Foundations of Management

- Managing
- The External Environment and Organizational Culture
- Managerial Decision Making

Planning: Delivering Strategic Value

- Planning and Strategic Management
- Ethics and Corporate Responsibility
- International Management
- Entrepreneurship

Strategy Implementation

Organizing: Building a Dynamic Organization

- Organization Structure
- The Responsive Organization
- Human Resources Management
- Managing the Diverse Workforce

Leading: Mobilizing People

- Leadership
- Motivating for Performance
- Managing Teams
- Communicating

Controlling: Learning and Changing

- Managerial Control
- Managing Technology and Innovation
- Creating and Managing Change

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Introduction

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PART **FIVE**

Controlling: Learning and Changing

In Parts One through Four, you learned about the foundations of management, planning and strategy, and the ways to implement plans by organizing, staffing, and leading. Part Five concludes our discussion with three chapters about controlling and changing what the organization and its people are doing. Chapter 16 describes managerial control, including issues related to culture, as well as techniques for ensuring that intended activities are carried out and goals are accomplished.

The last two chapters focus on change and renewal. Chapter 17 discusses technology and innovation, including a strategic approach to new technologies and the creation of a culture for innovation. Chapter 18 examines an ongoing challenge for the modern executive: becoming world-class through the management of change. In this chapter, we describe the nature of this challenge and ways managers can deal with it. Some of the topics you learned about in earlier chapters play central roles in the change process. Chapter 18 should remind you how your understanding of them will benefit your managerial career.

CHAPTER 16
Managerial Control

More than at any time in the past, companies will not be able to hold themselves together with the traditional methods of control: hierarchy, systems, budgets, and the like . . . The bonding glue will increasingly become ideological.

— Collins and Porras[1]

Use your good judgment in all situations. There will be no additional rules.

— Nordstrom's employee manual

▶ ▶ ▶ ▶ ▶ ▶ LEARNING OBJECTIVES

After studying Chapter 16, you will be able to:

▶ **1** Explain why companies develop control systems for employees. p. 574

▶ **2** Summarize how to design a basic bureaucratic control system. p. 575

▶ **3** Describe the purposes for using budgets as a control device. p. 584

▶ **4** Define basic types of financial statements and financial ratios used as controls. p. 588

▶ **5** List procedures for implementing effective control systems. p. 594

▶ **6** Identify ways in which organizations use market control mechanisms. p. 599

▶ **7** Discuss the use of clan control in an empowered organization. p. 601

CHAPTER OUTLINE

Management Close-Up:

HOW DID ELATTUVALAPIL SREEDHARAN STEER A MASSIVE SUBWAY PROJECT?

If you have ever traveled through a big city—in the United States or abroad—chances are you've ridden a subway system—the Tube, Underground, BART, or Metro—at least once. While it might not be your favorite form of transportation because of the lack of scenery, consider how efficient it is at getting people from one place to another without tangling with ground-based traffic. Then think about what a sprawling city would be like without one. Gridlock would result. Until recently, New Delhi, the capital of India and home to about 14 million people, had no underground transportation. Above ground, hordes of motorcycles, exhaust-pumping cars and trucks, motorized *and* hand-towed rickshaws—along with horse-drawn carts, motor-scooter riders, pedestrians, and wandering sacred cows—packed the streets so tightly that it was nearly impossible to travel anywhere. Throw in the occasional lumbering elephant, and the traffic became truly chaotic.

Elattuvalapil Sreedharan, a government civil engineer, wanted something better for the citizens of New Delhi.

> Elattuvalapil Sreedharan undertook a management task that no one else wanted—and most thought was impossible to accomplish. As you read this chapter, consider the types of controls that Sreedharan put into place to ensure his project's success. What were they, and why were they so important to the outcome?

In his late 60s, he was ready to retire from government work when he was offered the opportunity to head a $2 billion subway project for the capital. A similar effort had failed disastrously in Calcutta, partly because of political infighting, leaving many people skeptical about the project's potential for success. But Sreedharan says that he wanted better standards for his people, who are accustomed to the frustrations and inconveniences of living in a developing nation. So he took the job of managing director of the Delhi Metro Rail Corp and began what others thought an impossible task: designing and building a state-of-the-art subway system beneath New Delhi. As director for a government-run bureau, he earns about one-twentieth of what he might make in the private sector. But he says that success of the new system is what counts to him most. "I am working not for myself alone but for society, the community," he explains. "I don't take this job for the remuneration, but for the satisfaction of creating some really good facility for the public."[2]

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LO **1** ▶

The design and construction of New Delhi's subway system is a tremendous success story. So were the early years of Dell, which gained market share as it perfected an individualized but rapid system for getting desktop and laptop PCs into the hands of consumers and business users. But more recently, Dell has stumbled.[3] Consumers have been more interested in low prices from discounters than in Dell's customization. Efforts to save money by outsourcing customer service led to widespread complaints about poor quality. Then the federal government announced that it was investigating financial irregularities in its reporting systems. When Dell said it would restate its earnings, the NASDAQ stock market nearly removed the company from its listing. How can a company that once was so successful run into so many problems, and how can a construction success story such as New Delhi's occur even in a bureaucracy as ungainly as India's? These examples are two sides of one coin: control—a means or mechanism for regulating the behavior of organization members. Left on their own, people may act in ways that they perceive to be beneficial to them individually but that may work to the detriment of the organization as a whole. Even well-intentioned people may not know whether they are directing their efforts toward the activities that are most important. Thus, control is one of the fundamental forces that keep the organization together and heading in the right direction.

control

Any process that directs the activities of individuals toward the achievement of organizational goals.

Control is defined as any process that directs the activities of individuals toward the achievement of organizational goals. It is how effective managers make sure that activities are going as planned. Some managers don't want to admit it (see Table 16.1), but control problems—the lack of controls or the wrong kinds of controls—frequently cause irreparable damage to organizations. Ineffective control systems result in problems ranging from employee theft to peeling tire tread problems. Research in Motion was publicly embarrassed when failure to fully test a "noncritical system routine" for updating its computer servers caused the e-mail service on its BlackBerry devices to crash for hours throughout North America.[4] Employees simply wasting time cost U.S. employers billions of dollars each year![5]

Control has been called one of the Siamese twins of management. The other twin is *planning*. Some means of control are necessary because once managers form plans and strategies, they must ensure that the plans are carried out. They must make sure that other people are doing what needs to be done and not doing inappropriate things. If plans are not carried out properly, management must take steps to correct the problem. This process is the primary control function of management. By ensuring creativity, enhancing quality, and reducing cost, managers must figure out ways to control the activities in their organizations.

Control is essential for the attainment of any management objective.

Not surprisingly, effective planning facilitates control, and control facilitates planning. Planning lays out a framework for the future and, in this sense, provides a blueprint for control. Control systems, in turn, regulate the allocation and use of resources and, in so doing, facilitate the process of the next phases of planning. In today's complex

TABLE 16.1

Symptoms of an Out-of-Control Company

• **Lax top management**—senior managers do not emphasize or value the need for controls, or they set a bad example.
• **Absence of policies**—the firm's expectations are not established in writing.
• **Lack of agreed-upon standards**—organization members are unclear about what needs to be achieved.
• **"Shoot the messenger" management**—employees feel their careers would be at risk if they reported bad news.
• **Lack of periodic reviews**—managers do not assess performance on a regular, timely basis.
• **Bad information systems**—key data are not measured and reported in a timely and easily accessible way.
• **Lack of ethics in the culture**—organization members have not internalized a commitment to integrity.

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System Control	Features and Requirements
Bureaucratic control	Uses formal rules, standards, hierarchy, and legitimate authority. Works best where tasks are certain and workers are independent.
Market control	Uses prices, competition, profit centers, and exchange relationships. Works best where tangible output can be identified and market can be established between parties.
Clan control	Involves culture, shared values, beliefs, expectations, and trust. Works best where there is "no one best way" to do a job and employees are empowered to make decisions.

TABLE 16.2
Characteristics of Controls

SOURCES: W. G. Ouchi, "A Conceptual Framework for the Design of Organizational Control Mechanisms," *Management Science* 25 (1979), pp. 833–48; W. G. Ouchi, "Markets, Bureaucracies, and Clans," *Administrative Science Quarterly* 25 (1980), pp. 129–41; and Richard D. Robey and C. A. Sales, *Designing Organizations* (Burr Ridge, IL: Richard D. Irwin, 1994).

organizational environment, both functions have become more difficult to implement while they have become more important in every department of the organization. Managers today must control their people, inventories, quality, and costs, to mention just a few of their responsibilities.

According to William Ouchi of the University of California at Los Angeles, managers can apply three broad strategies for achieving organizational control: bureaucratic control, market control, and clan control.[6] **Bureaucratic control** is the use of rules, regulations, and formal authority to guide performance. It includes such items as budgets, statistical reports, and performance appraisals to regulate behavior and results. **Market control** involves the use of pricing mechanisms to regulate activities in organizations as though they were economic transactions. Business units may be treated as profit centers and trade resources (services or goods) with one another via such mechanisms. Managers who run these units may be evaluated on the basis of profit and loss. **Clan control,** unlike the first two types, does not assume that the interests of the organization and individuals naturally diverge. Instead, clan control is based on the idea that employees may share the values, expectations, and goals of the organization and act in accordance with them. When members of an organization have common values and goals—and trust one another—formal controls may be less necessary. Clan control is based on many of the interpersonal processes described in the organization culture section of Chapter 2, in Chapter 12 on leadership, and in Chapter 14 on groups and teams (e.g., group norms and cohesiveness).

