CHAPTER

2

Introduction to Cost Management Systems

LEARNING OBJECTIVES

After completing this chapter, you should be able to answer the following questions:

1. Why do organizations have management control systems?
2. What is a cost management system and what are its primary goals?
3. What major factors influence the design of a cost management system?
4. Why should one consider organizational form, structure, and culture when designing a cost management system?
5. How do the internal and external operating environments impact the cost management system?
6. What three groups of elements affect the design of a cost management system and how are these elements used?
7. How is gap analysis used in the implementation of a cost management system?

INTRODUCING

Motorola, Inc.

http://www.mot.com

When times are tough, some people eat their seed corn. Motorola managers are planting theirs.

Despite recent struggles in businesses such as cellular phones and satellites, this big electronics company is boosting efforts in basic research that might not pay off for several years. Motorola's initiative is not yet in the league of such companies as International Business Machines Corp. or Lucent Technologies, but it is taking the company in some unusual directions.

The biggest breakthrough so far has been organizational. This past November, Motorola combined separate research groups for wireless communications, chips, and other products into a single corporate entity called Motorola Labs. The goal was to reduce duplication, spend funds more efficiently, and develop ideas faster.

Surprisingly, the move didn't mean cost savings; after looking at other big companies' research arms, Motorola officials concluded they were spending too little. "We discovered there's a relatively steady proportion spent on research: about one percent of prior-year revenues. We were a little below that," recalls Dennis Robertson, Motorola's chief technology officer.

Motorola began loosening the spending spigot. The one percent goal, with Motorola's 1998 revenue of $30 billion, would be $300 million a year. While Robertson didn't give precise figures, he said Motorola is getting close to the target.

SOURCE: Quentin Hardy, "Business Brief—Motorola, Inc.: Wireless Divisions to Add 1,400 Workers by Year-End," *The Wall Street Journal* (June 17, 1999), p. B6. Permission conveyed through the Copyright Clearance Center.

There is an old adage that declares "you have to spend money to make money." The adage expresses the idea that revenues cannot be produced without first incurring costs. Motorola managers have recognized the necessity of incurring costs to realize revenues by increasing expenditures on research and development with the expectation that an increase in revenues will follow. However, the managers have also recognized that costs must be contained for the relationships among costs, revenues, and profits to be satisfactory—a large amount of costs cannot be incurred to produce a modest amount of revenue. Motorola managers acted to contain costs when they created Motorola Labs "to spend funds more efficiently. . . ."

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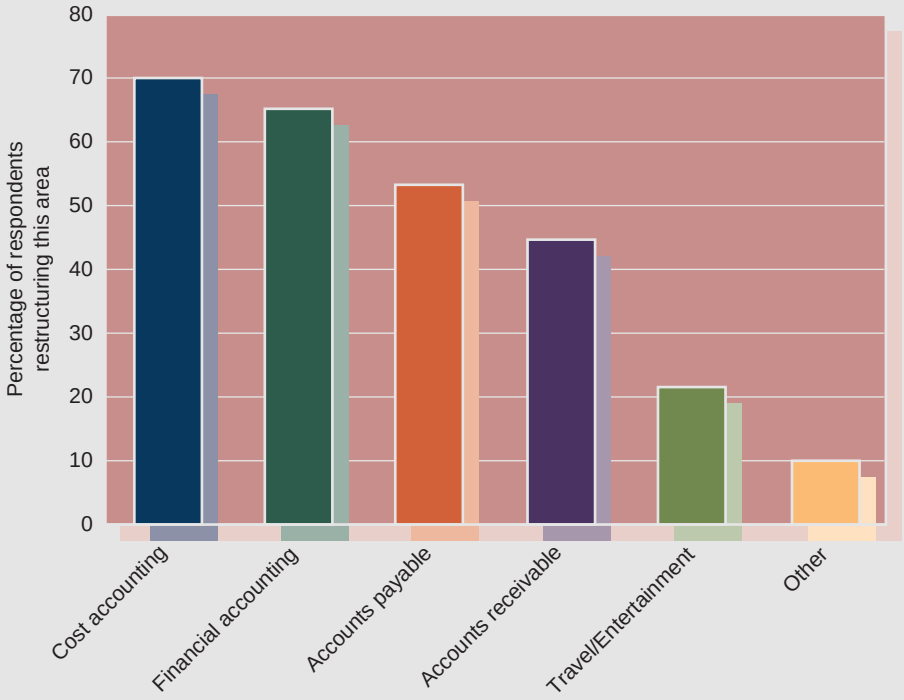
A fundamental concern managers have in executing their duties is how their actions affect costs incurred, and benefits received, by their employers. Ultimately, most models applied by managers reduce to a comparative analysis of costs versus benefits. Financial experts, especially accountants, bear the primary responsibility for providing managers with information about measurements of costs and benefits.

In Chapter 1, the differences and similarities among the disciplines of financial, management, and cost accounting were discussed. Cost accounting was shown to play a role in both internal and external reporting. Also, the linkages between cost accounting and the specific managerial functions of planning, controlling, decision making, and performance evaluation were shown.

Cost accounting practices are increasingly being scrutinized by financial experts who hope to improve the relevance of the information they provide to managers and external parties. As shown in Exhibit 2–1, cost accounting has recently become the top financial function target for reengineering according to a 1998 membership survey of the Institute of Management Accountants. Because a given cost accounting system is typically cast in two separate, often competing, roles, and because the financial reporting role often dominates the management role, cost accounting information is frequently found to be of limited value to managers.

EXHIBIT 2–1

Which Finance Functions Are You Reengineering?



SOURCE: Staff, "Cost Accounting Systems Become Top Target of Reengineering in the Finance Function," Cost Management Update, a publication of the Cost Management Group of IMA (July/August), p. 3. Copyright by Institute of Management Accountants, Montvale, N.J.

The problem is that the dictates of financial reporting are very different from those of strategic cost management. For financial reporting purposes, cost information can be highly aggregated, historical, and must be consistent with GAAP. In contrast, the cost information required for management purposes may be segmented, current, and relevant for a particular purpose. Consequently, the cost information provided by the financial reporting system is of little value for cost management purposes.[1]

1

Why do organizations have management control systems?

In redesigning cost accounting systems, the general internal use of information and the specific application of information to manage costs are getting increased attention. This chapter discusses concepts and approaches to designing information systems that support the internal use of accounting and other information to manage costs. The perspective taken is that a cost management system is an integral part of an organization's overall management information and control systems. An emphasis is placed on the main factors that determine the structure and success of a cost management system, the factors that influence the design of such a system, and the elements that comprise the system.

The next section provides a broad introduction to management information and control systems. It offers a foundation and context for understanding the roles of the cost management system.

INTRODUCTION TO MANAGEMENT INFORMATION AND CONTROL SYSTEMS

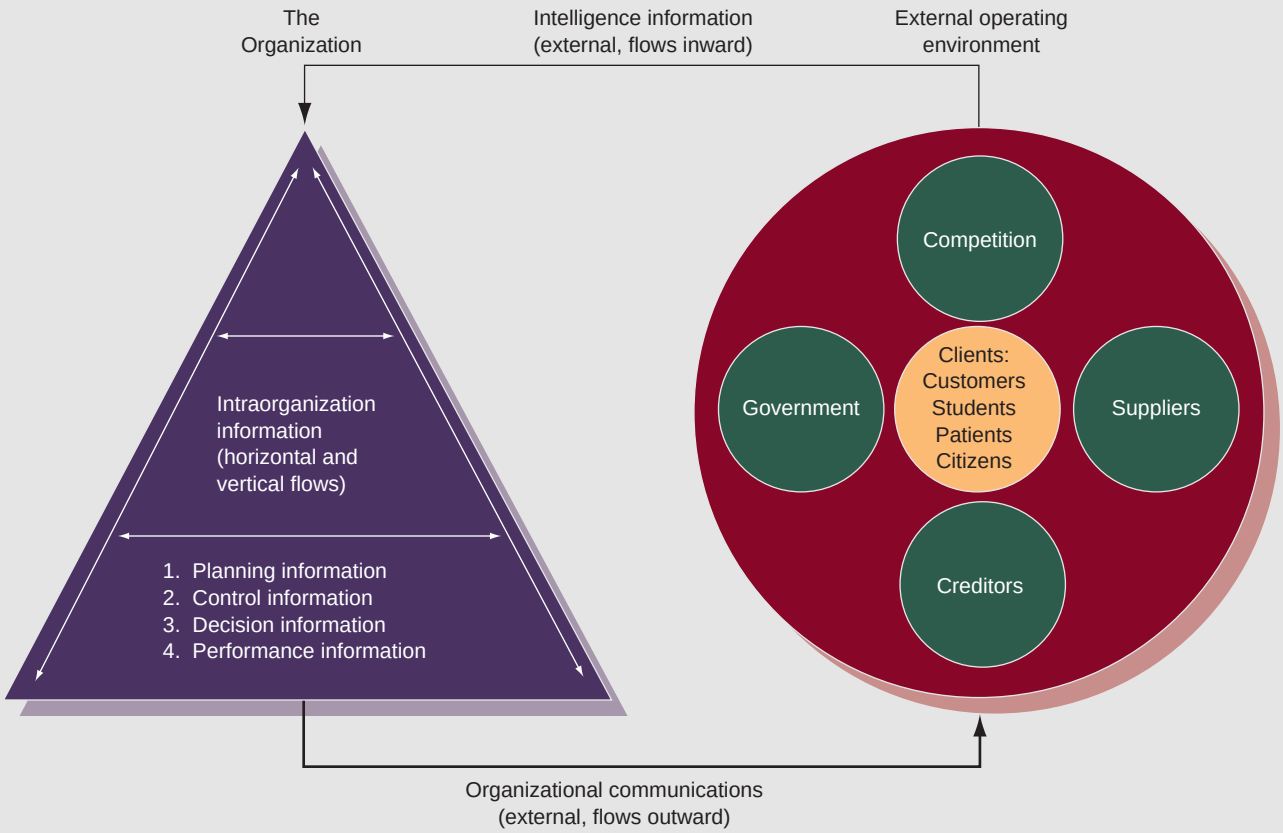
2

What is a cost management system and what are its primary goals?

A cost management system is part of an overall management information and control system. Exhibit 2–2 illustrates the types of information needed in an organization

[1] Robin Cooper and Regine Slagmulder, "Strategic Cost Management: Introduction to Enterprise-wide Cost Management," *Management Accounting* (August 1998), p. 17.

Information flows both to and from an organization. Once inside the organization, it flows both vertically and horizontally.



SOURCE (adapted): James H. Donnelly, Jr., James L. Gibson, and John M. Ivancevich, *Fundamentals of Management* (Plano, TX: Business Publications, Inc., 1987), p. 565.

EXHIBIT 2–2

Information Flows and Types of Information

for individuals to perform their managerial functions. The exhibit also demonstrates the demand from external parties for information from the firm. A **management information system (MIS)** is a structure of interrelated elements that collects, organizes, and communicates data to managers so they may plan, control, make decisions, and evaluate performance. A MIS emphasizes satisfying internal demands for information rather than external demands. In most modern organizations, the MIS is computerized for ease of access to information, reliability of input and processing, and ability to simulate outcomes of alternative situations.

management information system (MIS)

As Exhibit 2–2 illustrates, the accounting personnel are charged with the task of providing information to interested external parties such as creditors, the government (for mandatory reporting to the Internal Revenue Service, Securities and Exchange Commission, and other regulatory bodies), and suppliers, in regard to payments and purchases. External intelligence is also gathered from these parties as well as from competitors. Managers use internally and externally generated information to govern their organizations.

