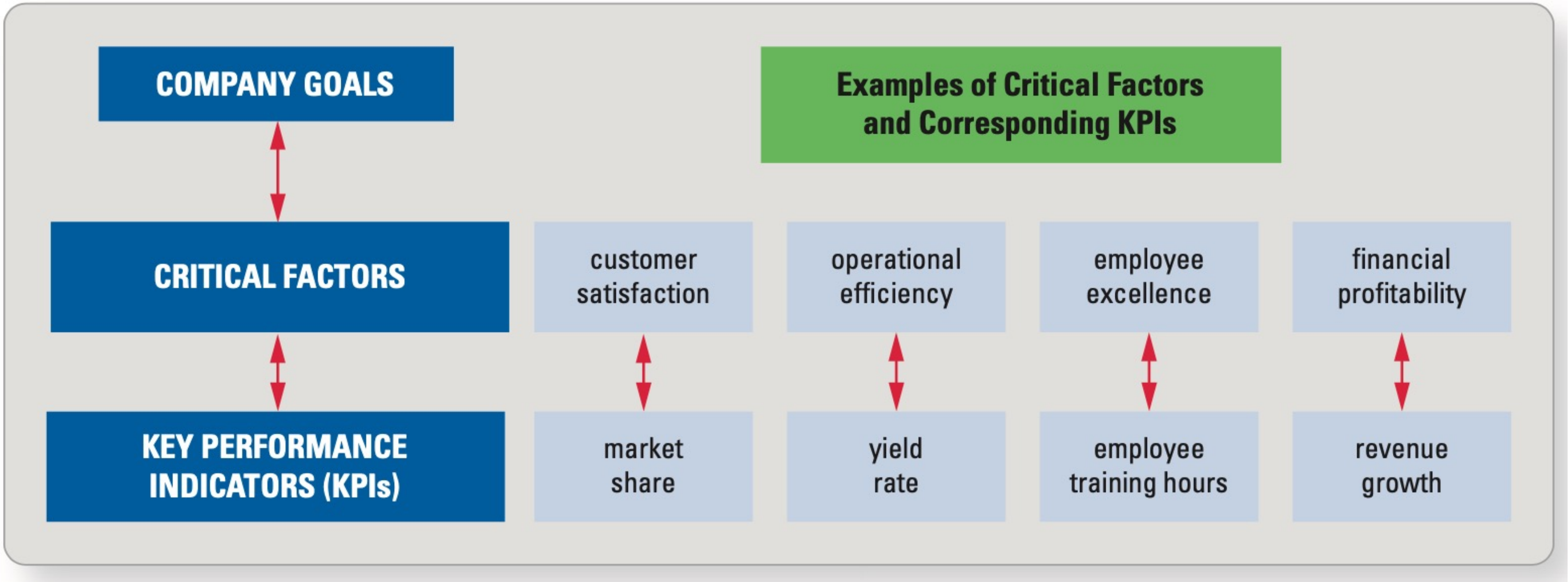
EXHIBIT 10-15 The Four Perspectives of the Balanced Scorecard



Key Performance Indicator (KPI)

- Summary performance metric; assesses how well the company is achieving its goals
- Continually measured
- Reported on **performance scorecard** or **performance dashboard**

Key Performance Indicator (KPI)



Financial Perspective

- “How do we look to shareholders?”
- Must continually attempt to increase profits

1) Increase revenues;
2) Control costs;
3) Increase productivity

Financial Perspective

- **Common KPIs:** *sales revenue growth, sales margin, gross margin percentage, capital turnover, ROI, Residual income, earnings per share*

Customer Perspective

- "How do customers see us?"
- Customers concerned with four product/service attributes:
  - Price
  - Quality
  - Sales service
  - Delivery time

Customer Perspective

- **Common KPIs:** *average customer satisfaction rating, percentage of market share, increase in the number of customers, number of repeat customers, rate of on-time deliveries*

Internal Business Perspective

- "At what business processes must we excel to satisfy customer and financial objectives?"
- Three factors:
  - Innovation
  - Operations
  - Post-sales support

Internal Business Perspective

- **Common KPIs:** *number of new products developed, new product development time, defect rate, manufacturing lead time, yield rate, number of warranty claims received, average customer wait time for customer service, average repair time*

Learning and Growth Perspective

- “Can we continue to improve and create value?”
- Three factors:
  - Employee capabilities
  - Information system capabilities
  - Company’s “climate for action”

Learning and Growth Perspective

- **Common KPIs:** *hours of employee training, employee satisfaction, employee turnover, percentage of processes with real-time feedback, percentage of employees with access to real-time data, number of employee suggestions implemented, percentage of employees involved in problem solving teams, employee rating of communication and corporate culture*

End of Chapter 10