Table 16.2 summarizes the main features of bureaucratic, market, and clan controls. We use this framework as a foundation for our discussions throughout the chapter.

bureaucratic control

The use of rules, regulations, and authority to guide performance.

market control

Control based on the use of pricing mechanisms and economic information to regulate activities within organizations.

clan control

Control based on the norms, values, shared goals, and trust among group members.
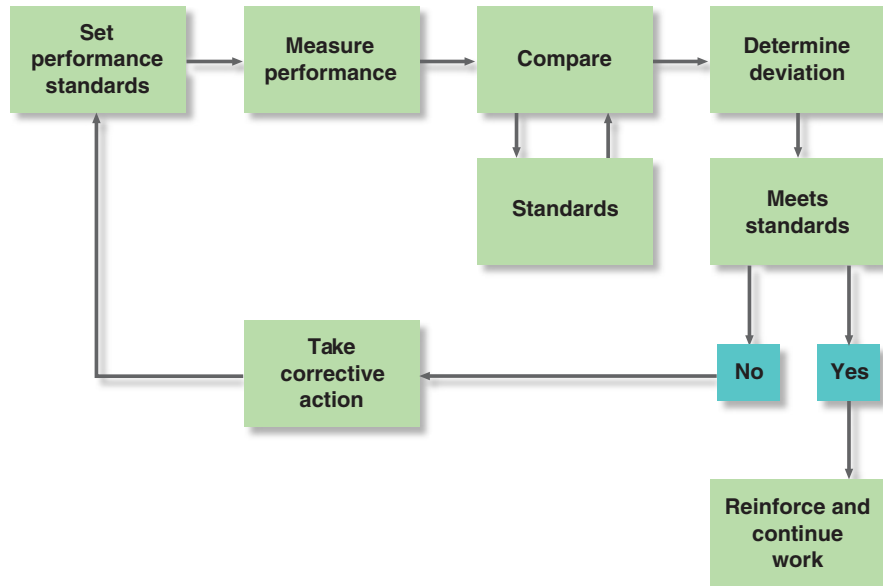
Bureaucratic Control Systems

LO **2** ▶

Bureaucratic (or formal) control systems are designed to measure progress toward set performance goals and, if necessary, to apply corrective measures to ensure that performance achieves managers' objectives. Control systems detect and correct significant variations, or discrepancies, in the results of planned activities.

The Control Cycle

As Figure 16.1 shows, a typical control system has four major steps:

1. Setting performance standards.
2. Measuring performance.
3. Comparing performance against the standards and determining deviations.
4. Taking action to correct problems and reinforce successes.

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FIGURE 16.1
The Control Process

Step 1: Setting Performance Standards   Every organization has goals: profitability, innovation, satisfaction of customers and employees, and so on. A **standard** is the level of expected performance for a given goal. Standards are targets that establish desired performance levels, motivate performance, and serve as benchmarks against which to assess actual performance. Standards can be set for any activity—financial activities, operating activities, legal compliance, charitable contributions, and so on.[7]

We have discussed setting performance standards in other parts of the text. For example, employee goal setting for motivation is built around the concept of specific, measurable performance standards. Such standards should be challenging and should aim for improvement over past performance. Typically, performance standards are derived from job requirements, such as increasing market share by 10 percent, reducing costs 20 percent, and answering customer complaints within 24 hours. But performance standards don't apply just to people in isolation—they frequently reflect the integration of both human and system performance. HealthPartners, a Bloomington, Minnesota, nonprofit organization that operates clinics and a hospital and offers health insurance plans, sets ambitious standards for patient care. To achieve a goal of reducing diabetes complications by 30 percent, HealthPartners measured existing practices and results, and then set up a standard protocol for exams and treatments, including the requirement that any abnormal results receive an immediate response. To encourage its physicians to follow the protocol, HealthPartners offers financial incentives for compliance. In little more than a decade, HealthPartners exceeded its goal for improved diabetes care. A local eye doctor commented that it was easy to tell which diabetic patients have coverage through HealthPartners because so few of them suffer diabetes-related damage to their retinas. HealthPartners has similar programs for treatment of cardiovascular disease and depression and for improving the health status of patients who are obese or smoke.[8]

Performance standards can be set with respect to (1) quantity, (2) quality, (3) time used, and (4) cost. For example, production activities include volume of output (quantity), defects (quality), on-time availability of finished goods (time use), and dollar expenditures for raw materials and direct labor (cost). Many important aspects of performance, such as customer service, can be measured by the same standards—adequate supply and availability of products, quality of service, speed of delivery, and so forth.

standard

Expected performance for a given goal: a target that establishes a desired performance level, motivates performance, and serves as a benchmark against which actual performance is assessed.

Standards must be set for all bottom-line practices.

One word of caution: The downside of establishing performance targets and standards is that they may not be supported by other elements of the control system. Each piece of the system is important and depends on the others, as is evident in the massive undertaking of designing and building New Delhi's subway system. Otherwise, the system can get terribly out of balance.

Sometimes quality standards involve meeting or exceeding standards set by government agencies. Recently, the U.S. Food and Drug Administration proposed loosening its standards for the ingredients in products labeled "chocolate" to allow the use of vegetable fats other than cocoa butter. If the rule change takes effect, candies like Whoppers malted milk balls and PayDay Chocolatey Avalanche could put "chocolate" in their names. Some true chocolate lovers are horrified, but Nick Malgieri, director of the baking program at the Institute of Culinary Education in New York, says, "No one is going to force a high-class chocolate maker to add vegetable fat to chocolate."[9] At companies that seek a reputation for premium quality, the recipe standards can remain as strict as ever, and chocolate afficionados will be on the alert.

Step 2: Measuring Performance   The second step in the control process is to measure performance levels. For example, managers can count units produced, days absent, papers filed, samples distributed, and dollars earned. Performance data commonly are obtained from three sources: written reports, oral reports, and personal observations.

Written reports include computer printouts and on-screen reports. Thanks to computers' data-gathering and analysis capabilities and decreasing costs, both large and small companies can gather huge amounts of performance data.

Management Close-Up: TAKING ACTION

Elattuvalapil Sreedharan has been a civil engineer for the Indian government for more than half a century, so he understands the complexity of its bureaucracy. Where others had stumbled in their attempts to undertake major improvements to the country's infrastructure, Sreedharan was confident that he could succeed—if he was allowed to do things his way. And that meant avoiding political systems to ensure that builders and overseers were picked based on their technical expertise.

The subway project was a huge undertaking—blasting 90 tunnels and building 150 bridges throughout the city, but Sreedharan was undaunted. He selected his own team of engineers and awarded contracts to prequalified construction bidders to minimize interference from government officials and politicians. He insisted on having the authority to circumvent much of India's governmental bureaucracy, an authority that was granted. In addition, he declared that he was going to build this subway according to world standards, not Indian ones. This meant using the best high-tech equipment available: German-made precision machines to dig tunnels, state-of-the-art South Korean trains, and innovative French signaling equipment. Sreedharan kept his organization lean, having engineers handle their own correspondence, instead of hiring administrative assistants.

New Delhi's subway system was completed three years ahead of schedule, within its budget and using some of the best equipment in the world. The Indian government was so impressed with Sreedharan's performance that it immediately gave him another assignment: to expand the network from 40 miles and 59 stations to 206 miles and a high-speed rail link to the airport. Sreedharan accepted the challenge, although he admitted concern about finishing this new project on time. So he split his team into three parts—each to work on one of the new lines—and promised bonuses for the team that produced the best results. "He's nourishing a competitive spirit," says Anuj Dayal of Metro Rail. "It's part of the management strategy."[10]

- Why was it significant that Sreedharan actually set a higher performance standard for his project than the government of India did?
- How might competition among the engineering teams affect the performance standards of the next project?

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One common example of *oral reports* occurs when a salesperson contacts his or her immediate manager at the close of each business day to report the accomplishments, problems, or customers' reactions during the day. The manager can ask questions to gain additional information or clear up any misunderstandings. When necessary, tentative corrective actions can be worked out during the discussion.

Personal observation involves going to the area where activities take place and watching what is occurring. The manager can directly observe work methods, employees' nonverbal signals, and the general operation. Personal observation gives a detailed picture of what is going on, but it also has some disadvantages. It does not provide accurate quantitative data; the information usually is general and subjective. Also, employees can misunderstand the purpose of personal observation as mistrust or lack of confidence. Still, many managers believe in the value of firsthand observation. As you learned in earlier chapters, personal contact can increase leadership visibility and upward communication. It also provides valuable information about performance to supplement written and oral reports.

Regardless of the performance measure used, the information must be provided to managers on a timely basis. For example, consumer-goods companies such as General Foods carefully track new-product sales in selected local markets first, so they can make any necessary adjustments well before a national rollout. Information that is not available is of little or no use to managers.

principle of exception

A managerial principle stating that control is enhanced by concentrating on the exceptions to or significant deviations from the expected result or standard.
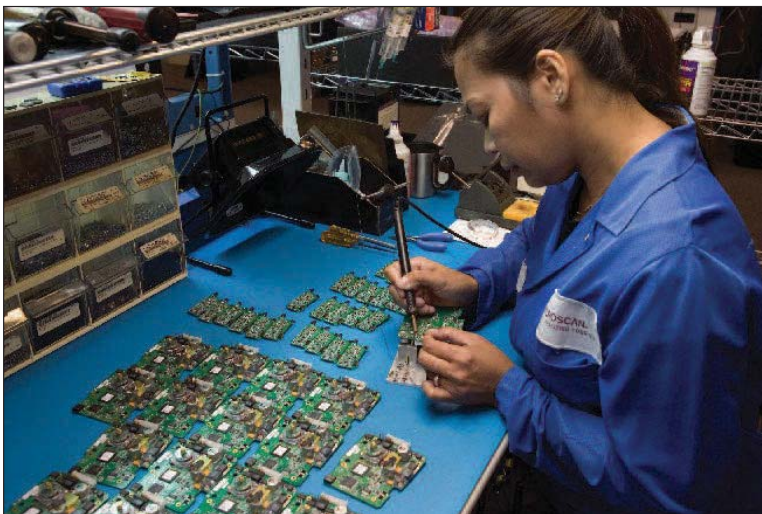
Step 3: Comparing Performance with the Standard The third step in the control process is comparing performance with the standard. In this process, the manager evaluates the performance. For some activities, relatively small deviations from the standard are acceptable, while in others a slight deviation may be serious. In many manufacturing processes, a significant deviation in either direction (e.g., drilling a hole that is too small or too large) is unacceptable. In other cases, a deviation in one direction, such as sales or customer satisfaction that fall below the target level, is a problem, but a deviation in the other, exceeding the sales target or customer expectations, is a sign employees are getting better-than-expected results. As a result, managers who perform the oversight must analyze and evaluate the results carefully.

The managerial **principle of exception** states that control is enhanced by concentrating on the exceptions to, or significant deviations from, the expected result or standard. In other words, in comparing performance with the standard, managers need to direct their attention to the exception. For example, controlling the quality of components produced on an assembly line might show that only 5 pieces per 1,000 fall out of line. To exercise effective control, the manager should investigate these five components—the exceptions—further.[11]

At Microscan, operators and assemblers are responsible for the quality of their work.

With the principle of exception, only exceptional cases require corrective action. This principle is important in controlling. The manager is not concerned with performance that equals or closely approximates the expected results. Managers can save much time and effort if they apply the principle of exception.

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Step 4: Taking Action to Correct Problems and Reinforce Successes

The last step in the control process is to take appropriate action when there are significant deviations. This step ensures that operations are adjusted to achieve the planned results—or to continue exceeding the plan if the manager determines that is possible. In cases in which significant variances are discovered, the manager usually takes immediate and vigorous action.