Because one of the managerial functions requiring information is control, the MIS is part of the **management control system (MCS)**. As illustrated in Exhibit 2–3, a control system has the following four primary components:

management control system (MCS)

1. A *detector* or *sensor*, which is a measuring device that identifies what is actually happening in the process being controlled.
2. An *assessor*, which is a device for determining the significance of what is happening. Usually, significance is assessed by comparing the information on what is actually happening with some standard or expectation of what should be happening.
3. An *effector*, which is a device that alters behavior if the assessor indicates the need for doing so. This device is often called "feedback."
4. A *communications network*, which transmits information between the detector and the assessor and between the assessor and the effector.[2]

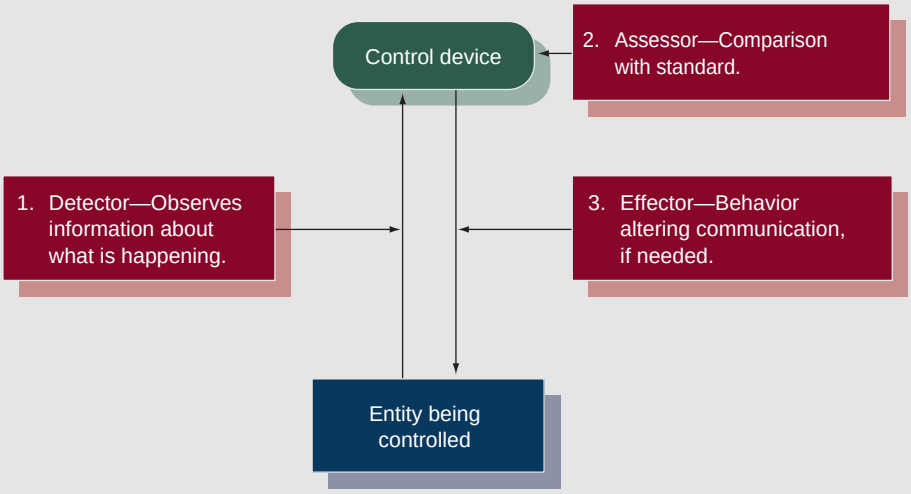
It is through these system elements that information about actual organizational ocurrences is gathered, comparisons are made against plans, changes are effected when necessary, and communications take place among appropriate parties. For example, source documents (detectors) gather information about sales that is compared to the budgets (assessor). If sales revenues are below budget, management may issue (communications network) a variance report (effector) to encourage the sales staff to increase volume.

However, even given the same information, different managers may interpret it differently and respond accordingly. In this respect, a management control system is not merely mechanical, it requires judgment. Thus, a management control system may be referred to as a black box: an operation whose exact nature cannot be observed.[3] Regardless of the specific actions taken, a management control system should serve to guide organizations in designing and implementing strategies such that organizational goals and objectives are achieved.

Most businesses have a variety of control systems in place. For example, a control system may reflect a set of procedures for screening potential suppliers or employees, a set of criteria to evaluate potential and existing investments, or a statistical control process to monitor and evaluate quality. Another important part of the management information and control systems is the cost management system.

EXHIBIT 2–3

Elements of a Control System



SOURCE: Robert N. Anthony and Vijay Govindarajan, *Management Control Systems* (Chicago: Irwin, 1995), p. 4. Reprinted by permission of The McGraw-Hill Companies.

[2] Robert N. Anthony and Vijay Govindarajan, *Management Control Systems* (Chicago: Irwin, 1995), p. 3.
[3] Ibid., p. 6.

DEFINING A COST MANAGEMENT SYSTEM

3

What major factors influence the design of a cost management system?

cost management system (CMS)

A **cost management system (CMS)** consists of a set of formal methods developed for planning and controlling an organization's cost-generating activities relative to its short-term objectives and long-term strategies. Business entities face two major challenges: achieving profitability in the short run and maintaining a competitive position in the long run. An effective cost management system must provide managers the information needed to meet both of these challenges.

Exhibit 2–4 summarizes the differences in the information requirements for organizational success in the short run and long run. The short-run requirement is that revenues exceed costs—the organization must make efficient use of its resources relative to the revenues that are generated. Specific cost information is needed and must be delivered in a timely fashion to an individual who is in a position to influence the cost. Short-run information requirements are often described as relating to operational management.

Meeting the long-run objective, survival, depends on acquiring the right inputs from the right suppliers, selling the right mix of products to the right customers, and using the most appropriate channels of distribution. These decisions require only periodic information that is reasonably accurate. Long-run information requirements are often described as relating to strategic management.

The information generated from the CMS should benefit all functional areas of the entity. Thus, the system should integrate the areas shown in Exhibit 2–5 and should "improve the quality, content, relevance, and timing of cost information that managers use for short-term and long-term decision making."[4]

cost driver

Crossing all functional areas, a cost management system can be viewed as having six primary goals: (1) develop reasonably accurate product costs, especially through the use of **cost drivers** (activities that have direct cause-and-effect relationships with costs); (2) assess product/service life-cycle performance; (3) improve understanding of processes and activities; (4) control costs; (5) measure performance; and (6) allow the pursuit of organizational strategies.

First and foremost, a CMS should provide the means to develop accurate product or service costs. This requires that the system be designed to use cost driver information to trace costs to products and services. The system does not have to be the most accurate, but it should match benefits of additional accuracy with expenses of achieving additional accuracy. Traceability has been made easier by improved information technology, including bar coding.

EXHIBIT 2–4

Dual Focus of Cost Management System

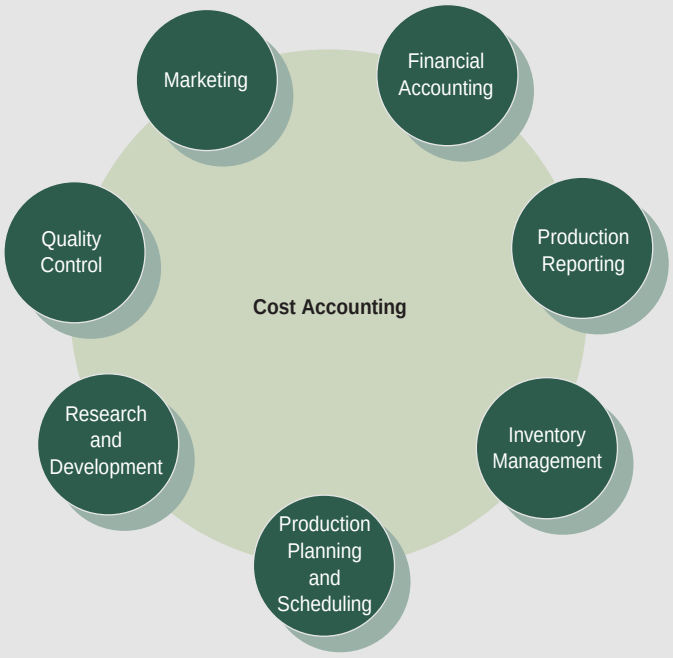
	Short Run	Long Run
Objective	Organizational efficiency	Survival
Focus	Specific costs: • manufacturing • service • marketing • administration	Cost categories: • customers • suppliers • products • distribution channels
Important characteristics of information	Timely Accurate Highly specific Short-term	Periodic Reasonably accurate Broad focus Long-term

SOURCE: Adapted from: Robin Cooper and Regine Slagmulder, "Operational Improvement and Strategic Costing," *Management Accounting* (September 1998), pp. 12–13.

[4] Steven C. Schnoebelen, "Integrating an Advanced Cost Management System into Operating Systems (Part 2)," *Journal of Cost Management* (Spring 1993), p. 60.

EXHIBIT 2–5

An Integrated Cost Management System



SOURCE: Robert McIlhattan, "The Path to Total Cost Management," *Emerging Practices in Cost Management*, Barry J. Brinker, ed. (Boston, Warren, Gorham & Lamont, 1990), p. 178. Reprinted with permission of RIA.

The product/service costs generated by the cost management system are the input to managerial processes. These costs are used to plan, prepare financial statements, assess individual product/service profitability and period profitability, establish prices for cost-plus contracts, and create a basis for performance measurements. If the input costs generated by the CMS are not reasonably accurate, the output of the preceding processes will be inappropriate for control and decision-making purposes.

Although product/service profitability may be calculated periodically as a requirement for external reporting, the financial accounting system does not reflect life-cycle information. The cost management system should provide information about the life-cycle performance of a product or service. Without life-cycle information, managers will not have a basis to relate costs incurred in one stage of the life cycle to costs and profitability of other stages. For example, managers may not recognize that strong investment in the development and design stage could provide significant rewards in later stages by minimizing costs of engineering changes and potential quality-related costs. Further, if development/design cost is not traced to the related product or service, managers may not be able to recognize organizational investment "disasters."

A cost management system should help managers comprehend business processes and organizational activities. Only by understanding how an activity is accomplished and the reasons for cost incurrence can managers make cost-beneficial improvements in the production and processing systems. Managers of a company desiring to implement new technology or production systems must recognize what costs and benefits will flow from such actions; these assessments can be made only if the managers understand how the processes and activities will differ after the change.

The original purpose of a cost accounting system was to control costs. This is still an important function of cost management systems given the current global competitive environment. A cost can be controlled only when the related activity

Financial accounting requires that research and development costs be expensed when incurred. However, because these costs are essential to any resulting product, a cost management system would trace them to that product as part of life-cycle costing.

is monitored, the cost driver is known, and the information is available. For example, if units are spoiled in a process, the CMS should provide information on spoilage quantity and cost rather than "burying" that information in other cost categories. Additionally, the cost management system should allow managers to understand the process so that the underlying causes of the spoilage can be determined. Armed with this information, managers can compare the costs of fixing the process with the benefits to be provided.

The information generated from a cost management system should help managers measure and evaluate performance. The measurements may be used to evaluate human or equipment performance or to evaluate future investment opportunities. As indicated in the accompanying News Note, one of the critical decisions managers must make involves trade-offs between long-run strategic benefits and short-run operational benefits.

GENERAL BUSINESS  **NEWS NOTE**

A Little Pain Now for a (Potential) Big Gain Later

Amazon.com, Inc., posted a $138 million net loss for the second quarter of 1999 and warned that future results would be affected by heavy spending on bigger warehouses. It followed this up with the assertion that three new strategic initiatives—on-line auctions, toy sales, and electronic sales—were off to brisk starts.

The latest results mark yet another quarter in which the Seattle-based on-line merchant has pursued brand building and rapid revenue growth at the expense of near-term profitability. For the quarter, revenue nearly tripled to $314.4 million from the year-earlier $116 million. Amazon noted that total customer accounts grew to 10.7 million as of June 30, up 2.3 million from the March 31 tally. However, even with the huge growth in revenues, the loss posted for the second quarter exceeded the total revenues generated in the same quarter for the prior year.

In a conference call with investors, CEO Jeff Bezos cautioned: "We're new to these businesses. I can guarantee you we won't operate as efficiently in the near term as we would like." That means ordering more inventory than needed and building warehouses before they are fully needed. That can affect profit margins, according to Bezos, but he defended it as the right choice for Amazon's long-term growth.

SOURCE: George Anders, "Amazon Posts $138 Million Loss but Sales Surge," *The Wall Street Journal* (July 22, 1999), p. B6. Permission conveyed through the Copyright Clearance Center.

Lastly, to maintain a competitive position in an industry, a firm must generate the information necessary to define and implement its organizational strategies. As discussed in Chapter 1, strategy is the link between an organization's goals and objectives and the operational activities executed by the organization. In the current global market, firms must be certain that such a linkage exists. Information provided by a CMS enables managers to perform strategic analyses on issues such as determining core competencies and organizational constraints from a cost-benefit perspective and assessing the positive and negative financial and nonfinancial factors of strategic and operational plans. The News Note about Amazon.com illustrates how managers must consider trade-offs between the benefits of incurring costs for short-term and long-term benefits. Thus, the cost management system is essential to the generation of information for effective strategic resource management.

Because the world of business competition is dynamic, and creative managers are constantly devising new business practices and innovative approaches to competition, a cost management system must be dynamic. The following section discusses the issues affecting the design and ongoing development of cost management systems in a continually evolving organization.

DESIGNING A COST MANAGEMENT SYSTEM

In designing and revising a cost management system, managers and accountants must be attuned to the unique characteristics of their firms. A generic cost management system cannot be "pulled off the shelf" and applied to any organization. Each firm warrants a cost management system that is tailored to its situation. However, some overriding factors are important in designing a cost management system. These factors are depicted in Exhibit 2–6 and are described in this section.