> "Mistakes and problems are inevitable in complex enterprises.... We shouldn't expect heads of established organizations to be perfect, but we should expect them to catch and correct their mistakes quickly."
>
> —Rosabeth Moss Kanter, professor, Harvard Business School[12]

An alternative approach is for the corrective action to be taken, not by higher-ups, but by the operator at the point of the problem. In computer-controlled production technology, two basic types of control are feasible: specialist control and operator control. With *specialist control*, operators of computer-numerical-control (CNC) machines must notify engineering specialists of malfunctions. With this traditional division of labor, the specialist takes corrective action. With *operator control*, multiskilled operators can rectify their own problems as they occur. Not only is this second strategy more efficient because deviations are controlled closer to their source, but it is also more satisfying because operators benefit by having a more enriched job. At Microscan System, which makes bar-code scanners, every employee is responsible for ensuring the quality of his or her work, resulting in efficient operations. Engineers are responsible for preventing and correcting problems in product and process design, and production workers are responsible for preventing and correcting defects in the processes they carry out.[13]

The selection of the corrective action depends on the nature of the problem. The corrective action may involve a shift in marketing strategy (if, say, the problem is lower-than-expected sales), a disciplinary action, a new way to check the accuracy of manufactured parts, or a major modification to a process or system. Sometimes managers learn they can get better results if they adjust their own practices. Yum Brands, whose franchise restaurants include KFC, Taco Bell, Pizza Hut, and Long John Silver's, conducts regular surveys to learn whether employees feel strong commitment to their jobs. These data are shared with managers to help them measure their performance as leaders and motivators. Jonathan McDaniel, a Houston KFC manager, once learned that his employees were unhappy with their work hours. He began asking them ahead of time whether they wanted particular days off each month—information that helped him create better schedules and end a cause of employee dissatisfaction.[14]

The Power of Collaboration

When corrective action is needed to solve a systemic problem, such as major delays in work flow, often a team approach is most effective. A corrective action is more likely to have greater acceptance in the organization if it is based on a common effort and takes into account multiple points of view. As we discussed in Chapter 14, teams often bring a greater diversity of resources, ideas, and perspectives to problem solving. Knowledgeable team members can often prevent managers from simplistic solutions that don't address the underlying causes of a problem. They are more likely to take into account the effects of any solution on other parts of the organization, preventing new problems from arising later. And they may well develop solutions that managers might not have considered on their own. As a result, any corrective action that is finally adopted will probably be more effective. An important added benefit of bringing employees together to develop corrective actions is that it helps managers build and reinforce an organizationwide culture of high standards.

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Approaches to Bureaucratic Control

The three approaches to bureaucratic control are feedforward, concurrent, and feedback. **Feedforward control** takes place before operations begin and includes policies, procedures, and rules designed to ensure that planned activities are carried out properly. Examples include inspection of raw materials and proper selection and training of employees. **Concurrent control** takes place while plans are being carried out. It includes directing, monitoring, and fine-tuning activities as they occur. **Feedback control** focuses on the use of information about results to correct deviations from the acceptable standard after they arise.

Feedforward Control   Feedforward control (sometimes called *preliminary control*) is future oriented; its aim is to prevent problems before they arise. Instead of waiting for results and comparing them with goals, a manager can exert control by limiting activities in advance. For example, companies have policies defining the scope within which decisions are made. A company may dictate that managers must adhere to clear ethical and legal guidelines when making decisions. Formal rules and procedures also prescribe people's actions before they occur. By stating that a financial officer must approve expenditures over $1,000 or that only components that pass all safety tests can be used in a product, management specifies in advance which actions can and cannot be taken. To prevent defaults, banks may require extensive loan documentation, reviews, and approvals by bank officers before authorizing a loan.[15]

Recently, more managers have grown concerned about the organizational pitfalls of workplace romances, and some have sought a solution in feedforward controls. As wonderful as it is to find love, problems can arise if romantic activities between a supervisor and subordinate create a conflict of interest or charges of sexual harassment. Other employees might interpret the relationship wrongly—that the company sanctions personal relationships as a path to advancement. In addition, romantic ups-and-downs can spill over into the workplace and affect everyone's mood and motivation. Controls aimed at preventing such problems in an organization include training in appropriate behavior (including how to avoid sexual harassment) and even requiring executives and their romantic interests to sign "love contracts" in which they indicate that the relationship is voluntary and welcome. A copy of the contract goes into the company's personnel files in case the attachment disintegrates and an unhappy employee wants to blame the company for having allowed it in the first place.[16]

Concurrent Control   Concurrent control, which takes place while plans are carried out, is the heart of any control system. On a manufacturing floor, all efforts are directed toward producing the correct quantity and quality of the right products in the specified amount of time. In an airline terminal, the baggage must get to the right airplanes before flights depart. In factories, materials must be available when and where needed, and breakdowns in the production process must be repaired immediately. Concurrent control also is in effect when supervisors watch employees to ensure they work efficiently and avoid mistakes.

Advances in information technology have created powerful concurrent controls. Computerized systems give managers immediate access to data from the most remote corners of their companies. For example, managers can update budgets instantly based on a continuous flow of performance data. In production facilities, monitoring systems that track errors per hour, machine speeds, and other measures allow managers to correct small production problems before they become disasters. Point-of-sale terminals in store checkout lines send sales data back to a retailer's headquarters to show which products are selling in which locations.

For Jim Donald, CEO of Starbucks, store visits are a fundamental part of concurrent control. Donald spends most of his day observing and talking to managers, corporate staff, and store employees. He visits about 10 stores a day while traveling, and

<div style="float:left; width:30%;">

feedforward control

The control process used before operations begin, including policies, procedures, and rules designed to ensure that planned activities are carried out properly.

concurrent control

The control process used while plans are being carried out, including directing, monitoring, and fine-tuning activities as they are performed.

feedback control

Control that focuses on the use of information about previous results to correct deviations from the acceptable standard.

</div>

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even while he's at headquarters, he gets out to roughly 20 stores a week. During a visit, he joins employees at work behind the counter, and he gets quality information from sticking his head into areas as widely diverse as the restrooms and pastry display. Donald says he learned from Wal-Mart founder Sam Walton, "If you want to know what's wrong with the business, ask the front line."[17]

Feedback Control   Feedback control is involved when performance data have been gathered and analyzed and the results have been returned to someone (or something) in the process to make corrections. When supervisors monitor behavior, they are exercising concurrent control. When they point out and correct improper performance, they are using feedback as a means of control.

Timing is an important aspect of feedback control. Long time lags often occur between performance and feedback, such as when actual spending is compared with the quarterly budget, instead of weekly or monthly, or when some aspect of performance is compared with the projection made a year earlier. Yet, if feedback on performance is not timely, managers cannot quickly identify and eliminate the problem and prevent more serious harm.[18]

In late spring 2005, carmaker General Motors was struggling with legacy costs, a shrinking sales base, and negative cash flow . . . not to mention foreign competition from Honda and Toyota. What control measures might be lacking at GM? Considering what you've read about approaches to control, what method might be beneficial to GM?

Some feedback processes are under real-time (concurrent) control, such as a computer-controlled robot on an assembly line. Such units have sensors that continually determine whether they are in the correct position to perform their functions. If they are not, a built-in control device makes immediate corrections.

In other situations, feedback processes require more time. Some companies that value innovation are applying social network analysis, which uses data from surveys to create diagrams showing which employees collaborate with which colleagues. Employees who are at a hub of information sharing are the organization's "innovation catalysts"—people who actively participate in information sharing. Managers can use the social network analysis to reward innovation catalysts, give them important assignments, and, in areas where not enough collaboration is occurring, train and motivate employees to share knowledge.[19]

The Role of Six Sigma   One of the most important quality-control tools to emerge is Six Sigma, which we first discussed in Chapter 9. It is a particularly robust and powerful application of feedback control. Six Sigma is designed to reduce defects in all organization processes—not just product defects but anything that may result in customer dissatisfaction, such as inadequate service, delayed delivery, and excessively high prices due to high costs or inefficiency. The system was developed at Motorola in the late 1980s, when the company found it was being beaten consistently in the competitive marketplace by foreign firms that were able to produce higher-quality products at a lower cost. Since then, the technique has been widely adopted and even improved on by many companies, such as GE, Allied Signal, Ford, and Xerox.

Sigma is the Greek letter used in statistics to designate the estimated standard deviation, or variation in a process. It indicates how often defects in a process are likely to occur. The lower the sigma number, the higher the level of variation or defects; the higher the sigma number, the lower the level of variation or defects. For example, as you can see in Table 16.3, a two-sigma-level process has more than 300,000 defects per million opportunities (DPMO)—not a very well-controlled process. A three-sigma-level process has 66,807 DPMO, which is roughly a 93 percent level of accuracy. Many organizations operate at this level, which on its face does not sound too bad, until we consider its implications—for example, 7 items of airline baggage lost for every 100 processed. The additional costs to organizations of such inaccuracy are enormous. As you can see in the table, even at just

The bottom line
Quality

Six Sigma aims for defect-free performance

TABLE 16.3

Relationship between Sigma Level and Defects per Million Opportunities

Sigma Level	DPMO	Is Four Sigma Good Enough?
2σ	308,537	Consider these everyday examples of four sigma quality . . .
3σ	66,807	• 20,000 lost articles of mail per hour
4σ	**6,210**	• Unsafe drinking water 15 minutes per day
5σ	233	• 5,000 incorrect surgical operations per week
6σ	3.4	• 200,000 wrong prescriptions each year
		• No electricity for 7 hours each month

SOURCE: Tom Rancour and Mike McCracken, "Applying 6 Sigma Methods for Breakthrough Safety Performance," *Professional Safety* 45, no. 10 (October 2000), pp. 29–32. Reprinted with permission.

above a 99 percent defect-free rate, or 6,210 DPMO, the accuracy level is often unacceptable—the statistical equivalent of about 50 dropped newborn babies a day.[20]

At a six-sigma level, a process is producing fewer than 3.4 defects per million, which means it is operating at a 99.99966 percent level of accuracy. Six Sigma companies have not only close to zero product or service defects but also substantially lower production costs and cycle times and much higher levels of customer satisfaction. The methodology isn't just for the factory floor, either. Hospitals that use Six Sigma have reported lowering the incidence of patients mistakenly given the wrong medications.[21]

The Six Sigma approach is based on an intense statistical analysis of business processes that contribute to customer satisfaction. For example, one of the processes GE measured when it began using the process was product delivery time. Once the defects or variations are measured, their causes are analyzed. Teams of employees then work on designing and testing new processes that will reduce the causes of the variations. For example, if the team finds that delivery delays are caused by production bottlenecks, it will work on eliminating those. When an improved process is installed, it is analyzed again for remaining defects, and employees then work on reducing those. This cycle continues until the desired quality level is achieved. In this way, the Six Sigma process leads to continuous improvement in an organization's operations.

Six Sigma has come under some criticism for not always delivering business results.[22] One likely reason Six Sigma doesn't always improve the bottom line is that it focuses only on how to eliminate defects in a process, not whether the process is the best one for the organization. So, for example, at 3M, a drive to improve efficiency through Six Sigma has been blamed for slowing the flow of innovative ideas. At Home Depot, Six Sigma has been credited with improving such processes as customer checkout and deciding where to place products in stores, but some say the effort took store workers away from customers. One way managers can apply the strengths of Six Sigma and minimize the drawbacks is by setting different goals and control processes for the company's mature products than for its areas of innovation.

The Columbus Metropolitan Library used Six Sigma to the benefit of its workers, customers, and its overall processes. Because the library is a not-for-profit organization, its profits were not the issue. Instead, working within a limited—in fact, frozen—budget was the challenge. As the budget began to squeeze staff and services more tightly, the library's top managers had to figure out how to do more, perform better, and achieve results with fewer resources. To accomplish this, they turned to the Lean Six Sigma (LSS) approach, which combines Six Sigma quality improvement methods with efforts to eliminate waste—in time, complex processes, and materials. They settled on areas needing improvement, formed teams, and began to identify and define the specific problems the library was facing.

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Some of the improvement projects were broader in scope, and others were quite narrow. For example, one of the narrower projects involved reviewing how long a customer had to wait to speak to a staff member after dialing the library's information line. The line is a crucial link to the public, handling nearly 400,000 calls a year. Despite its importance, customers sometimes had to wait as much as five minutes to speak with someone—creating general dissatisfaction with the library. At first glance, it seemed that more staff would be needed to alleviate the problem. But when the project team dug deeper and applied statistical analysis through the Six Sigma approach, they discovered that the wait time was really caused by the length of the recorded menu and the way staff was trained to handle it. With reprogramming of the menu and retraining of the current staff, more than 80 percent of calls to the information line are now answered in less than 15 seconds.

The library has also undertaken projects involving community relations and development, requests for printed documents, human resources, and finance. "Of course, true systemwide quality improvement will require more than a handful of successful projects," writes library executive Shaunessy Everett. "Change is risky, it's scary, and it takes time." But the Columbus Metropolitan Library is now a true devotee of the Six Sigma approach.[23]

Management Audits

Over the years, **management audits** have developed as a means of evaluating the effectiveness and efficiency of various systems within an organization, from social responsibility programs to accounting control. Management audits may be external or internal. Managers conduct external audits of other companies and internal audits of their own companies. Some of the same tools and approaches are used for both types of audit.[24]

management audits
An evaluation of the effectiveness and efficiency of various systems within an organization.

External Audits   An **external audit** occurs when one organization evaluates another organization. Typically an external body such as a CPA firm conducts financial audits of an organization (accounting audits are discussed later). But any company can conduct external audits of competitors or other companies for its own strategic decision-making purposes. This type of analysis (1) investigates other organizations for possible merger or acquisition, (2) determines the soundness of a company that will be used as a major supplier, or (3) discovers the strengths and weaknesses of a competitor to maintain or better exploit the competitive advantage of the investigating organization. Publicly available data usually are used for these evaluations.[25]

External audits provide essential feedback control when they identify legal and ethical lapses that could harm the organization and its reputation. They also are useful for preliminary control because they can prevent problems from occurring. If a company seeking to acquire other businesses gathers adequate, accurate information about possible candidates, it is more likely to acquire the most appropriate companies and avoid unsound acquisitions.

external audit
An evaluation conducted by one organization, such as a CPA firm, on another.

Internal Audits   An organization may assign a group to conduct an **internal audit** to assess (1) what the company has done for itself and (2) what it has done for its customers or other recipients of its goods or services. The company can be evaluated on a number of factors, including financial stability, production efficiency, sales effectiveness, human resources development, earnings growth, public relations, civic responsibility, and other criteria of organizational effectiveness. The audit reviews the company's past, present, and future.[26] A recent study found that the stock prices of companies with highly rated audit committees tended to rise faster than shares of companies with lower-rated internal auditors. It is likely that the higher-rated audit committees do a better job of finding and eliminating undesirable practices.[27]

To perform a management audit, auditors compile a list of desired qualifications and weight each qualification. Among the most common undesirable practices uncovered

internal audit
A periodic assessment of a company's own planning, organizing, leading, and controlling processes.

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by a management audit are the performance of unnecessary work, duplication of work, poor inventory control, uneconomical use of equipment and machines, procedures that are more costly than necessary, and wasted resources. At Capital One Financial Corporation, the human resource (HR) department performed an audit of facilities usage. Over several months, staff members walked through headquarters, noting which desks were occupied. The audit determined that more than 4 out of 10 desks were unused each day, and another 3 out of 10 were unused at least part of the day. Employees were away at meetings, visiting clients, or working flexible schedules. The HR staff developed a plan for Capital One to operate more efficiently in one-third of its space. Now most employees keep their work items in a cart, which they take to a desk when they need one. The change saves the company $3 million a year.[28]

LO **3** ▶

Budgetary Controls

Budgetary control is one of the most widely recognized and commonly used methods of managerial control. It ties together feedforward control, concurrent control, and feedback control, depending on the point at which it is applied. *Budgetary control* is the process of finding out what's being done and comparing the results with the corresponding budget data to verify accomplishments or remedy differences. Budgetary control commonly is called **budgeting**.

budgeting

The process of investigating what is being done and comparing the results with the corresponding budget data to verify accomplishments or remedy differences; also called *budgetary controlling*.

Fundamental Budgetary Considerations   In private industry, budgetary control begins with an estimate of sales and expected income. Table 16.4 shows a budget with a forecast of expected sales (the *sales budget*) on the top row, followed by several categories of estimated expenses for the first three months of the year. In the bottom row, the profit estimate is determined by subtracting each month's budgeted expenses from the sales in that month's sales budget. Columns next to each month's budget provide space to enter the actual accomplishments so that managers can readily compare expected amounts and actual results.

Although this discussion of budgeting focuses on the flow of money into and out of the organization, budgeting information is not confined to finances. The entire enterprise and any of its units can create budgets for their activities, using units other than dollars, if appropriate. For example, many organizations use production budgets forecasting physical units produced and shipped, and labor can be budgeted in skill levels or hours of work required.

A primary consideration of budgeting is the length of the budget period. All budgets are prepared for a specific time period. Many budgets cover one, three, or six

TABLE 16.4   A Sales-Expense Budget

	January		February		March	
	Estimate	**Actual**	**Estimate**	**Actual**	**Estimate**	**Actual**
Sales	$1,200,000		$1,350,000		$1,400,000	
Expenses						
General overhead	310,000		310,000		310,000	
Selling	242,000		275,000		288,000	
Producing	327,000		430,500		456,800	
Research	118,400		118,400		115,000	
Office	90,000		91,200		91,500	
Advertising	32,500		27,000		25,800	
Estimated gross profit	80,100		97,900		112,900	

months or one year. The length of time selected depends on the primary purpose of the budgeting. The period chosen should include the enterprise's complete normal cycle of activity. For example, seasonal variations should be included for production and for sales. The budget period commonly coincides with other control devices, such as managerial reports, balance sheets, and statements of profit and loss. In addition, the extent to which reasonable forecasts can be made should be considered in selecting the length of the budget period.

Budgetary control proceeds through several stages. *Establishing expectancies* starts with the broad plan for the company and the estimate of sales, and it ends with budget approval and publication. Next, the *budgetary operations* stage deals with finding out what is being accomplished and comparing the results with expectancies. The last stage, as in any control process, involves responding appropriately with some combination of reinforcing successes and correcting problems.

Although practices differ widely, a member of top management often serves as the chief coordinator for formulating and using the budget. Usually the chief financial officer (CFO) has these duties. He or she needs to be less concerned with the details than with resolving conflicting interests, recommending adjustments when needed, and giving official sanction to the budgetary procedures. In a small company, budgeting responsibility generally rests with the owner. To understand why budgeting is a critical responsibility even in small start-ups, and to receive some practical advice on using budgets, read the "From the Pages of *BusinessWeek*" feature.

Better Business through Budgeting

FROM THE PAGES OF
BusinessWeek

Creating a budget can help a start-up entrepreneur set goals and evaluate the viability of a business idea. It can also help established small-business owners gauge the financial health of their companies and measure progress. No business should be without a working budget, yet many small companies do operate without formal budgets, or they seldom consult the budgets they draw up, says Wendy Alexander, director of small business for Capital One Financial. Here are edited excerpts of Alexander's interview with columnist Karen E. Klein.

Q: Why does a would-be entrepreneur or a small-business owner need to devote the time to creating a working budget?
A: For a start-up CEO, a well-planned budget is crucial to assess whether an idea is realistic, from a business and financial perspective. Once a company is in motion, it's a tool that tells you whether or not your financials are on track. If you experience unexpected windfalls or expenses, your budget acts as an early-warning system to alert you to those things. And, of course, a budget is key to getting loans, bringing on new partners, and attracting investors. With a budget, you'll have a history of performance that allows you to show what you planned to do with your company and what you have achieved.

Q: Don't most companies have budgets?
A: Most, but not all. A substantial number of the micro-businesses we counsel do not have working budgets. The reality is, most small-business owners found their companies because they love whatever it is they are producing or providing as a service. Managing the finances is secondary to most of them. So, if they feel like the financial matters are more or less under control, they don't bother to create a formal budget. Also, small-business owners are always strapped for time, and the last thing they want to spend a lot of time on are financial details. What's key is to make the commitment to do a budget, and then make it as simple—but also as effective—as possible.

Q: How do you define a budget, and what elements should it include?
A: Very simply, it involves identifying the income that the company is bringing in and the expenses that are going out. Every company should track its income, expenses, and profits and project those numbers about a year out, or even a couple of years out.

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Doing that shows how the company is expected to do in the future, and as time passes, those expectations can be compared to how the company actually does. That comparison shows the entrepreneur how the company is performing and whether or not goals are being met.