Organizational Form, Structure, and Culture

4

Why should one consider organizational form, structure, and culture when designing a cost management system?

organizational form

An entity's legal nature reflects its **organizational form**. Selecting the organizational form is one of the most important decisions business owners make. This choice affects the costs of raising capital, operating the business (including taxation issues), and, possibly, litigating. The available organizational form alternatives have increased remarkably in recent years.

The most popular form for large, publicly traded businesses is the corporation. However, smaller businesses or cooperative ventures between large businesses also use general partnerships, limited partnerships, limited liability partnerships (LLPs), and limited liability companies (LLCs). These latter two forms have recently emerged due to new federal, state, and international legislation. Both the LLP and LLC provide more protection for a partner's personal assets than a general partnership in the event of litigation that leads to firm liquidation. Accordingly, LLPs and LLCs may offer better control for legal costs than general partnerships.

Organizational form also helps determine who has the statutory authority to make decisions for the firm. In a general partnership, all partners are allowed to make business decisions as a mere incidence of ownership. Alternatively, in a corporation, individual shareholders must act through a board of directors who, in turn, typically rely on professional managers. This ability to "centralize" authority is regarded as one of the primary advantages of the corporate organizational form and, to some extent, is available in limited partnerships, LLPs, and LLCs.

Once the organizational form is selected, top managers are responsible for creating a structure that is best suited to achieving the firm's goals and objectives. Organizational structure, introduced in Chapter 1, refers to how authority and responsibility for decision making are distributed in the entity.[5] Top managers make

[5] Organizational structure is discussed in detail in Chapter 1 and later in this chapter.

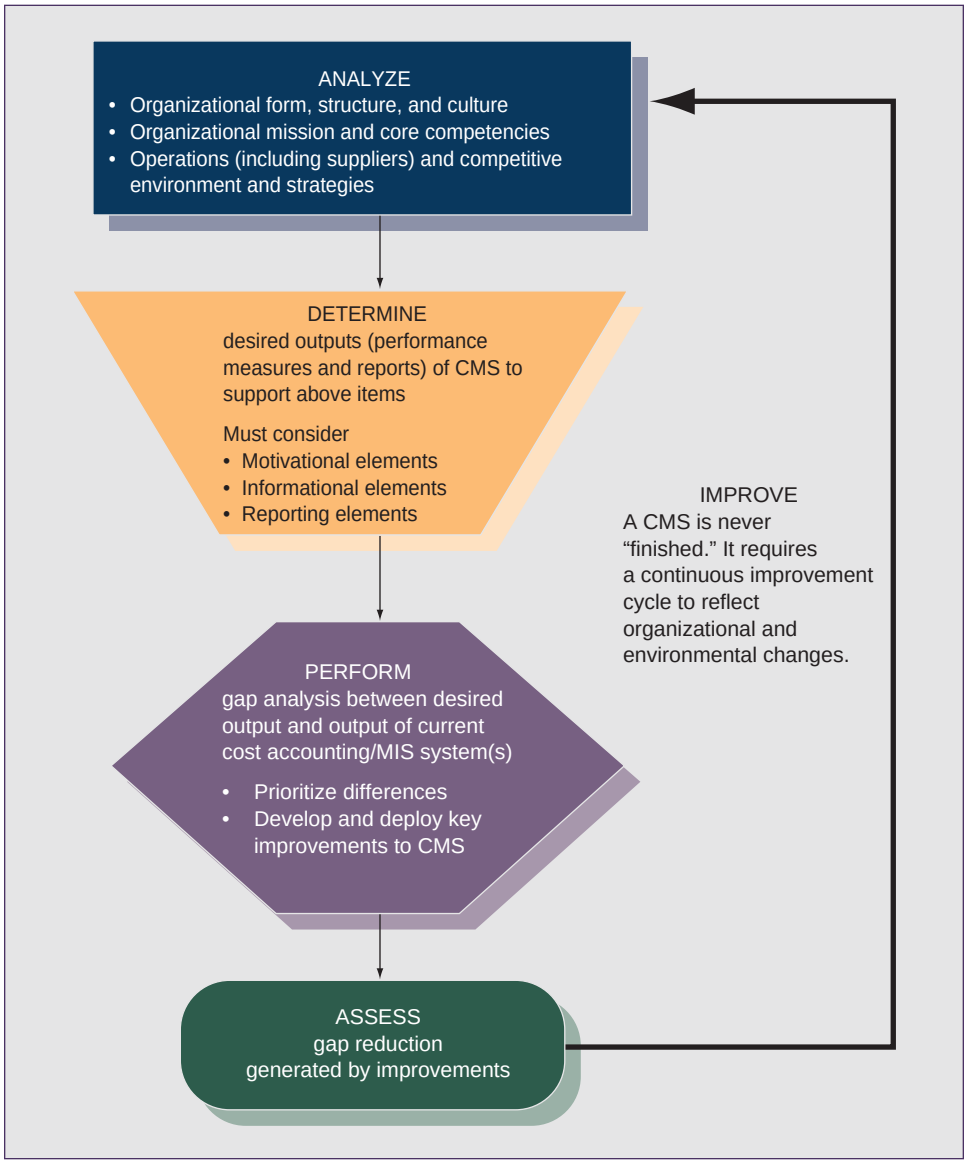


EXHIBIT 2–6

Design of a Cost Management System

judgments about how to organize subunits and the extent to which authority will be decentralized. Although the current competitive environment is conducive to strong decentralization, top managers usually retain authority over operations that can be performed more economically centrally because of economies of scale. For example, financing, personnel, and certain accounting functions may be maintained "at headquarters" rather than being delegated to organizational subunits.

In designing the organizational structure, top managers normally will try to group subunits either geographically or by similar missions or natural product clusters. These aggregation processes provide effective cost management because of proximity or similarity of the units under a single manager's control.

For example, relative to similarity of mission, Chapter 1 introduced three generic missions (build, harvest, and hold) for business subunits. Subunits pursuing a "build" mission are using more cash than they are generating. Such subunits are investing cash with an expectation of future returns. At the other extreme, subunits pursuing a "harvest" mission are expected to generate excess cash and have a much shorter investment horizon. If one manager were responsible for subunits that represented both build and harvest missions, it would be difficult for top management

to design proper incentives and performance evaluation measures for the subunit manager or to evaluate his or her cost management effectiveness and efficiency. Different cost management tools are used for different subunit missions. If a specific cost management tool is to be applied to an entire subunit but there is a mix of missions across that subunit's components, there is greater potential for making poor decisions.

The extent to which managers decentralize also determines who will be held accountable for cost management and organizational control. An information system must provide relevant and timely information to persons who are making decisions that have cost control implications, and a control system must be in place to evaluate the quality of those decisions.

An entity's culture also plays an important role in setting up a cost management system. Organizational culture refers to the underlying set of assumptions about the entity and the goals, processes, practices, and values that are shared by its members. To illustrate the effect of organizational culture on the cost management system, consider AT&T prior to its divestiture. It was an organization characterized by "bureaucracy, centralized control, nepotism, a welfare mentality in which workers were 'taken care of,' strong socialization processes, [and] little concern for efficiency. . . ."[6] In such a culture, the requirements of a cost management system would have been limited because few individuals needed information, decisions were made at the top of the organization, and cost control was not a consideration because costs were passed on to customers through the rate structure. After divestiture, the company's culture changed to embrace decentralized decision making, cost efficiency, and individual responsibility and accountability. Supporting such a changed culture requires different types, quantities, and distributions of cost management information.

http://www.att.com

The values-based aspects of organizational culture are also extremely important in assessing the cost management system. For example, one part of Birmingham Steel Corporation's mission statement is "to be the lowest-cost, highest-quality manufacturer of steel products in the markets served."[7] Without a well designed cost management system, Birmingham Steel could not evaluate how well it is progressing toward the accomplishment of that mission. Thus, the cost management system is instrumental in providing a foundation for companies with an organizational culture that emphasizes total quality management.

http://www.birsteel.com

Organizational Mission and Core Competencies

Knowledge of the organization's mission and core competencies is a key consideration in the design of a cost management system. The mission provides a long-term goal toward which the organization wishes to move. If the mission that the entity wishes to achieve is unknown, it does not matter what information is generated by the cost management system—or any other information system!

As discussed in Chapter 1, in pursuing the business mission, companies may avoid or confront competition. For example, companies may try to avoid competition by attempting to be more adept in some way than other entities. The generic paths a company may take to avoid competition include differentiation and cost leadership.[8]

In the current global environment, it is often difficult to maintain a competitive advantage under either a differentiation or cost leadership strategy. Competitors are becoming skilled at duplicating the specific competencies that gave rise to the original competitive advantage. For many companies, the key to success in the future may be to confront competition by identifying and exploiting temporary

[6] Thomas S. Bateman and Scott A. Snell, *Management Building Competitive Advantage* (Chicago: Irwin, 1996), p. 268.
[7] Birmingham Steel Corporation, *1995 Annual Report*, p. 1.
[8] Michael Porter, *Competitive Advantage: Creating and Sustaining Superior Performance* (New York: Free Press, 1985), p. 17.

opportunities for advantage. In a confrontation strategy, companies "still try to differentiate their products by introducing new features, or try to develop a price leadership position by dropping prices, . . . [but, the companies] assume that their competitors will rapidly bring out products that are equivalent and match any price changes."[9] Although it may be necessary, a confrontation strategy is, by its very nature, less profitable for companies than differentiation or cost leadership.

Exhibit 2–7 shows how the strategy of the firm, together with the life-cycle stages of products, determines what a firm must do well to be successful at any point in time. This exhibit illustrates how the information requirements of managers change over time as the life cycle evolves and, thus, are dependent upon the strategy being pursued.

The globalization of markets has created, in many industries, competition among equals. Today, many firms are capable of delivering products and services that are

EXHIBIT 2–7

Strategy and Life-Cycle Stage Determine Critical Organizational Activities

Product Strategy	LIFE-CYCLE STAGE			
	Introduction	**Growth**	**Maturity**	**Decline**
Differentiation				
	Product R&D and design are critical. Establish presence in market and product distinctiveness.	Strengthen distinctive product competencies and formalize product support structure. Marketing is critical.	Exploit competitive advantage. Maintain heavy product marketing emphasis.	Divest/spin off operations early. Relate service to new products.
Cost Leadership				
	Process R&D and design are critical. Manage high costs present with low volume.	Quickly determine product cost structure and viability. Establish or increase market share and/or distribution channels.	Make no major product changes. Standardization is critical.	Manage, reduce, and control costs. Reduce capacity and evaluate low-cost alternatives (e.g., make, outsource, shutdown).
Confrontation				
	Minimize product development time. Design to facilitate process flexibility.	Establish market leadership and reliability. Provide distribution for quick delivery.	Refine product manufacturability and process reliability. Increase and innovate distribution efforts.	Develop existing distribution network for new products. Emphasize exceptional service options.

SOURCE: B. Douglas Clinton and Aaron H. Graves, "Product Value Analysis: Strategic Analysis Over the Entire Product Life Cycle," *Journal of Cost Management* (May/June 1999), p. 23. © 1999 Warren Gorham & Lamont. Reprinted with permission of RIA.

[9] Robin Cooper, *When Lean Enterprises Collide* (Boston: Harvard Business School Press, 1995), p. 11.

qualitatively and functionally equivalent. Without being able to distinguish one competitor's products from those of another based on quality or functionality, the consumer's focus switches to price. In turn, price-based competition changes the internal focus to costs. One industry currently particularly affected by price-based competition is communication. The accompanying News Note illustrates the shift to an intensive internal focus on costs.

http://www.ingersoll-rand.com
http://www.csfb.com

Clarification of mission can be served by identifying the organization's core competencies, which are dimensions of operations that are key to an organization's survival. Most organizations would consider timeliness, quality, customer service, efficiency and cost control, and responsiveness to change as five critical competencies. Once managers have gained consensus on an entity's core competencies, the cost management system can be designed to (1) gather information related to measurement of those items and (2) generate output about those competencies in forms that are useful to interested parties.