Q: How do small-business owners make realistic projections about what their financial performance will be over time?
A: If they are already in business, they should have a lot of historical data they can look at and go from there. A new business owner will need to do some research. Start by pulling together all your anticipated sources of income. Then think about whether the business is seasonal, what additional income sources might come along in the near future, and what your marketing plan is likely to generate in terms of increased income. Next, you do the same thing for your fixed costs and variable expenses, thinking about each major line item and what it is expected to cost. Once you've pulled the pieces of the puzzle together, you need to plug in the numbers.

Q: How do you come up with those?
A: You research prices and what things are likely to cost. If you can, you research the sales of other people in the same market you're in. Something to remember is that it always pays to be a little conservative with your numbers. It's always great to have some contingency funds. So don't constrict your business from taking advantage of good opportunities, but do build a financial cushion into your budget.

Q: What are the dangers of not having a budget?
A: The biggest danger is running blindly into a nasty surprise. Some of those surprises could even put your company out of business. For a start-up company that doesn't establish a budget, it may find that even if it is selling as much product as expected, the numbers just don't add up. It may simply be impossible to make a profit at the business. A lot of times with start-ups, entrepreneurs are focused so completely on recruiting customers that they don't realize how much their expenses are going to eat into their income.

Q: What are some of the common mistakes you see in budgeting, and how can entrepreneurs avoid them?
A: The biggest mistake is for a business owner to treat a budget as a one-time exercise, or a once-a-year exercise, rather than as a living document that they're using to run the business day to day. Often we see entrepreneurs who have prepared budgets, but only because they are trying to get a loan or they're doing their taxes. They put all this time and effort into drawing up the budget, then they set it aside and never consult it again.

SOURCE: Excerpted from Karen E. Klein, "Better Business through Budgeting," *BusinessWeek,* January 19, 2006, http://www.businessweek.com (interview with Wendy Alexander).

Types of Budgets   There are many types of budgets. Some of the more common types are as follows:

- *Sales budget.* Usually data for the sales budget include forecasts of sales by month, sales area, and product.
- *Production budget.* The production budget commonly is expressed in physical units. Required information for preparing this budget includes types and capacities of machines, economic quantities to produce, and availability of materials.
- *Cost budget.* The cost budget is used for areas of the organization that incur expenses but no revenue, such as human resources and other support departments. Cost budgets may also be included in the production budget. Costs may be fixed, or independent of the immediate level of activity (such as rent) or variable, rising or falling with the level of activity (such as raw materials).

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- *Cash budget.* The cash budget is essential to every business. It should be prepared after all other budget estimates are completed. The cash budget shows the anticipated receipts and expenditures, the amount of working capital available, the extent to which outside financing may be required, and the periods and amounts of cash available.
- *Capital budget.* The capital budget is used for the cost of fixed assets like plant and equipment. Such costs are usually treated, not as regular expenses, but as investments because of their long-term nature and importance to the organization's productivity.
- *Master budget.* The master budget includes all the major activities of the business. It brings together and coordinates all the activities of the other budgets and can be thought of as a "budget of budgets."

Nowhere are cost budget issues more evident than in the oil industry, which experiences many price fluctuations. But what happens when disaster strikes? Market control gets even more volatile. BP, one of the world's largest oil companies, recently experienced a triple disaster: a 200,000-gallon oil leak in its Alaska Prudhoe Bay pipeline, an explosion at an oil refinery in Texas that killed 15 people and injured 179 others, and the failure of a subsea pumping system when the Thunder Horse oil platform fell into the Gulf of Mexico. Each of these events cost the company hundreds of millions of dollars, adding up to $1.5 billion, not to mention delays and lost productivity. The loss of the Thunder Horse platform resulted in a three-year delay in the start-up of the world's largest floating oil platform.

Robert Malone, head of BP, was in charge of solving each of these mammoth problems. But management experts note that even more important was the problem of an organization culture that allowed these events to take place. How had no one noticed that oil was eating away the pipes leading into Prudhoe Bay? This is the type of question that Malone faced. Malone visited the Prudhoe Bay facility to learn what had happened and discovered crews working impossibly long hours with outdated technology. He acknowledged that changes were necessary, authorizing a wave of hiring and an additional $550 million for repairs at the site. But he was quick to note that BP wasn't willing to throw away money. "The day someone says budget doesn't matter, well, then I'm working at the wrong company," he said.[29]

Traditionally, budgets were often imposed *top-down*, with senior management setting specific targets for the entire organization at the beginning of the budget process. In today's more complex organizations, the budget process is much more likely to be *bottom-up*, with top management setting the general direction, but with lower-level and middle-level managers actually developing the budgets and submitting them for approval. When the budgets are consolidated, senior managers can then determine whether the budget objectives of the organization are being met. The budget will then be either approved or sent back down the organization for additional refinement.

Accounting records must be inspected periodically to ensure they were properly prepared and are correct. **Accounting audits,** which are designed to verify accounting reports and statements, are essential to the control process. This audit is performed by members of an outside firm of public accountants. Knowing that accounting records are accurate, true, and in keeping with generally accepted accounting practices (GAAP) creates confidence that a reliable base exists for sound overall controlling purposes.

accounting audits

Procedures used to verify accounting reports and statements.

Activity-Based Costing   Traditional methods of cost accounting may be inappropriate in today's business environment because they are based on outdated methods of rigid hierarchical organization. Instead of assuming that organizations are bureaucratic "machines" that can be separated into component functions such as human resources, purchasing, and maintenance, companies such as Chrysler,

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**activity-based
costing (ABC)**

A method of cost
accounting designed to
identify streams of activity
and then to allocate costs
across particular business
processes according to the
amount of time employees
devote to particular
activities.

Hewlett-Packard, and GE have used **activity-based costing (ABC)** to allocate costs across business processes.

ABC starts with the assumption that organizations are collections of people performing many different but related activities to satisfy customer needs. The ABC system is designed to identify those streams of activity and then to allocate costs across particular business processes. The basic procedure is outlined in Figure 16.2 and works as follows: First, employees are asked to break down what they do each day in order to define their *basic activities*. For example, employees in Dana Corporation's material control department engage in a number of activities that range from processing sales orders and sourcing parts to requesting engineering changes and solving problems. These activities form the basis for ABC. Second, managers look at total expenses computed by traditional accounting—fixed costs, supplies, salaries, fringe benefits, and so on—and spread total amounts over the activities according to the amount of time spent on each activity. At Dana, customer service employees spend nearly 25 percent of their time processing sales orders and only about 3 percent scheduling parts. Thus, 25 percent of the total cost ($144,846) goes to order processing, and 3 percent ($15,390) goes to scheduling parts. As can be seen in Figure 16.2, both the traditional and ABC systems reach the same bottom line. However, because the ABC method allocates costs across business processes, it provides a more accurate picture of how costs should be charged to products and services.[30]

This heightened accuracy can give managers a more realistic picture of how the organization is actually allocating its resources. It can highlight where wasted activities are occurring or whether activities cost too much relative to the benefits provided. Managers can then take action to correct the problem. For example, Dana's most expensive activity is sales-order processing. Its managers might try to find ways to lower that cost, freeing up resources for other tasks. By providing this type of information, ABC has become a valuable method for streamlining business processes.

$

The bottom line
COST

Activity-based costing can
highlight overspending.

LO **4** ▶

Financial Controls

In addition to budgets, businesses commonly use other statements for financial control. Two financial statements that help control overall organizational performance are the balance sheet and the profit and loss statement.

FIGURE 16.2
How Dana Discovers
What Its True Costs Are

Old way

Old-style accounting identifies costs
according to the category of expense.
The new math tells you that your real
costs are what you pay for the different
tasks your employees perform. Find
that out and you will manage better.

Salaries
$371,917

Fringes
$118,069

Supplies
$76,745

Fixed Costs
$23,614

Total $590,345

New way

Activity-based costing

	Salaries	Fringes	Supplies	Fixed costs
Process sales order				$144,846
Source parts				$136,320
Expedite supplier orders				$ 72,143
Expedite internal processing				$ 49,945
Receive supplier quality				$ 47,599
Reissue purchase orders				$ 45,235
Expedite customer orders				$ 27,747
Schedule intracompany sales				$ 17,768
Request engineering change				$ 16,704
Resolve problems				$ 16,648
Schedule parts				$ 15,390

Total $590,345

SOURCE: Courtesy Dana Corporation.

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The Balance Sheet   The **balance sheet** shows the financial picture of a company at a given time. This statement itemizes three elements: (1) assets, (2) liabilities, and (3) stockholders' equity. **Assets** are the values of the various items the corporation owns. **Liabilities** are the amounts the corporation owes to various creditors. **Stockholders' equity** is the amount accruing to the corporation's owners. The relationship among these three elements is as follows:

$$\text{Assets} = \text{Liabilities} + \text{Stockholders' equity}$$

Table 16.5 shows an example of a balance sheet. During the year, the company grew because it enlarged its building and acquired more machinery and equipment by means of long-term debt in the form of a first mortgage. Additional stock was sold to help finance the expansion. At the same time, accounts receivable were increased, and work in process was reduced. Observe that Total assets ($3,053,367) = Total liabilities ($677,204 + $618,600) + Stockholders' equity ($700,000 + $981,943 + $75,620).

Summarizing balance sheet items over a long period of time uncovers important trends and gives a manager further insight into overall performance and areas in which adjustments need to be made. For example, at some point, the company might decide that it would be prudent to slow down its expansion plans.

The Profit and Loss Statement   The **profit and loss statement** is an itemized financial statement of the income and expenses of a company's operations. Table 16.6 shows a comparative statement of profit and loss for two consecutive years. In this illustration, the operating revenue of the enterprise has increased. Expense also has increased, but at a lower rate, resulting in a higher net income. Some managers draw up tentative profit and loss statements and use them as goals. Then performance is measured against these goals or standards. From comparative statements of this type, a manager can identify trouble areas and correct them.

Controlling by profit and loss is most commonly used for the entire enterprise and, in the case of a diversified corporation, its divisions. However, if controlling is by departments, as in a decentralized organization in which department managers have control over both revenue and expense, a profit and loss statement is used for each department. Each department's output is measured, and a cost, including overhead, is charged to each department's operation. Expected net income is the standard for measuring a department's performance.

Financial Ratios   An effective approach for checking on the overall performance of an enterprise is to use key financial ratios. Ratios help indicate possible strengths and weaknesses in a company's operations. Key ratios are calculated from selected items on the profit and loss statement and the balance sheet. We will briefly discuss three categories of financial ratios: liquidity, leverage, and profitability:

- *Liquidity ratios.* Liquidity ratios indicate a company's ability to pay short-term debts. The most common liquidity ratio is *current assets to current liabilities,* called the **current ratio** or *net working capital ratio.* This ratio indicates the extent to which current assets can decline and still be adequate to pay current liabilities. Some analysts set a ratio of 2 to 1, or 2.00, as the desirable minimum. For example, referring back to Table 16.5, the liquidity ratio there is about 2.86 ($1,918,455/$667,204). The company's current assets are more than capable of supporting its current liabilities.
- *Leverage ratios.* Leverage ratios show the relative amount of funds in the business supplied by creditors and shareholders. An important example is the **debt-equity ratio,** which indicates the company's ability to meet its long-term financial obligations. If this ratio is less than 1.5, the amount of debt is not considered excessive. In Table 16.5, the debt-equity ratio is only

balance sheet

A report that shows the financial picture of a company at a given time and itemizes assets, liabilities, and stockholders' equity.

assets

The values of the various items the corporation owns.

liabilities

The amounts a corporation owes to various creditors.

stockholders' equity

The amount accruing to the corporation's owners.

profit and loss statement

An itemized financial statement of the income and expenses of a company's operations.

current ratio

A liquidity ratio that indicates the extent to which short-term assets can decline and still be adequate to pay short-term liabilities.

debt-equity ratio

A leverage ratio that indicates the company's ability to meet its long-term financial obligations.

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TABLE 16.5

A Comparative Balance
Sheet

Comparative Balance Sheet for the Years Ending December 31		
	This Year	**Last Year**
Assets		
Current assets:		
Cash	$161,870	$119,200
U.S. Treasury bills	250,400	30,760
Accounts receivable	825,595	458,762
Inventories:		
Work in process and finished products	429,250	770,800
Raw materials and supplies	251,340	231,010
Total current assets	1,918,455	1,610,532
Other assets:		
Land	157,570	155,250
Building	740,135	91,784
Machinery and equipment	172,688	63,673
Furniture and fixtures	132,494	57,110
Total other assets before depreciation	1,202,887	367,817
Less: Accumulated depreciation and amortization	67,975	63,786
Total other assets	1,134,912	304,031
Total assets	$3,053,367	$1,914,563
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$287,564	$441,685
Payrolls and withholdings from employees	44,055	49,580
Commissions and sundry accruals	83,260	41,362
Federal taxes on income	176,340	50,770
Current installment on long-term debt	85,985	38,624
Total current liabilities	667,204	622,021
Long-term liabilities:		
15-year, 9 percent loan, payable in each of the years 2002–2015	210,000	225,000
5 percent first mortgage	408,600	
Registered 9 percent notes payable		275,000
Total long-term liabilities	618,600	500,000
Stockholders' equity:		
Common stock: authorized 1,000,000 shares, outstanding last year 492,000 shares, outstanding this year 700,000 shares at $1 par value	700,000	492,000
Capital surplus	981,943	248,836
Earned surplus	75,620	51,706
Total stockholders' equity	1,757,563	792,542
Total liabilities and stockholders' equity	$3,053,367	$1,914,563

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TABLE 16.6
A Comparative Statement
of Profit and Loss

Comparative Statement of Profit and Loss for the Years Ending June 30			
	This Year	**Last Year**	**Increase or Decrease**
Income:			
Net sales	$253,218	$257,636	$4,418*
Dividends from investments	480	430	50
Other	1,741	1,773	32
Total	255,439	259,839	4,400*
Deductions:			
Cost of goods sold	180,481	178,866	1,615
Selling and administrative expenses	39,218	34,019	5,199
Interest expense	2,483	2,604	121*
Other	1,941	1,139	802
Total	224,123	216,628	7,495
Income before taxes	31,316	43,211	11,895*
Provision for taxes	3,300	9,500	6,200*
Net income	$ 28,016	$ 33,711	$5,695*

*Decrease.

0.35 ($618,600/$1,757,563). The company has financed its expansion almost entirely by issuing stock rather than by incurring significant long-term debt.

- *Profitability ratios.* Profitability ratios indicate management's ability to generate a financial return on sales or investment. For example, **return on investment (ROI)** is a ratio of profit to capital used, or a rate of return from capital (equity plus long-term debt). This ratio allows managers and shareholders to assess how well the firm is doing compared with other investments. For example, if the net income of the company in Table 16.5 were $300,000 this year, its return on capital would be 12.6 percent [$300,000/($1,757,563/$618,600)], normally a very reasonable rate of return.

return on investment (ROI)

A ratio of profit to capital used, or a rate of return from capital.

Using Financial Ratios   Although ratios provide both performance standards and indicators of what has occurred, exclusive reliance on financial ratios can have negative consequences. Because ratios usually are expressed in compressed time horizons (monthly, quarterly, or yearly), they often cause **management myopia**—managers focus on short-term earnings and profits at the expense of their longer-term strategic obligations.[31] Control systems using long-term (e.g., three- to six-year) performance targets can reduce management myopia and focus attention further into the future.

management myopia

Focusing on short-term earnings and profits at the expense of longer-term strategic obligations.

A second negative outcome of ratios is that they relegate other important considerations to a secondary position. Research and development, management development, progressive human resource practices, and other considerations may receive insufficient attention. Therefore, the use of ratios should be supplemented with other control measures. Organizations can hold managers accountable for market share, number of patents granted, sales of new products, human resource development, and other performance indicators.

The Downside of Bureaucratic Control

So far you have learned about control from a mechanical viewpoint. But organizations are not strictly mechanical; they are composed of people. While control systems are used to constrain people's behavior and make their future behavior predictable, people

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are not machines that automatically fall into line as the designers of control systems
intend. In fact, control systems can lead to dysfunctional behavior. A control system
cannot be effective without consideration of how people will react to it. For effective
control of employee behavior, managers should consider three types of potential re-
sponses to control: rigid bureaucratic behavior, tactical behavior, and resistance.[32]

Rigid Bureaucratic Behavior   Often people act in ways that will help them look
good on the control system's measures. This tendency can be useful, because it focuses
people on the behaviors management requires. But it can result in rigid, inflexible be-
havior geared toward doing *only* what the system requires. For example, in the earlier
discussion of Six Sigma, we noted that that control process emphasizes efficiency over
innovation. After 3M began using Six Sigma extensively, it slipped from its goal of hav-
ing at least one-third of sales come from newly released products. When George Buckley
recently took the CEO post, only one-fourth of sales were coming from new products,
and Buckley began relying less extensively on efficiency controls. Buckley explained to
a reporter, "Invention is by its very nature a disorderly process."[33] The control challenge,
of course, is for 3M to be both efficient and creative.

Rigid bureaucratic behavior occurs when control systems prompt employees to stay
out of trouble by following the rules. Unfortunately, such systems often lead to poor
customer service and make the entire organization slow to act (recall the discussion of
bureaucracy in Chapter 10). Some companies, including General Motors and UPS,
enforce rules that employees must keep their desks neat. Of course, a chaotic work-
place has its problems, but one survey found that people who said their desks were
"very neat" spent more of their day looking for items than people who said their desks
were "fairly messy."[34] By that measure, controlling neatness actually makes employees
less efficient. Likewise, trying to control your own productivity by limiting phone
calls and e-mail to certain times of day is beneficial only if you don't have the kind of
job where ignoring the phone or e-mail causes you to annoy customers or miss im-
portant problems.

We have all been victimized at some time by rigid bureaucratic behavior. Reflect
for a moment on this now classic story of a "nightmare" at a hospital:

> At midnight, a patient with eye pains enters an emergency room at a hospital. At the reception
> area, he is classified as a nonemergency case and referred to the hospital's eye clinic. Trouble is,
> the eye clinic doesn't open until the next morning. When he arrives at the clinic, the nurse asks
> for his referral slip, but the emergency room doctor had forgotten to give it to him. The patient
> has to return to the emergency room and wait for another physician to screen him. The physician
> refers him back to the eye clinic and to a social worker to arrange payment. Finally, a third doctor
> looks into his eye, sees a small piece of metal, and removes it—a 30-second procedure.[35]

Stories such as these have, of course, given bureaucracy a bad name. Some managers
will not even use the term *bureaucratic control* because of its potentially negative con-
notation. That is unfortunate because the control system itself is not the problem.
The problems occur when the systems are no longer viewed as tools for running the
business but instead as rules for dictating rigid behavior.

Tactical Behavior   Control systems will be ineffective if employees engage in tac-
tics aimed at "beating the system." The most common type of tactical behavior is to
manipulate information or report false performance data. People may produce two
kinds of invalid data: about what *has* been done and about what *can* be done. False re-
porting about the past is less common, because it is easier to identify someone who
misreports what happened than someone who gives an erroneous prediction or esti-
mate of what might happen. Still, managers sometimes change their accounting sys-
tems to "smooth out" the numbers. Also, people may intentionally feed false
information into a management information system to cover up errors or poor per-
formance. Recently, several customs inspectors at Orlando Sanford International Airport

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said their supervisors had pressured them to speed up the processing of passengers by entering "generic" data instead of actually questioning the passengers. According to the inspectors, when the system flagged passengers for additional screening during busy periods, they were told to guess at the information, such as race and length of stay, rather than asking the passengers to provide the information. The justification for this behavior was that time pressure gave them no more than a minute to screen each passenger and keep the line moving, so that the public would be satisfied with their agency's work.[36]

More commonly, people falsify their predictions or requests for the future. When asked to give budgetary estimates, employees usually ask for larger amounts than they need. On the other hand, they sometimes submit unrealistically *low* estimates when they believe a low estimate will help them get a budget or a project approved. Budget-setting sessions can become tugs-of-war between subordinates trying to get slack in the budget and superiors attempting to minimize slack. Similar tactics are exhibited when managers negotiate unrealistically low performance standards so that subordinates will have little trouble meeting them; when sales-

people project low forecasts so that they will look good by exceeding them; and when workers slow down the work pace while time-study analysts are setting work pace standards. In these and other cases, people are concerned only with their own performance figures rather than with the overall performance of their departments or companies.

Resistance to Control Often people strongly resist control systems. They do so for several reasons. First, comprehensive control systems increase the accuracy of performance data and make employees more accountable for their actions. Control systems uncover

Drug testing is one of the ways organizations monitor employees. Some people favor the control measure but change their minds when personally asked to submit a urine specimen.

mistakes, threaten people's job security and status, and decrease people's autonomy.