Competitive Environment and Strategies

5

How do the internal and external operating environments impact the cost management system?

cost structure

Once the organizational "big picture" has been established, managers can assess internal specifics related to the design of a cost management system. A primary consideration is the firm's cost structure. Traditionally, **cost structure** has been defined in terms of how costs change relative to changes in production or sales volume.

As firms have become increasingly dependent on automated technology, it has become more difficult to control costs through sales and production. Many technology costs are associated with plant, equipment, and infrastructure investments that provide the capacity to produce goods and services. Higher proportions of these costs exist in industries that depend on technology for competing on the bases of quality and price. Manufacturing and service firms have aggressively adopted advanced technology. The data shown in Exhibit 2–8 reveal the effects of technology on the efficiency of particular industries.[10] Sales per employee traditionally has been viewed as a measure of organizational productivity. Technology acquisition and employee training are now regarded as principal sources of productivity improvement.

NEWS NOTE GENERAL BUSINESS

How Do You Raise Profits without Raising Prices?

At a town meeting with employees early in 1999, AT&T Corp.'s chief financial officer, Daniel E. Somers, was asked if the company was through with its battle to cut costs. "No, we're not," Somers recalls answering. "We think of costs the way we used to think of price. It's something we're constantly working on."

It's not just high-tech companies fighting this battle. Ingersoll-Rand Co., of Woodcliff Lake, N.J., saw its average selling price for products from door locks to industrial pumps increase just under 1 percent in 1998, after no increase in 1997. "In all of our business plans, we really don't count on price to increase our profits," said David W. Devonshire, Ingersoll-Rand's chief financial officer. "We really rely on what we're doing on the cost side."

"Raising prices was just an easier way of making money than all of the other things you could think of," says Roseanne M. Cahn, economist at Credit Suisse First Boston. "This is now getting into manager's psyches, that you do not have pricing power and guess what, you have to do something else to make money."

SOURCE: Darren McDermott, "Cost-Consciousness Beats 'Pricing Power,' " *The Wall Street Journal* (May 3, 1999), p. A1. Permission conveyed through the Copyright Clearance Center.

[10] These data are not adjusted for inflation.

EXHIBIT 2–8

Average Sales (in thousands) per Employee by Industry

Industry	YEAR 1978	1998	Percentage Increase
Agriculture and forestry	$ 37	$100	270%
Air transportation	67	166	248%
Computers	47	259	551%
Grocery stores	85	143	168%
Hotels and motels	21	51	243%
Mining	80	102	128%
Petroleum refining	265	710	268%
Pharmaceuticals	66	270	409%
Plastics	59	141	239%
Restaurants	40	44	110%
Steel works	85	327	385%
Telephone and telegraph	68	208	306%
Textiles	54	127	235%
Trucking	66	157	238%

SOURCE: COMPUSTAT (an electronic financial data source published by Standard and Poors).

The cost management implications of this shift in cost structure are significant. Most importantly, because most technology costs are not susceptible to short-run control, cost management efforts are increasingly directed toward the longer term. Also, managing costs is increasingly a matter of capacity management: high capacity utilization (if accompanied by high sales volumes) allows a firm to reduce its per-unit costs in pursuing a cost leadership strategy.

A second implication of the changing cost structure is the firm's flexibility to respond to changing short-term conditions. As the proportion of costs relating to technology investment increases, a firm has less flexibility to take short-term actions that would reduce costs with no long-term adverse consequences.[11]

In pursuing either a differentiation or cost leadership strategy, the management of high technology costs requires beating competitors to the market with new products. The importance of timeliness is illustrated in the following quote:

> *There are numerous innovations which have maximized a market window to achieve phenomenal success—Polaroid is a case in point. Equally, there have been numerous high-quality products that arrived too late, either because the market had been acquired by a competitor, or because the need no longer existed. By the time Head began to produce oversized tennis racquets, Prince had cornered the market.*[12]

http://www.polaroid.com

Being first to market may allow a company to set a price that leads to a large market share, which, in turn, may lead to an industry position of cost leader. Alternatively, the leading edge company may set a product price that provides a substantial per-unit profit for all sales generated before competitors are able to offer alternative products. Rapid time-to-market requires fast development of new products and services.

Time-to-market is critical in the high-tech industry because profitability depends on selling an adequate number of units at an acceptable price. Because the price per unit has been falling steadily for years, getting a new product to the market late can be disastrous. The risk is described by Richard O'Brien, an economist for Hewlett-Packard in the following quote:[13]

http://hewlett-packard.com

[11] Many of the new fixed costs would be regarded as "committed" rather than "discretionary." See Chapter 15 for additional details.
[12] Simon Cooper, "There Is No Point Putting a Wind Spoiler on the Back of a Turtle" *CMA Magazine* (February 1996), p. 4.
[13] Darren McDermott, "Cost Consciousness Beats 'Pricing Power,' " *The Wall Street Journal* (May 3, 1999), p. A1.

"Product life cycles keep shrinking. If you can't get to market on time, you will have missed your chance because the price point will have moved."

Reducing time-to-market is one way a company can cut costs. Exhibit 2–9 lists other ways, most of which are associated with the earlier stages of the product life cycle. Thus, as has been previously mentioned, product profitability is largely determined by an effective design and development process.

Getting products to market quickly and profitably requires a compromise between the advantages of product innovation and superior product design. Rapid time-to-market may mean that a firm incurs costs associated with design flaws (such as the costs of engineering changes) that could have been avoided if more time had been allowed for the product's development. Also, if a flawed product is marketed, costs will likely be incurred for returns, warranty work, or customer "bad will" regarding the firm's reputation for product quality.

Time-to-market is important because of the competitive advantages it offers and because of compressed product life cycles. Both of these factors have a significant effect on cost management systems, as discussed in the accompanying News Note.

http://www.honda.com

Another aspect of an organization's operating environment is supplier relations. Many companies that have formed strategic alliances with suppliers have found such relationships to be effective cost control mechanisms. For example, by involving suppliers early in the design and development stage of new products, a better design for manufacturability will be achieved and the likelihood of meeting cost targets will be improved. Additionally, if information systems of customers and suppliers are linked electronically, the capabilities and functions of systems must be considered in designing the CMS.

Another operating environment consideration in the design of a cost management system is the need to integrate the organization's current information systems. The "feeder" systems (such as payroll, inventory valuation, budgeting, and costing) that are in place should be evaluated to answer the following questions:

- What data are being gathered and in what form?
- What outputs are being generated and in what form?
- How do the current systems interact with one another and how effective are those interactions?

EXHIBIT 2–9

Actions to Substantially Reduce Product Costs

- Develop new production processes
- Capture learning curve and experience effects
- Increase capacity utilization
- Use focused factory arrangement
  - — reduces coordination costs
- Design for manufacturability
  - — reduces assembly time
  - — reduces training costs
  - — reduces warranty costs
  - — reduces required number of spare parts
- Design for logistical support
- Design for reliability
- Design for maintainability
- Adopt advanced manufacturing technologies
  - — reduces inventory levels
  - — reduces required production floor space
  - — reduces defects, rework and quality costs

SOURCE: Adapted from Gerald I. Susman, "Product Life Cycle Management," *Journal of Cost Management* (Summer 1989), pp. 8–22. © 1999 Warren Gorham & Lamont. Reprinted with permission of RIA.

INTERNATIONAL  **NEWS NOTE**

Can a David Survive Among the Goliaths?

Honda Motor Co.'s ability to shave more savings from its manufacturing operations will be one of the keys to the company's drive to prove that an automaker doesn't have to be huge to survive, says the company's president.

Honda's go-it-alone strategy challenges industry wisdom that bigger is better and that a manufacturing scale of at least four million vehicles a year is needed to defray the cost of developing technologies such as environmentally friendly engines. Instead, Honda wants to remain small but double its efficiency level.

"Who says you have to be a member of the four million club to survive?" asks Honda's president, Hiroyuki Yoshino. "If you spend small, then you don't have to sell a lot to be profitable."

Yoshino says staying ahead of the competition to come up with cleaner gasoline engines and zero-emission "green car" power sources, such as fuel cells, is vital to Honda's survival. But equally important, he says, will be the ability to design cars and standardize manufacturing tools to eliminate costly retooling for model changeovers and new-product launches, and thus give Honda the agility and flexibility to meet sudden shifts in consumer tastes.

The company is experimenting with new manufacturing methods at its Canadian assembly line for minivans and introducing some of those methods at its facilities in Japan. In the next several years, Honda "should become capable of halving the time and cost for a new-model introduction," asserts Masaki Iwai, Honda's senior managing director, which he believes would lower the bar for turning a profit.

SOURCE: Norihiko Shirouzu, "Honda Bucks Industry Wisdom, Aiming to Be Small and Efficient," *The Wall Street Journal* (July 9, 1999), p. A12. Permission conveyed through the Copyright Clearance Center.

- Is the current chart of accounts appropriate for the cost management information desired?
- What significant information issues (such as yield, spoilage, and cycle time) are not currently being addressed by the information system, and could those issues be integrated into the current feeder systems?

With knowledge of the preceding information, management must analyze the cost-benefit trade-offs that relate to the design of the cost management system. As the costs of gathering, processing, and communicating information decrease, or as the quantity and intensity of competition increase, more sophisticated cost management systems are required. Additionally, as companies focus on customer satisfaction and expand their product or service offerings, more sophisticated cost management systems are needed. In these conditions, the generation of "better" cost information is essential to long-run organizational survival and short-run profitability.

Even with appropriate information systems in place, there is no guarantee that managers will make decisions consistent with organizational strategies. Proper incentives and reporting systems must be incorporated into the CMS for managers to make appropriate decisions. This is the subject of the following section.

ELEMENTS OF A COST MANAGEMENT SYSTEM

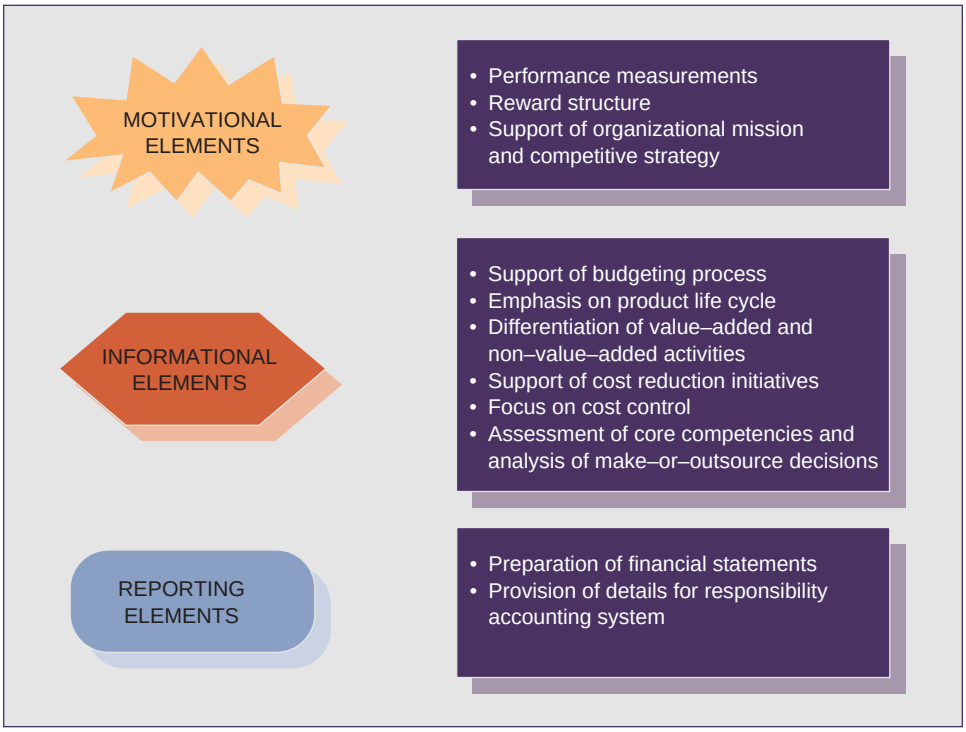
A cost management system is composed of three primary elements: motivational elements, information elements, and reporting elements. These elements are detailed in Exhibit 2–10. The elements as a whole must be internally consistent, and the individually selected elements must be consistent with the strategies and missions of the subunits. Different aspects of these elements may be used for different purposes. For example, numerous measures of performance can be specified, but only certain measures will be appropriate for specific purposes.