When Ford CEO Alan Mulally toured the automobile testing facility at product-rating organization Consumer Reports, he and two senior engineers received a lot of criticism from the Consumer Reports team about the inefficient design of the new Ford Edge crossover SUV. The Ford Edge doesn't have an electronic door opener like many of its rivals do. Although that doesn't sound like a major shortcoming, consider the shopper who arrives at the vehicle with arms full of groceries on a rainy day and has to drop all packages just to open the door or rear hatch. To that customer, it's a big deal. But as the engineers received this criticism, they began to become more and more defensive about their design. Mulally identified this behavior as one of his company's biggest problems—the tendency of employees to explain away mistakes instead of tackling them. "We seek to be understood more than we seek to understand," he commented.

Back at headquarters, Mulally examined the history of Ford compacts, where he learned that every time a Ford dealer sells a compact instead of a truck or SUV, the company loses $3,000. He was told that this is because Ford needed to sell a high number of

these cars to reach the firm's corporate average fuel economy number. But Mulally wasn't satisfied with the answer. "Why haven't you figured out a way to make a profit [on these cars]?" he asked. The answer is that for years, Ford has accepted the inevitability of losing money. When executive chairman Bill Ford Jr. learned that the company still used letter grades to assess its performance—and that executives were content with Cs—he pantomined aiming a gun at his head and replied, "We still do that?"[37]

Second, control systems can change expertise and power structures. For example, management information systems can make the costing, purchasing, and production decisions previously made by managers much quicker. Those individuals may fear a loss of expertise, power, and decision-making authority as a result.

Third, control systems can change the social structure of an organization. They can create competition and disrupt social groups and friendships. People may end up competing against those with whom they formerly had comfortable, cooperative relationships. Because people's social needs are so important, they will resist control systems that reduce social need satisfaction.

Fourth, control systems may be seen as an invasion of privacy, lead to lawsuits, and cause low morale.

LO 5 ▶ Designing Effective Control Systems

Effective control systems maximize potential benefits and minimize dysfunctional behaviors. To achieve this, management needs to design control systems that

1. Establish valid performance standards.
2. Provide adequate information to employees.
3. Ensure acceptablity to employees.
4. Maintain open communication.
5. Use multiple approaches.

Establish Valid Performance Standards An effective control system must be based on valid and accurate performance standards. The most effective standards, as discussed earlier, tend to be expressed in quantitative terms; they are objective rather than subjective. Also, the measures should not be capable of being easily sabotaged or faked. Moreover, the system must incorporate all important aspects of performance. For example, a company that just focused on sales volume without also looking at profitability might soon go out of business. As you learned earlier, unmeasured behaviors are neglected. Often, performance standards for delivering training and other HR programs emphasize trainee satisfaction as reported on surveys. But Sun Microsystems applies the criteria for valid performance standards. When it conducted a mentoring program, Sun's HR department investigated the impact on factors such as promotion rates, salary increases, and employee performance. The evaluation gave the HR department feedback useful for improving its mentoring program in the future.[38]

Starbucks CEO Joe Donald understands the importance of listening to employees on the front line. He visits at least 20 Starbucks a week, a form of concurrent control.

But management also must defend against another problem: too many measures that create overcontrol and employee resistance. To make many controls tolerable, managers can devote attention to a few key areas while setting "satisfactory" performance standards in others. Or they can establish simple priorities. The purchasing agent may have to meet targets in the following sequence: quality, availability, cost, inventory level. Finally,

managers can set tolerance ranges. For example, in financial budgeting optimistic, expected, and minimum levels sometimes are specified.

Many companies' budgets set cost targets only. This causes managers to control spending but also to neglect earnings. At Emerson Electric, profit and growth are key measures. If an unanticipated opportunity to increase market share arises, managers can spend what they need to go after it. The phrase "it's not in the budget" is less likely to stifle people at Emerson than it is at most other companies.

This principle applies to nonfinancial aspects of performance as well. At many customer service call centers, control aims to maximize efficiency by focusing on the average amount of time each agent spends handling each

Executives say their companies are better at financial controlling than controlling nonfinancial performance.[39]

How do you rate your organization's ability to measure and monitor financial and nonfinancial performance?

phone call. But the business objectives of call centers should also include other measures such as cross-selling products or improving customer satisfaction and repeat business. Carlson Leisure Travel Services is one of a growing number of companies using new technology to analyze the content—not just the duration—of each call and capture information about the amount sold by call-center agents.[40]

Business consultant Michael Hammer summarizes these points in terms of what he calls seven "deadly sins" of performance measurement to avoid:[41]

1. *Vanity*—using measures that are sure to make managers and the organization look good. For example, a company might measure order fulfillment in terms of whether products are delivered by the latest date promised by the organization, rather than by the tougher and more meaningful measure of when the customers request to receive the products.

2. *Provincialism*—limiting measures to functional or departmental responsibilities, rather than the organization's overall objectives. If a company's transportation department measures only shipping costs, it won't have an incentive to consider that shipping reliability (delivery on a given date) will affect performance at the company's stores or distribution centers.
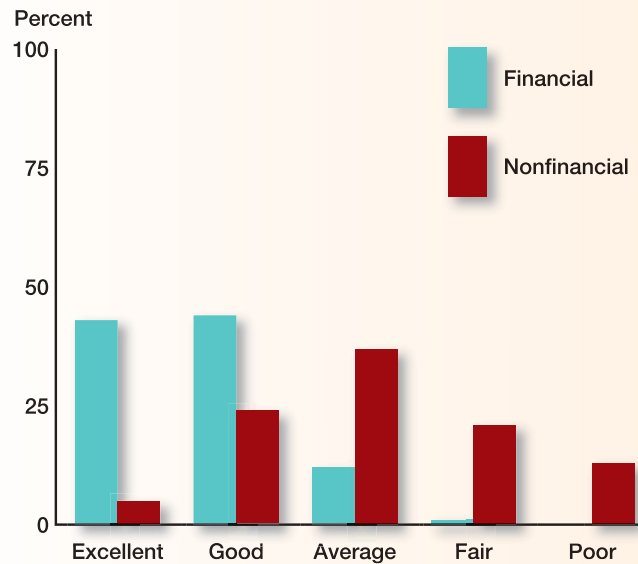
3. *Narcissism*—measuring from the employee's, manager's, or company's point of view, rather than the customer's. For example, a maker of computer systems measured on-time shipping of each component; if 90 percent of the system's components arrived at the customer on time, it was 90 percent on time. But from the customer's point of view, the system wasn't on time at all, because the customer needed *all* the components to use the system.

4. *Laziness*—not expending the effort to analyze what is important to measure. An electric power company simply assumed customers cared about installation speed, but in fact, customers really cared more about receiving an accurate installation schedule.

5. *Pettiness*—measuring just one component of what affects business performance. An example would be clothing manufacturers that assume they should just consider manufacturing cost, rather than the overall costs of making exactly the right products available in stores when customers demand them.

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6. *Inanity*—failing to consider the way standards will affect real-world human behavior and company performance. A fast-food restaurant targeted waste reduction and was surprised when restaurant managers began slowing down operations by directing their employees to hold off on cooking anything until orders were placed.

7. *Frivolity*—making excuses for poor performance rather than taking performance standards seriously. In some organizations, more effort goes to blaming others than to correcting problems.

According to Hammer, the basic correction to these "sins" is to carefully select standards that look at entire business processes, such as product development or order fulfillment, and identify which actions make those processes succeed. Then managers should measure performance against these standards precisely, accurately, and practically, making individuals responsible for their achievement and rewarding success.

Provide Adequate Information   Management must communicate to employees the importance and nature of the control system. Then people must receive feedback about their performance. Feedback motivates people and provides information that enables them to correct their own deviations from performance standards. Allowing people to initiate their own corrective action encourages self-control and reduces the need for outside supervision. *Open-book management*, described in Chapter 15, is a powerful use of this control principle.

Information should be as accessible as possible, particularly when people must make decisions quickly and frequently. For example, a national food company with its own truck fleet had a difficult problem. The company wanted drivers to go through customer sales records every night, insert new prices from headquarters every morning, and still make their rounds—an impossible set of demands. To solve this control problem, the company installed personal computers in more than 1,000 delivery trucks. Now drivers use their PCs for constant communication with headquarters. Each night drivers send information about the stores, and each morning headquarters sends prices and recommended stock mixes.

In general, a manager designing a control system should evaluate the information system in terms of the following questions:

1. Does it provide people with data relevant to the decisions they need to make?
2. Does it provide the right amount of information to decision makers throughout the organization?
3. Does it provide enough information to each part of the organization about how other, related parts of the organization are functioning?[42]

Ensure Acceptability to Employees   Employees are less likely to resist a control system and exhibit dysfunctional behaviors if they accept the system. They are more likely to accept systems that have useful performance standards but are not overcontrolling. Employees also will find systems more acceptable if they believe the standards are possible to achieve.

The control system should emphasize positive behavior rather than focusing on controlling negative behavior alone. McBride Electric, an electrical contracting company, uses an electronic monitoring system called DriveCam to encourage its drivers to behave responsibly in terms of safety and fuel consumption. A DriveCam video monitor in each truck records activity inside and outside the cab; it saves that recording only if the truck is involved in a specified "trigger event" such as braking hard or swerving. Management explained the system to the drivers, emphasizing that it would help the company improve profits (a relevant message in a company that practices open-book management) and would protect the workers if they were ever accused falsely of unsafe practices. Not only did McBride immediately begin seeing improvements in safety and vehicle wear and tear, but it was also able to make good on its promise to defend employees. An anonymous phone caller complained that poor driving by a McBride driver had caused him to wreck his car. The McBride manager who took the call explained that he

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The Power of Collaboration

Providing adequate information can sometimes mean the difference between life and death. That is why hospitals around the country have banded together to standardize the colors and messages that appear on wristbands used to alert hospital staff to patient allergies, risks, and do-not-resuscitate orders. Prior to these efforts, there were no standard guidelines to designate a color code for, say, an allergy to aspirin or the existence of diabetes. So patients who were transferred from one hospital to another—or doctors and nurses who rotated among hospitals—might waste valuable minutes in an emergency trying to read a patient's wristband, or might misinterpret it altogether.

Through collaboration, hospitals have created guidelines for their states and regions, setting limits on the number of colors that can be used and making sure that the colors that appear on a patient's chart correspond with those of the wristbands. In addition, they are purchasing preprinted wristbands with certain common warnings such as "allergy" or "fall risk." Finally, they order all other bands removed from a patient's wrist, such as those with religious or political messages, to reduce confusion. "Every day, our patients [were] transferred into acute-care hospitals where the color banding was totally different from ours, so on a daily basis we were putting our patients at risk," says Bonnie Haluska, chairman of the Color of Safety task force and assistant vice president of inpatient services at a hospital in Scranton, Pennsylvania.