6

What three groups of elements affect the design of a cost management system and how are these elements used?

EXHIBIT 2–10

Cost Management System Elements



Motivational Elements

Performance measurements are chosen so as to be consistent with organizational goals and objectives and to "drive" managers toward designated achievements. These measurements, which are discussed in depth in Chapters 20 and 21, may be quantitative or nonquantitative, financial or nonfinancial, and short-term or long-term. For example, if a subunit is expected to generate a specified dollar amount of profit for the year, the performance measure has been set to be quantitative, financial, and short-term. A longer-term performance measure might be an average increase in profit or change in stock price over a five-to-ten-year period.

Today, performance measures and rewards are designed not only to motivate employees and managers to act in the best interest of the organization but also to help recruit and retain qualified employees. These roles are illustrated in the accompanying News Note.

The performance measurement system should encourage managers to act in the best interest of the organization and its subunits and to support organizational missions and competitive strategies. Once defined, the nature of the criteria used to measure performance should be linked to the organizational incentive system because, as implied in the News Note, "you get what you measure." This linkage sends the message to managers that they will be rewarded in line with the quality of their organizational and subunit decisions and, thereby, their contributions to achieving the organizational missions.

http://www.aon.com

In addition to performance measures, different forms of rewards have different incentive effects and can reflect different time orientations. In general, longer-term incentives encourage managers to be more long-term oriented in their decisions, while short-term incentives encourage managers to be focused on the near future.

To illustrate, cash is the most obvious reward for short-term performance. All managers receive some compensation in cash for paying living expenses. However, once a manager receives a cash reward, its value is not dependent on future performance. In contrast, a stock option that is not exercisable until a future time

GENERAL BUSINESS  NEWS NOTE

What's in It for Me?

Aon Consulting's 1998 America at Work Survey of 1,800 employees measures critical factors that employees weigh when making employment decisions. Results of the survey support both sides of the retention equation. On the intrinsic or environmental side, opportunities for learning and growth top the list of reasons for employees to stay with their employers. On the extrinsic or more tangible side, meaningful rewards and recognition of performance are highly correlated with employee commitment. In fact, salary and benefits are viewed as two of the most important factors affecting employment decisions.

Traditionally, compensation systems have been designed to attract, retain, motivate, and reward employees by being externally competitive and internally equitable. Unquestionably, these are noble intentions. However, the actual plan design that's in place at many organizations was originally conceived in the 1950s, when the world of work looked very different from what it does today. It was a time when fairness was defined as "sameness," when employment was for a lifetime, and when following procedure was far more critical to success than innovation and gaining competitive advantage.

Today, compensation systems must support the mission and culture of the organization and communicate to employees what is important, why they are important, and what their role is in ensuring the ongoing viability of the organization. Compensation systems are incredibly powerful communication tools to apply to a workforce looking for answers to the fundamental questions, "Why am I here?" "What am I contributing?" and "How (well) am I being recognized for my contribution?" Basically, if employees feel good about the answers to those questions, they stay; if they don't, they go.

SOURCE: Valerie L. Williams and Jennifer E. Sunderland, "New Pay Programs Boost Retention," *Workforce* (May 1999), pp. 36–40. Permission conveyed through the Copyright Clearance Center.

provides a manager with an incentive to be more concerned about long-term performance. The ultimate value of the stock option is determined in the future when the option is exercised, rather than on the date it is received. Thus, the option's value is related more to long-term than to short-term organizational performance.

Performance rewards for top management may consist of both short-term and long-term incentives. Normally, a major incentive is performance-based pay that is tied to the firm's stock price. The rewards for subunit managers should be based on the specific subunit's mission. Managers of subunits charged with a "build" mission should receive long-term incentives. These managers need to be concerned about long-term success and be willing to make short-term sacrifices for long-term gains.

Alternatively, managers of subunits charged with a "harvest" mission must be more oriented to the short term. These subunits are expected to squeeze out as much cash and profit as possible from their operations. Accordingly, incentives should be in place to encourage these managers to have a short-term focus in decision making.

profit sharing

Profit sharing refers to compensation that is contingent on the level of organizational profit generated. This type of pay is a powerful incentive and is now used in virtually every U.S. industry. Today's companies experiment with a variety of incentives as a "carrots" to induce employees and managers to act in the best interest of customers and shareholders. As indicated in the following News Note, not all of these efforts are successful.

http://www.knoll.de

Selection of performance measurements and the reward structure is important because managers evaluate decision alternatives based on how the outcomes may impact the selected performance (measurement and reward) criteria. Because higher performance equals a larger reward, the cost management system must have specified performance "yardsticks" and provide measurement information to the appropriate individuals for evaluation purposes. Performance measurement is meaningful only in a comparative or relative sense. Typically, current performance is assessed relative to past or expected performance or, as illustrated in the following News Note, relative to peers.

NEWS NOTE  ETHICS

Show Me the Money!

Dave Kerr knew his sales team's compensation plan just wasn't working the way it should. For one thing, star salespeople weren't bringing home substantially more money than the lowest performers. But even slower sellers, who were favored by the imbalance in the system, weren't really happy. "No one thought their quota was fair," says Kerr, director of strategic planning for Knoll Pharmaceuticals in Mount Olive, New Jersey. "We spent too much time setting, managing, and adjudicating complaints about the quotas—it was just a massive, unproductive effort every four months."

So in 1996 Kerr went to the extreme and dumped the quota system for all 600 of Knoll's field salespeople. Today, Knoll's incentive compensation plan is based on comparing performance of reps against that of their colleagues, so they're not selling in a vacuum. Here's how it works. Incentive money is put into a companywide pool that grows or shrinks with the company's earnings. Reps can earn a larger or smaller share of the pool depending on both the absolute volume growth and the percentage of volume growth for individual products. Relative payments are determined in advance. For example, the top seller might make three times the average; the lowest performing seller might earn nothing; and the average seller would make an average amount. "What makes the plan more fair," Kerr says, "is that employees are measured only against those with similar sales potential."

SOURCE: Tricia Campbell, "Quashing the Quota System," *Sales & Marketing Management* (July 1999), p. 89. Permission conveyed through the Copyright Clearance Center.

Informational Elements

The accounting function in an organization is expected to support managers in the areas of planning, controlling, decision making, and performance evaluation. These roles converge in a system designed for cost management. Relative to the planning role, the cost management system should provide a sound foundation for the financial budgeting process.

Budgets provide both a specification of expected achievement as well as a benchmark against which to compare actual performance. A CMS, like a traditional cost accounting system, should be able to provide the financial information needed for budget preparation. But, in addition, a well designed CMS will disclose the cost drivers for activities so that more useful simulations of alternative scenarios can be made. The same system can highlight any activities that have a poor cost-benefit relationship so that these activities can be reduced or eliminated. This helps reduce budget preparation time. "By reducing the length of the budgeting cycle and making the process more efficient, the informational benefit of semiannual or quarterly budgeting may become practical."[14]

As firms find it more difficult to maintain a competitive advantage, they must place greater emphasis on managing the product life cycle. In such an environment, firms often use innovative tools, many of which are discussed in later chapters, to provide information relevant to assessing their competitive positions. As discussed earlier in this chapter, most actions available to managers to control costs are concentrated in the earliest stages of the product life cycle. Accordingly, information relevant to managing costs must be focused on decisions made during those stages—that information will be provided by a well designed and integrated cost management system.

The life cycle of many products will become shorter as firms become more and more adept at duplicating their competitors' offerings. In the future, managers

[14] Steven C. Schnoebelen, "Integrating an Advanced Cost Management System Into Operating Systems (Part 2)," *Journal of Cost Management* (Spring 1993), p. 63.

will confront the fact that products will spend less time in the maturity stage of the product life cycle. In this competitive environment, firms will be forced to find ways to continue to squeeze out cash from their mature products to support development of new products. Additionally, the future will place greater emphasis on a firm's ability to adapt to changing competitive conditions. Flexibility will be an important organizational attribute and will cause managers to change the emphasis of control systems as shown in Exhibit 2–11.

To provide information relevant to product design and development, the accounting information system must be able to relate resource consumption and cost to alternative product and process designs. Computer simulation models are useful in relating products to activities.[15] In addition to focusing information on the front end of the product life cycle, the capital spending is becoming an increasingly important tool in cost management, especially relative to new technology acquisition decisions. Decisions made with regard to capital investments affect the future cost structure of firms and, hence, the extent to which short-term actions can effect a change in the level of total costs.

Lastly, the system should produce cost information with minimal distortions from improper or inaccurate allocations, or from improper exclusions. Improper exclusions usually relate to the influence of financial accounting, such as the mandate to expense product development or distribution costs. If the system minimizes these cost distortions, the cost assignments are more relevant for control purposes and for internal decision making.

The information required to support decisions depends on the unique situational factors of the firm and its subunits. The information system must enable the decision maker to evaluate how alternative decision choices would impact the items that are used to measure and evaluate the decision maker's performance.

Techniques such as relevant costing, quality cost management, job order and process costing, and cost-volume-profit analysis, discussed in later chapters, relate to the role of cost information in decision making. Many decisions involve comparing the benefit received from some course of action (such as serving a given customer) to the costs of the action (costs of providing services). Only if the cost data contain minimal distortion can managers make valid cost-benefit assessments.

EXHIBIT 2–11

Shift in Control Emphasis in Future Competitive Environment

	From		To
Strategic Focus	Achieving financial results: sales, costs, and profits	→	Achieving operational objectives: low cost, quality, sales mix, on-time delivery, and capacity usage
Product Sales Partnerships	Submitting bids and taking orders	→	Developing and creating sales opportunities
Budgeting	Developing annual plans	→	Ongoing planning and frequent budget revisions
Culture	Meeting project expectations	→	Learning and improving upon processes

SOURCE: Ralph E. Drtina and Gary A. Monetti, "Controlling Flexible Business Strategies," *Journal of Cost Management* (Fall 1995), pp. 42–49. © 1995 Warren Gorham & Lamont. Reprinted with permission of RIA.

[15] Using computer models is an element of process cost management. For more details, see "Process Cost Management," by Thomas G. Greenwood and James M. Reeve in the *Journal of Cost Management* (Winter 1994), pp. 4–19.

Reporting Elements

The reporting elements of a cost management system refer to methods of providing information to persons in evaluative roles. First and foremost, the CMS must be effective in generating fundamental financial statement information including inventory valuation and cost of sales information. This information is not necessarily the same as that being used for internal planning, control, decision making, or performance evaluation. But, if the feeder systems to the CMS have been appropriately integrated and the system itself designed to minimize distortions, there should be little difficulty generating an "external" product or service cost.

responsibility accounting system

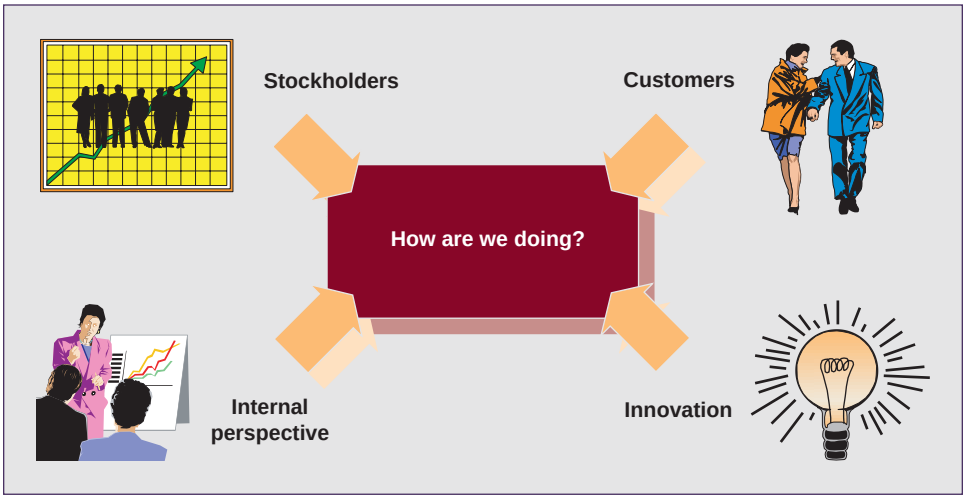
In addition to financial statement valuations, the reporting elements of the cost management system must address internal needs of a **responsibility accounting system**. This system provides information to top management about the performance of an organizational subunit and its manager.[16] For each subunit, the responsibility accounting system separately tracks costs and, if appropriate, revenues.

Performance reports are useful only to the extent that the measured performance of a given manager or subunit can be compared to a meaningful baseline. The normal baseline is a measure of expected performance. Expected performance can be denoted in financial terms, such as budgetary figures, or in nonfinancial terms, such as throughput, customer satisfaction measures, lead time, capacity utilization, and research and development activities. By comparing expected and actual performance, top managers are able to determine which managers and subunits performed according to expectations and which exceeded or failed to meet expectations. Using this information that has been processed and formulated by the cost management system, top managers link decisions about managerial rewards to performance. Exhibit 2–12 demonstrates a typical performance measurement system that gathers data from four perspectives: internal, innovation, customer, and stockholder.

The movement toward decentralization has increased the importance of an effective reporting system. With decentralization, top managers must depend on the reporting system to keep all organizational subunits aligned with their subunit missions and organizational goals and objectives. A cost management system is not designed to "cut" costs. It exists to ensure that a satisfactory yield (revenue) is realized from the incurrence of costs. Accordingly, cost management begins with an understanding that different costs are incurred for different purposes. Some costs are incurred to yield immediate benefits; others are expected to yield benefits in the near or distant future.

EXHIBIT 2–12

Performance Evaluation from Multiple Perspectives



[16] Responsibility accounting concepts are discussed in detail in Chapters 18 through 21.

Only by linking costs to activities and activities to strategies can the yield on costs be understood. Thus, to achieve effective cost management, it is useful to start by sorting organizational activities according to their strategic roles. This logic suggests that organizational management is made easier by breaking down operations into subunits. By so doing, top managers can assign responsibility and accountability for distinct subunit missions to a particular manager. In turn, by creating the proper incentives for each subunit manager, top management will have set the stage for each subunit manager to act in the best interest of the overall organization. This linkage is the start of a process that focuses a specific subunit manager's attention on a set of costs and activities that uniquely relates to the subunit's organizational mission.

For subunit managers to effectively manage costs, each must be provided with relevant information. Because the nature and time horizon of decisions made by managers vary across subunits, each manager requires unique information. Accountants face the task of providing information to each subunit manager that is tailored to the particular context. In addition to information about decision alternatives, managers need to know how the alternatives are likely to impact their expected rewards.

The role of a reporting system is to compare benchmark performance to actual performance for each manager. On the basis of this comparison, the relative rewards of subunit managers are determined. Accordingly, this comparison is a key source of motivation for subunit managers to act in the best interest of the organization.

Optimal organizational performance is realized only if there is consistency for each subunit across the elements of motivation, information, and reporting. Managers of subunits with a "build" mission need information tailored to their competitive strategies and focused on the early stages of the product life cycle. Their incentives to manage costs need to be relatively long-term, and their reward structures should emphasize success in the areas of product development and design and market share growth. Alternatively, subunit managers of mature businesses need information that pertains more to short-term competition. Their reward and reporting structures should emphasize near-term profit and cash flow.

One of the evolving challenges in today's business environment is the management of activities across an entire supply chain. Competition is prevalent among supply or "value" chains as well as individual businesses. Thus, future financial specialists will develop only cost management systems that include activities not occurring within single firms but occurring within a supply chain and involving several firms.

Since most businesses have a CMS in place, most CMS design and implementation issues relate to modifications in cost management systems. The modification of existing systems is discussed next.

CMS IMPLEMENTATION

7

How is gap analysis used in the implementation of a cost management system?

Once the organization and its subunits have been structured and the elements of the cost management system determined, the current information system(s) should be evaluated. A gap analysis is necessary to compare the information that is needed to the information that is currently available, or to determine how well desired information outputs coincide with current outputs. Any difference represents a "gap" to be overcome.

In many situations, it is impossible to eliminate all system gaps in the short term, potentially because of software or hardware capability or availability. Methods of reducing or eliminating the gaps, including all related technical requirements and changes to existing feeder systems, should be specified in detail. These details should be expressed, qualitatively and quantitatively, in terms of costs and benefits.

In the event of limited resources, top management may then prioritize the differences as to which gap issues to address and in which order. As system implementation proceeds, management should assess the effectiveness of the improvements and determine the need for other improvements. Once the CMS has been established, previously identified gaps may become irrelevant or may rise in rank of priority. Only through continuous improvement efforts can the cost management system provide an ongoing, viable network of information to users.

Technology's impact on cost management system design and implementation is significant. With advancements in technology, it is becoming possible to link the feeder systems of a company into a truly integrated cost management system.

enterprise resource planning (ERP)

Enterprise resource planning (ERP) systems are packaged business software systems that allow companies to (1) automate and integrate the majority of their business processes, (2) share common data and practices across the entire enterprise, and (3) produce and access information in a real-time environment.[17] The ERP software often involves 30 separate modules that collect data from individual processes in the firm (sales, shipping, distribution, etc.) and assemble that data in a form accessible by all managers. ERP is discussed in detail in Chapter 17.

REVISITING

Motorola, Inc.

http://www.mot.com

The consolidation of Motorola's separate research programs into Motorola Labs is already starting to pay dividends. The consolidation has made it possible for Motorola to tweak a single innovation for several products. A new semiconductor for sending video signals, for example, works in both an experimental wireless phone and a set-top box for interactive TV. The chip's key elements are also used in a device for fingerprint identification on computer keyboards, soon to be a product, that eliminates the need for passwords.

Other efforts are more speculative. With DNA, Motorola researchers are trying to exploit the attractions of pairs of organic acids, using the links to lay down patterns of chip circuitry. The effort reflects management's interest in moving Motorola into biotechnology; the labs intend to use DNA to help map genetic sequences to find abnormalities that could lead to diseases.

In looking for new ways to make wireless networks more efficient, Motorola scientists developed a computer program that mimics a city full of roaming pager and cellphone users. The permutations are virtually infinite: a supercomputer using the software, working at 100 billion instructions per second, can create only about 10 seconds of a real-time simulation in an hour of number crunching. But the software has led to design improvements that can cut dropped cellular calls by 50 percent, Motorola researchers say.

Motorola also is building an enormous internal library of maps and related materials to help decision making in construction projects. The system will include information such as how many pumps a gas station will have, what payment systems it will use, and how fuel will be stored and mixed. These industry "road maps" could be the foundation of a future design and consulting business, the company says.

SOURCE: Quentin Hardy, "Business Brief—Motorola, Inc.: Wireless Divisions to Add 1,400 Workers by Year-End," *The Wall Street Journal* (June 17, 1999), p. B6. Permission conveyed through the Copyright Clearance Center.

[17] Win G. Jordan and Kip R. Krumwiede, "ERP Implementers Beware!" *Cost Management Update* (March 1999), pp. 1–4.

CHAPTER SUMMARY

As first discussed in Chapter 1, cost accounting's role in management accounting is to provide information for managers' planning, controlling, decision-making, and performance evaluation needs. This chapter discusses the role of accountants and accounting information in developing a formal system of cost management.

A cost management system is a subpart of a firm's information and control systems. A management information system is a structure that organizes and communicates data to managers. Control systems exist to guide organizations in achieving their goals and objectives. They have four primary components: detectors, assessors, effectors, and a communications network.

A cost management system consists of a set of formal methods developed for planning and controlling an organization's cost-generating activities relative to its goals and objectives. This system serves multiple purposes: to develop product costs, assess product/service profitability, improve understanding of how processes affect costs, facilitate cost control, measure performance, and implement organizational strategies.

It is not feasible to simply adopt a generic, "off-the-shelf" cost management system. As in the design of any control system, managers must be sensitive to the unique aspects of their organizations. Three factors that specifically should be taken into account in designing a control system are the organizational form, structure, and culture; organizational mission and critical success factors; and the competitive environment.

A cost management system's design is based on elements from three groups of management control tools. The selected elements of the system should be internally consistent and be consistent with the missions of the individual subunits. The three groups of control tools are motivational elements, informational elements, and reporting elements.

The motivational elements exist to provide managers the incentive to take the actions that are in the best interest of their subunits and the overall organization. Managers are motivated to do the right thing when the rewards they receive for their efforts are linked to the quality of decisions they make on behalf of the organization and their specific subunits.

The informational elements provide managers with relevant data. Accountants play a primary role in information management and are charged with maintaining an information system that is useful in performance measurement of managers and subunits and in making managerial decisions. To compete in the global environment, firms are developing new techniques to provide information relevant to assessing their competitive positions.

The reporting elements exist to provide information regarding managerial performance. For accounting, this is sometimes referred to as the "scorekeeping" role. A responsibility accounting system provides information to top management about the performance of an organizational subunit and its manager.

Gap analysis is the key to identifying differences (gaps) between the ideal cost management system and the existing system. By prioritizing the order in which gaps are to be closed, managers can proceed in an orderly manner with updating the cost management system. Because business processes are constantly evolving, the cost management system must be continuously evaluated and updated so that it provides the information and motivation that managers currently require.

APPENDIX

Cost Management System Conceptual Design Principles

"In 1986, Computer Aided Manufacturing-International, Inc. (CAM-I) formed a consortium of progressive industrial organizations, professional accounting firms, and government agencies to define the role of cost management in the new advanced manufacturing environment."[18] One outcome of this consortium was a conceptual framework of principles (listed in Exhibit 2–13) for designing a cost management system. If a CMS provides the suggested information relating to costs, performance measurements, and investment management, that system will be relevant to management's decision-making needs. Although compatible with existing cost accounting systems, the set of principles as a whole suggests a radical departure from traditional practices. The practices focus management attention on organizational activities, product life cycles, integrating cost management and performance measurement, and integrating investment management and strategic management.

EXHIBIT 2–13

CMS Conceptual Design Principles

Cost Principles

- Identify costs of non-value-added activities to improve use of resources.
- Recognize holding costs as a non-value-added activity traceable directly to a product.
- Significant costs should be directly traceable to management reporting objectives.
- Separate cost centers should be established for each homogeneous group of activities consistent with organizational responsibility.
- Activity-based cost accumulation and reporting will improve cost traceability.
- Separate bases for allocations should be developed to reflect causal relations between activity costs and management reporting objectives.
- Costs should be consistent with the requirement to support life-cycle management.
- Technology costs should be assigned directly to products.
- Actual product cost should be measured against target cost to support elimination of waste.
- Cost-effective approaches for internal control should be developed as a company automates.

Performance Measurement Principles

- Performance measures should establish congruence with a company's objectives.
- Performance measures should be established for significant activities.
- Performance measures should be established to improve visibility of cost drivers.
- Financial and nonfinancial activities should be included in the performance measurement system.

Investment Management Principles

- Investment management should be viewed as more than the capital budgeting process.
- Investment management decisions should be consistent with company goals.
- Multiple criteria should be used to evaluate investment decisions.
- Investments and attendant risks should be considered interrelated elements of an investment strategy.
- Activity data should be traceable to the specific investment opportunity.
- Investment management decisions should support the reduction or elimination of non-value-added activities.
- Investment management decisions should support achieving target cost.

SOURCE: Callie Berliner and James A. Brimson, eds., *Cost Management for Today's Advanced Manufacturing* (Boston: Harvard Business School Press, 1988), pp. 13–18. Reprinted by permission of Harvard Business School Press. Copyright 1988 by CAM-1.

[18] Berliner and Brimson, *Cost Management*, p. vii.

KEY TERMS

cost driver (p. 45)
cost management system (CMS) (p. 45)
cost structure (p. 52)
enterprise resource planning (ERP) (p. 62)
management control system (MCS) (p. 43)
management information system (MIS) (p. 43)
organizational form (p. 48)
profit sharing (p. 57)
responsibility accounting system (p. 60)

QUESTIONS

1. Why must a company spend money to make money? What do you predict would occur to a company's revenues if that company achieved its objective of incurring annual operating costs of $0?
2. Why are so many companies presently redesigning their cost accounting systems?
3. How can a company evaluate whether it is effectively managing its costs?
4. Why is an effective management information system a key element of an effective management control system?
5. What is a control system? What purpose does a control system serve in an organization?
6. Why would an organization have multiple control systems in place?
7. Why does an effective cost management system necessarily have both a short-term and long-term focus?
8. Why would management be willing to accept somewhat inaccurate costs from the cost management system? What sacrifices would be necessary to obtain more accurate costs?
9. List some examples of costs that a cost management system might treat differently for internal and external purposes. Why would these treatments be appropriate?
10. How can an integrated cost management system help managers understand and evaluate the effectiveness and efficiency of business processes?
11. Is cost reduction the primary purpose of a cost management system? Discuss the rationale for your answer.
12. Why is it not possible for a cost management system to simply be "pulled off the shelf"?
13. How does the choice of organizational form influence the design of a firm's cost management system?
14. What information could be generated from a cost management system that would help an organization manage its core competencies?
15. Describe characteristics of organizations in which centralized control would be effective and those in which decentralized control would be effective.
16. Would you prefer to work as an employee in an organization that had centralized or decentralized control? Discuss the reasons for your answer.
17. List five types of cost management information that would be most useful to an organizational subunit that was engaged in a (a) build, (b) harvest, or (c) hold mission.
18. Discuss ways in which organizational culture could be used as a control mechanism.
19. Compare the description in the chapter of AT&T prior to divestiture with the former Soviet Union prior to perestroika. How has the culture of each of these entities changed over time? How would these changes affect the types of information needed by managers/leaders?

20. Why would a cost management system, within a company pursuing confrontational competition, be required to provide information about competitors?
21. How does the life-cycle stage of a product influence the nature of information that is required to successfully manage costs of that product?
22. In the present highly competitive environment, why has cost management risen to such a high level of concern while price management has declined in importance?
23. What do you believe the core competencies of your college or university to be? Why did you choose these?
24. Why can "dollar sales per employee" be viewed as a measure of organizational productivity? What actions can managers take to increase productivity?
25. Give three examples of industries in which time-to-market is critical. Give three examples of industries in which time-to-market is almost irrelevant. Discuss the reasons for importance or lack thereof in each industry.
26. Why is the supply chain, or value chain, becoming an increased focus of cost management systems?
27. What are feeder systems and why are they important in the design of a cost management system?
28. Which is most important in the design of a cost management system: motivational elements, informational elements, or reporting elements? Discuss the rationale for your answer.
29. "A firm cannot be successful unless short-term profits are achieved." Is this statement true or false? Why?
30. Provide three examples from your academic career of the truthfulness of the statement "you get what you measure."
31. Why do companies measure their performance from a variety of perspectives (e.g., shareholder, customer) rather than a single perspective?
32. What is gap analysis, and what role does it play in the implementation of a cost management system?
33. *(Appendix)* What was CAM-I and why was it organized?

EXERCISES

34. *(Cost management and strategy)* Assume that you are a financial analyst and you have just been handed a 2000 financial report of Firm X, a large, global pharmaceutical firm. The company competes in both traditional pharmaceutical products and the evolving biotechnology products. Also assume that you have been given the following data on the pharmaceutical industry.

	Firm X	Industry Average
Sales	$5.0 billion	$1.2 billion
Net income	$1.3 billion	$0.12 billion
Advertising	$0.1 billion	$0.2 billion
Research and development	$0.4 billion	$0.3 billion
New investment in facilities	$0.5 billion	$0.3 billion

Given the above data, evaluate the cost management performance of Firm X.

35. *(Cost management system benefits)* Consider the following excerpt regarding advertising agencies:

http://www.isba.org.uk

The latest study on advertising agency performance from the Incorporated Society of British Advertisers found that agencies are failing to provide adequate service, to develop trusting relationships, be innovative, be efficient, control costs, and keep their promises. Agency staff are difficult to reach, planners are lack-

ing when it comes to monitoring and evaluating advertising, creatives still do not listen to advertisers' concerns or understand their target markets, and production departments fail to deliver value for money or meet budgets. On a grander scale, the majority of advertisers do not feel that their agencies provide competent advice on business and marketing issues.

SOURCE: Ruth Nicholas, "Survey Finds Ad Agency Still Failing Clients." From an original article in the 3 June 1999 issue of *Marketing* with the permission of Haymarket Business Publications Ltd.

Given the problems plaguing advertising agencies, discuss how an integrated cost management system could help individual ad agencies become more competitive.

36. *(Organizational form)* As a team of three, or as individuals, write a paper that compares and contrasts the corporate, general partnership, limited partnership, LLP, and LLC forms of business. At a minimum, include in your discussion issues related to the following: formation, capital generation, managerial authority and responsibility, taxation, ownership liability, and implications for success in mission and objectives.

37. *(Cost management and organizational culture)* Use Internet resources to compare and contrast the organizational cultures and operating performance of any two firms in the same industry. Following are possible pairs to compare.

1. Delta Air Lines and Southwest Airlines (http://www.delta-air.com and http://www.southwest.com)
2. Exxon and Royal Dutch Shell (http://www.exxon.com and http://www.shell.com)
3. Nordstrom's and Wal-Mart (http://www2.nordstrom.com and http://www.walmart.com)
4. Haggar and Levi-Strauss (http://www.haggar.com and http://www.levi.com)
5. IBM and Dell Computer (http://www.ibm.com and http://www.dell.com)

In your discussion, address the following questions:

a. Which of the pair is the better operating performer?

b. Do you believe that organizational culture has any relationship to the differences in operations?

38. *(Organizational strategy)* Use Internet resources to find a company (regardless of where they are domiciled) whose managers have chosen to (a) avoid competition through differentiation, (b) avoid competition through cost leadership, and (c) confront competitors head-on. Prepare an analysis of each of these company's strategies and discuss your perception of how well that strategy has worked.

39. *(Cost management and organizational objectives)* In a team of three, prepare an oral presentation discussing how accounting information can (a) help and (b) hinder an organization's progress toward its mission and objectives. Be sure to differentiate between the effects of what you perceive as "traditional" versus "nontraditional" accounting information.

40. *(Organizational culture)* Write a paper describing the organizational culture at a job you have held or at the college or university that you attend. Be sure to include a discussion of the value system and how it was communicated to new employees or new students.

41. *(Cost management and strategy change)* The following excerpt illustrates a strategy change by Corel, the software company.

http://www.corel.com
http://www.novell.com

Corel's problems originated four years ago when the company purchased the WordPerfect word-processing software from Novell Inc. and started waging war with Microsoft for the top retail sales spot in packaged office suites. Within months of the $124 million acquisition, Corel transformed the moribund

WordPerfect into the centerpiece of a rival to Microsoft's Office package, which included a word processor, a spreadsheet, graphics software, and a personal organizer. For two months in 1995, Corel's package edged out Microsoft's in retail sales.

But the early success was deceptive. Corel sacrificed profit for market share by marketing its office suite at about half the retail price of Microsoft's Office. Meanwhile, Corel's aggressive advertising campaign, including title sponsorship of the women's professional tennis tour and national television commercials in the United States, drained the company's meager resources. When Microsoft introduced its own upgraded Office 97 suite, the battle was over.

To reverse its fortunes, Corel is slashing costs. . . . For instance, it is spending much less than before to attract new office-software customers.

SOURCE: Adapted from Julian Beltrame, "Corel Stages Comeback from Battle with Microsoft—Cost Cutting, Refocusing on Corel Products Move Company Into the Black," *The Wall Street Journal* (August 9, 1999), p. B4.

Corel's change in cost management has resulted in the company's return to profitable operations. The change in cost management resulting in "slashing costs" implies that the company has changed its strategy. Discuss how the firm's strategy might have changed such that the firm's new strategy would be consistent with the change in cost management that is described in the article.

CASES

http://www.kpmgconsulting.com

42. *(Information and cost management)* Consider the following excerpt about customer communication.

Companies worldwide lose millions of dollars each year because they fail to communicate with customers and suppliers. These and other supply chain inefficiencies are pointed out in the results of two surveys issued by KPMG Consulting, a part of KPMG Peat Marwick LLP.

"Most companies think they're more efficient than they really are," said Thomas Wilde of KPMG. "It's either too painful to make the necessary organizational changes to become more efficient, or the benefits are not clear to them."

Supplier and customer involvement is essential to efficient supply chain management, yet 29% of companies report their suppliers have no involvement in their inventory management, according to the survey. Another 22% of companies report no involvement from their customers when planning manufacturing requirements. "It's as if a tire company just guessed at the number it needed to manufacture every year, without talking to auto manufacturers first," said Steven Y. Gold, KPMG partner.

The problem is particularly acute in consumer markets. While 96% of retailers share information with customers/suppliers, 79% are using outdated modes of communication, such as paper or fax.

SOURCE: Anonymous, "Companies Lose Millions by Ignoring Customers in Supply Chain Forecasting and Inventory Control," *Cost Management Update 87* (May 1998), p. 3.

Select a major manufacturing company in your area. For this company, prepare a table identifying specific ways in which an improved system of communications with suppliers and customers could result in specific cost savings for the manufacturing firm, its suppliers, or its customers. Organize your table in three columns as follows.

Specific Information to Be Obtained	Information Source	Specific Cost to Be Reduced

43. *(Alternative cost management strategies)* Robert L. Wehling, Procter & Gamble's senior vice president for advertising and market research, would like to wean Americans off coupons.

http://www.pg.com

His relentless cost-control efforts, which P&G began in the manufacturing area in 1993, have led to moves to eliminate couponing, increase print advertising, and curb growth in P&G's marketing spending.

In fact, fewer than 2% of the 291.9 billion coupons that companies distributed in 1995 were redeemed. . . .

P&G has been plowing back savings from cost-cutting initiatives into lowering prices on most of its 300 brands. Since 1992–93, the list prices on P&G brands, excluding coffee, have declined by $1 billion. Prices on diapers and detergents have particularly declined.

In February, P&G eliminated all promotional coupons in three New York state markets—in a test that many industry watchers doubted could be successfully expanded nationwide because coupons are such an integral part of American consumers' psyche.

Until P&G came along, no company had risked eliminating all coupons in a big geographical market, despite the growing consensus among major marketers that coupons are expensive and turn brand-loyal customers into bargain hunters who select brands based on short-term price promotions.

P&G spent $3.3 billion in 1995 on advertising. Its popular brand names include Tide, Vicks, Cover Girl, and Pampers.

SOURCE: Raju Narisetti, "P&G Ad Chief Plots Demise of the Coupon," *The Wall Street Journal* (April 17, 1996) pp. B1, B5A. Permission conveyed through the Copyright Clearance Center.

a. What costs and benefits did P&G likely consider in its decision to discontinue the use of coupons to promote its products?
b. What is P&G's apparent market strategy in deciding to lower prices? Explain.
c. What risks should P&G take into account before discontinuing the use of coupons nationwide?

44. *(Cost management and customer service)* The following excerpt illustrates how one company experienced negative fallout due to cost-cutting measures.

In Digital Equipment Corp.'s 1994 reorganization, its second in as many years, the company eliminated hundreds of sales and marketing jobs in its health-industries group, which had been bringing in $800 million of annual revenue by selling computers to hospitals and other health-care providers worldwide.

Digital says it cut [costs and positions] because it had to act fast. It was losing about $3 million a day, and its cost of sales was much higher than that of its rivals. Robert B. Palmer, the chief executive officer of the Maynard, Massachusetts, company, saw across-the-board cuts in all units, regardless of profitability, as the way to go. . . .

But in the health-industries group, the cutbacks imposed unexpected costs. Digital disrupted longstanding ties between its veteran salespeople and major customers by transferring their accounts to new sales divisions. It also switched hundreds of smaller accounts to outside distributors without notifying the customers.

At the industry's annual conference, "I had customers coming up to me and saying, 'I haven't seen a Digital sales rep in nine months. Whom do I talk to now?' " recalls Joseph Lesica, a former marketing manager in the group who resigned last year. "That really hurt our credibility. I was embarrassed."

Resellers of Digital computers, who account for most of its health-care sales, also complained about diminished technology and sales support. "There were months when you couldn't find anybody with a Digital badge," complains an official at one former reseller who had been accustomed to Digital sales reps

accompanying him on customer calls. "They walked away from large numbers of clients." Adds Richard Tarrant, chief executive of IDX Systems Corp., a Burlington, Vermont, reseller that used to have an exclusive arrangement with Digital, "Now, they're just one of several vendors we use."

Many Digital customers turned to International Business Machines Corp. [IBM] and Hewlett-Packard Co., and so did some employees of Digital's downsized health-care group. Lesica says some laid-off workers went to Hewlett-Packard and quickly set about bringing Digital clients with them. "That's another way [Digital] shot itself in the foot," he says.

SOURCE: Alex Markels and Matt Murray, "Call It Dumbsizing: Why Some Companies Regret Cost-Cutting," *The Wall Street Journal* (May 4, 1996), pp. A1, A6. Permission conveyed through the Copyright Clearance Center.

a. What is the implied mission (build, hold, or harvest) of the health-industries group of Digital? Explain.
b. Describe the circumstances in which "across-the-board" cuts in spending represent a rational approach to cost management.
c. When Digital decided to cut costs, what were the apparent criteria used to determine which costs to cut?
d. How could a better, integrated cost management system have helped Digital avoid the adverse effects of its cost-cutting efforts?

45. *(Cost management: short-term vs. long-term)* Flatland Metals Co. produces steel products for a variety of customers. One division of the company is Residential Products Division, created in the late 1940s. Since that time, this division's principal products have been galvanized steel components used in garage door installations. The division has been continuously profitable since 1950, and in 1996, it generated profits of $10 million on sales of $300 million.

However, over the past ten years, growth in the division has been slow; profitability has become stagnant, and few new products have been developed, although the garage door components market has matured. The president of the company, John Stamp, has asked his senior staff to evaluate the operations of the Residential Products Division and to make recommendations for changes that would improve its operations. The staff uncovered the following facts:

- Tracinda Green, age 53, has been president of the division for the past fifteen years.
- Green receives a compensation package that includes a salary of $175,000 annually plus a cash bonus based on achievement of the budgeted level of annual profit.
- Growth in sales in the residential metal products industry has averaged 12 percent annually over the past decade. Most of the growth has occurred in ornamental products used in residential privacy fencing.
- Nationally, the division's market share in the overall residential metal products industry has dropped from 12 percent to 7 percent during the past ten years and has dropped from 40 percent to 25 percent for garage door components.
- The division maintains its own information systems. The systems in use today are mostly the same systems that were in place fifteen years ago; however, some of the manual systems have been computerized (e.g., payroll, accounts payable, accounting).
- The division has no customer service department. A small sales staff solicits and takes orders by phone from national distribution chains.
- The major intra-division communication tool is the annual operating budget. No formal statements have been prepared in the division regarding strategies, mission, values, goals and objectives, or identifying core competencies.

Given the introductory paragraphs and the facts from the staff of the company's president, identify the major problems in the Residential Products Division and develop recommendations to address the problems you have identified.

46. *(Cost management and profitability)* The following excerpt deals with Nordstrom's cost-cutting efforts.

http://www2.nordstrom.com

Nordstrom's Inc., a retailing-industry laggard in profits, has been undergoing an effort to cut costs. But can the department store chain do that while maintaining its famously obsessive level of customer service?

"The biggest challenge is to keep the culture in the organization while making the necessary changes for the new millennium," says Jennifer Black, president and analyst at Black & Co. in Portland, Oregon.

The good news is that Nordstrom's lags so far behind the industry's most efficient and profitable department store operators that it can cut a lot of costs without gutting the sales staff. "There is so much at this company that hasn't been done," Black says. "They've only skimmed the surface."

For instance, May Department Stores Co., based in St. Louis, boasts a 12.5% operating margin, while Nordstrom's was among retailing's lowest, at 5.6% for 1998. Nordstrom's certainly has opportunity for improvement. Its sales per square foot of store space, at $382 for 1998, are the envy of the industry. May's sales per square foot were just $201.

But inefficient operations have prevented Nordstrom's from boosting its bottom line, despite its higher sales. Becoming efficient requires Nordstrom's family, which owns a controlling 35 percent stake in the company, to embrace change at what has been an insular operation. So far, the family is talking the talk. "Nothing is sacred," says 36-year-old William Nordstrom.

SOURCE: Calmetta Y. Coleman, "Nordstrom's Tries to Cut Costs While Maintaining Service—Retailer Consolidates Operations That Have Weighed on Its Bottom Line," *The Wall Street Journal* (April 8, 1999) p. B4. Permission conveyed through the Copyright Clearance Center.

a. What is Nordstrom's strategy as implied by the discussion in the news article?

b. Given your answer to part (a), discuss how, as a paid consultant to Nordstrom's, you would go about developing a plan to recommend cost management changes at the company.

47. *(Cost management and product life cycle)* Ford Motor Co. reported a 58 percent drop in its fourth-quarter profits as a result of the heavy costs of launching new vehicles. And officials predicted that similar costs will continue to depress earnings through the first half of this year.

http://www.fordvehicles.com

Ford launched its Taurus sedan, its biggest-selling car, in the fourth quarter, while preparing for the debut of its F-series pickup trucks. The two vehicle lines account for sales of more than one million vehicles each year.

In the first half of 1996, Ford also plans to introduce a new version of its Escort small car, another of Ford's top sellers.

"The time to make changes is when you are strong," said David McCammon, Ford's vice president of finance. He said the automaker still managed to finish 1995 with $12.4 billion in cash despite a drop in full-year reported profit of 22%.

SOURCE: Adapted from Oscar Suris, "Ford's Net Declined 58 Percent in Fourth Period," *The Wall Street Journal* (February 1, 1996) pp. A3–A4.

a. Why would Ford's reported profits for 1995 have dropped because of the launching of new vehicles?

b. How would Ford's reported profit have differed if the company had used life-cycle costing techniques to account for the costs of launching new products?

c. Explain what McCammon meant when he said, "The time to make changes is when you are strong."

(continued)

d. By management's willingness to proceed with launching new products even though doing so lowers reported profits for the current year, what can be inferred about the motivational elements in Ford's cost management system?

REALITY CHECK

48. A joke making the rounds in Philadelphia-area doctors' lounges goes like this:

Leonard Abramson, chief executive officer of U.S. Healthcare Inc., the big health-maintenance company, dies and goes to heaven, where he tells God what a great place it is. "Don't get too comfortable," God advised, "You're only approved for a three-day stay."

That's the kind of cost control that the messianic Abramson understands. In the past two years, U.S. Healthcare has slashed the fees it pays to specialists and hospitals by 12 percent to 20 percent and sometimes more, these providers say. In the past year, it has cut members' days in hospitals by 11 percent. Increasingly, it asks specialists and hospitals to assume the financial risk for procedures that cost more than anticipated.

U.S. Healthcare is widely considered one of the country's toughest HMO companies and one of the most innovative. It keeps 30 cents of every premium dollar to pay for salaries, marketing, administration and shareholder dividends, nearly 10 cents more than the industry average. It zealously tracks the performance of doctors and hospitals, paying more to those whose quality scores are high. It is earning robust profits—up 99 percent in the past 24 months—while rocking the tradition-bound, health-care markets along the East Coast.

"Unless you change the culture of the community you're working in, you're not changing health care," Abramson declares.

In the health-care community, U.S. Healthcare has both staunch supporters and critics. Consider the following additional information:

- Last year, Abramson earned $9.8 million in salary, bonuses, and stock options. Critics suggest this is excessive pay and takes resources that could otherwise have been applied to benefit patients. Abramson says, in a free market economy, large rewards flow to those who provide superior performance.
- Critics claim U.S. Healthcare selects service providers based on price rather than quality.
- The company pays doctors to take training courses, such as one in breast cancer screening techniques.
- The company has an information system that allows it to rank hospitals according to infection rates of urology patients, by the length of stay for coronary-bypass surgery, or by the number of babies delivered by Cesarean. The company shows the comparative data to its service providers and uses it as leverage in negotiations.
- The company is increasingly using performance-based pay contracts for its service providers.
- All of U.S. Healthcare's HMOs have earned three-year accreditation from the National Committee for Quality Assurance; this is the best performance of any U.S. managed-care company.

Examine the preceding information and discuss your opinion as to whether U.S. Healthcare is applying an ethical approach to the management of health-care costs. Where possible, use concepts presented in the chapter to defend your position.

49. [John] Strazzanti is president of Com-Corp Industries, a $13 million, 100-employee metal-stamping shop he incorporated in Cleveland in 1980. He'd started out as a machine operator with a tool-and-die manufacturer, rapidly climbing the ladder to become general manager of another stamping company. Along the way, he didn't just dream about what he'd change if he were a company president. He figured out ways to make his dreams a reality.

[Dateline Cleveland, 1977] Packie Presser was vice president of the notoriously demanding local chapter of the teamsters' union. The chapter controlled a metal-stamping plant where Strazzanti had just been promoted from floor supervisor to general manager. Strazzanti recalls:

Two coworkers marched into my office. It was a hot summer day; they had had a few beers at lunch and were fired up. They worked hard in the warehouse and saw the engineers working in the air-conditioning and getting paid a lot more. They didn't think it was fair and wanted more money. I knew I was in a no-win situation. If I told them I thought they were being paid fairly, that's what they expected; they were going to argue, and they weren't going to be happy with the results. If I gave them more money, I was being unfair to everybody else.

So I took out a legal pad and I told them to write down whatever they wanted to be paid. Thirty days from that date, they would get that pay—with one caveat. During the 30 days, I would shop for replacements for them. If I could get highly qualified people to work for anything less than that number, they would have to take a hike. They asked for time to think about it and never came back with a number.

A lot of these guys think that if a company fills an order for a million dollars, it earns a million dollars in profit. I realized that if workers understood how a company earned a profit and how it had to be competitive, a lot of the resentment between managers and employees could be eliminated. And they needed to understand that if they improved their job skills, they could receive a higher wage.

SOURCE: Anonymous, "If I Were President. . . ," *Inc.* (April 1995) pp. 56–61. Permission conveyed through the Copyright Clearance Center.

a. How does the sharing of information in an organization contribute to the empowerment of employees in a decentralized organizational structure to enhance their performance and that of the organization?

b. In a decentralized organization, how does the sharing of information allow employees to better understand their organizational roles relative to the roles of others?

c. In a decentralized organization, how does quality control depend on widespread distribution of information?

50. The motivational elements of a cost management system are integral to the success of cost management goals. It is understood that the stronger the individual incentive to manage costs correctly, the greater is the likelihood that a given manager will act to manage costs effectively.

Currently, many employers provide fringe benefits to their employees that may provide a significant social benefit but that do not necessarily provide the strongest incentive to effectively manage costs. A significant employee benefit of this type is employer-provided health care. Discuss whether employers have an ethical responsibility to their employees, and to society, to provide health coverage to their employees, given that other forms of compensation that provide more powerful incentives could be offered to employees instead of health coverage.