Barb Averyt, project director at the Arizona Hospital & Healthcare Association, which is a member of the Western Region Alliance for Patient Safety, agrees. "The wristbands don't replace the medical record, but they are the first line of communication," she explains. "So if someone is mopping the floor and they see a patient with a yellow bracelet trying to get out of bed, they know they have to call the nurse."[43]

would be able to review a video taken from the truck that day—and the caller quickly hung up.[44] This approach exhibits the motivational quality of "procedural justice," described in Chapter 13. It gave employees the feeling that they were being evaluated by a fair process and was therefore more likely to be accepted by them.

Maintain Open Communication   When deviations from standards occur, it is important that employees feel able to report the deviations so that the problem can be addressed. If employees come to feel that their managers want to hear only good news or, worse, if they fear reprisal for reporting bad news, even if it is not their fault, then any controls that are in place will be much less likely to be effective. Problems may go unreported or, even worse, may reach the point where they become much more expensive or difficult to solve. But if managers create an environment of

The Power of Collaboration

One of the best ways to establish reasonable standards and thus gain employee acceptance of the control system is to set standards participatively. As we discussed in Chapter 4, participation in decision making secures people's understanding and cooperation and results in better decisions. Allowing employees to collaborate in control-system decisions that affect their jobs directly will help overcome resistance and foster acceptance of the system. In addition, employees on the "front line" are more likely to know which standards are most important and practical, and they can inform a manager's judgment on these issues. Finally, if standards are established in collaboration with employees, managers will more easily obtain cooperation on solving the problem when deviations from standards occur.

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openness and honesty, one in which employees feel comfortable sharing even negative information and are appreciated for doing so in a timely fashion, then the control system is much more likely to work effectively.

> "I've learned that mistakes can often be as good a teacher as success."
> —Jack Welch, former CEO, General Electric

Nevertheless, managers may sometimes need to discipline employees who are failing to meet important standards. In such cases, an approach called *progressive discipline* is usually most effective. In this approach, clear standards are established, but failure to meet them is dealt with in a progressive or step-by-step process. For example, the first time an employee's sales performance has been worse than it should have been, the supervising manager may offer verbal counseling or coaching. If problems persist, the next step might be a written reprimand. This type of reasonable and considered approach signals to all employees that the manager is interested in improving their performance, not in punishing them.

Use Multiple Approaches Multiple controls are necessary. For example, banks need controls on risk so that they don't lose a lot of money from defaulting borrowers, as well as profit controls including sales budgets that aim for growth in accounts and customers. Recently, many banks have emphasized sales growth by relaxing controls on lending to small businesses. Even brand-new start-ups are finding that Bank of America and some of its competitors will grant them unsecured business loans.[45] Of course, if too many of these businesses fail, the banks will have to reemphasize the risk management side of the equation and return to requiring collateral and a strong track record.

balanced scorecard

Control system combining four sets of performance measures: financial, customer, business process, and learning and growth.

As you learned earlier in this chapter, control systems generally should include both financial and nonfinancial performance targets and incorporate aspects of preliminary, concurrent, and feedback control. In recent years, a growing number of companies have combined targets for managers into a **balanced scorecard**, a combination of four sets of performance measures: (1) financial, (2) customer satisfaction, (3) business processes (quality and efficiency), and (4) learning and growth.[46] The goal is generally to broaden management's horizon beyond short-term financial results so that the company's long-term success is more likely. For example, Hyde Park Electronics had been using a variety of financial controls when it adopted a business scorecard that added metrics such as on-time delivery, employee satisfaction, and sales impact of marketing activities. Profits under the balanced scorecard reached record levels.[47] The balanced scorecard also is adaptable to nonprofit settings. Ocean-Monmouth Legal Services, which provides legal services to poor people in New Jersey, uses a balanced scorecard to track progress in meeting strategic, operational, financial, and client satisfaction goals. The organization's executive director, Harold E. Creacy, credits the approach with helping to cope with the rising costs and tight resources that so often plague nonprofits.[48]

Effective control will also require managers and organizations to use many of the other techniques and practices of good management. For example, compensation systems will grant rewards for meeting standards and impose consequences if they are not met. And to gain employee acceptance, managers may also rely on many of the other communication and motivational tools that we discussed in earlier chapters, such as persuasion and positive reinforcement.

The Other Controls: Markets and Clans

Although the concept of control has always been a central feature of organizations, the principles and philosophies underlying its use are changing. In the past, control was focused almost exclusively on bureaucratic (and market) mechanisms. Generations of managers

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were taught that they could maximize productivity by regulating what employees did on the job—through standard operating procedures, rules, regulations, and close supervision. To increase output on an assembly line, for example, managers in the past tried to identify the "one best way" to approach the work and then to monitor employees' activities to make certain that they followed standard operating procedures. In short, they controlled work by dividing and simplifying tasks, a process we referred to in Chapter 1 as *scientific management.*

Although formal bureaucratic control systems are perhaps the most pervasive in organizations (and the most talked about in management textbooks), they are not always the most effective. *Market controls* and *clan controls* may both represent more flexible, though no less potent, approaches to regulating performance.
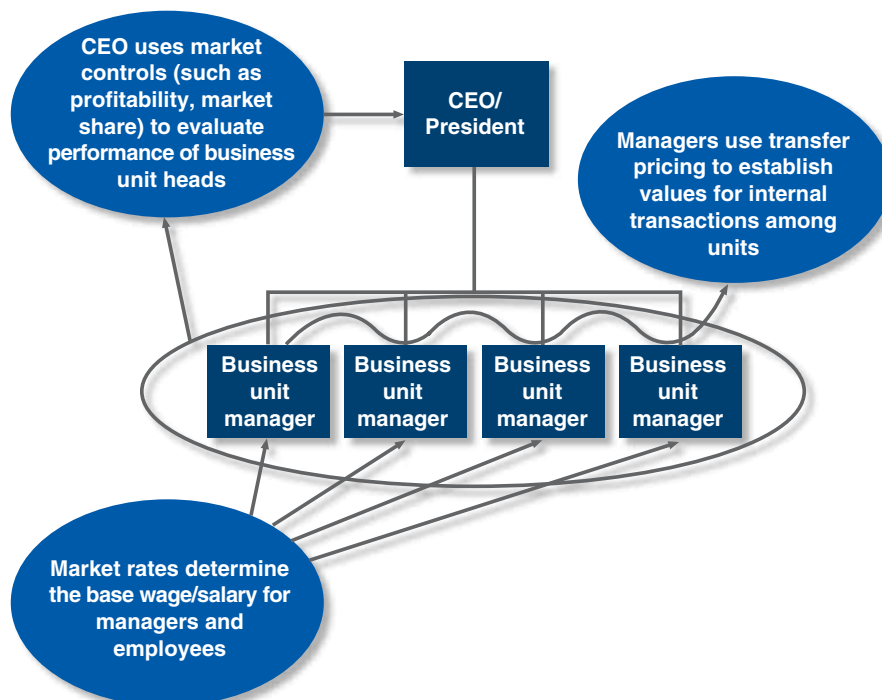
Market Control

In contrast to bureaucratic controls, market controls involve the use of economic forces—and the pricing mechanisms that accompany them—to regulate performance. The system works like this: in cases where output from an individual, department, or business unit has value to other people, a price can be negotiated for its exchange. As a market for these transactions becomes established, two effects occur:

$ **The bottom line**
COST

Market controls help maintain
low prices.

- Price becomes an indicator of the value of the good or service.
- Price competition has the effect of controlling productivity and performance.

The basic principles that underlie market controls can operate at the corporate level, the business unit (or department) level, and the individual level. Figure 16.3 shows a few different ways in which market controls are used in an organization.

FIGURE 16.3
Examples of Market Control

CEO uses market controls (such as profitability, market share) to evaluate performance of business unit heads

CEO/President

Managers use transfer pricing to establish values for internal transactions among units

Business unit manager

Business unit manager

Business unit manager

Business unit manager

Market rates determine the base wage/salary for managers and employees

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Market Controls at the Corporate Level   In large, diversified companies, market controls often are used to regulate independent business units. Particularly in large conglomerate firms that act as holding companies, business units typically are treated as profit centers that compete with one another. Top executives may place very few bureaucratic controls on business unit managers but use profit and loss data for evaluating performance. While decision making and power are decentralized to the business units, market controls ensure that business unit performance is in line with corporate objectives.

Use of market control mechanisms in this way has been criticized by those who insist that economic measures do not reflect the complete value of an organization adequately. Employees often suffer as diversified companies are repeatedly bought and sold based on market controls.

Market Controls at the Business Unit Level   Market control also can be used within business units to regulate exchanges among departments and functions. Transfer pricing is one method that organizations use to try to reflect market forces for internal transactions. A **transfer price** is the charge by one unit in the organization for a good or service that it supplies to another unit of the same organization. For example, in automobile manufacturing, a transfer price may be affixed to components and subassemblies before they are shipped to subsequent business units for final assembly. Ideally, the transfer price reflects the price that the receiving business unit would have to pay for that product or service in the marketplace.

As organizations have more options to outsource goods and services to external partners, market controls such as transfer prices provide natural incentives to keep costs down and quality up. Managers stay in close touch with prices in the marketplace to make sure their own costs are in line, and they try to improve the service they provide to increase their department's value to the organization. Consider the situation in which training and development activities can be done internally by the human resources department or outsourced to a consulting firm. If the human resources department cannot supply quality training at a reasonable price, there may be no reason for that department to exist inside the firm. Similarly, Penske Truck Leasing Company began outsourcing many of its finance processes to a company called Genpact, not only for lower prices but also for the expertise developed by that specialized firm to compete in the marketplace. Penske's senior vice president of finance, Frank Cocuzza, says the department spends $20 million less per year than it did to perform the same functions in-house while it has improved its rate of collections and learned thousands of ways to make his own operation more efficient, modeled after Genpact's lean practices.[49]

Market Controls at the Individual Level   Market controls also are used at the individual level. For example, in situations where organizations are trying to hire employees, the supply and demand for particular skills influence the wages employees can expect to receive and the rate organizations are likely to pay. Employees or job candidates who have more valuable skills tend to be paid a higher wage. Of course, wages don't always reflect market rates—sometimes they are based (perhaps arbitrarily) on internal resource considerations—but the market rate is often the best indicator of an employee's potential worth to a firm.

Market-based controls such as these are important in that they provide a natural incentive for employees to enhance their skills and offer them to potential firms. Even after individuals gain employment, market-based wages are important as controls in

transfer price

Price charged by one unit for a good or service provided to another unit within the organization.

As much as it would seem that market controls play a significant role in the salary of a professional baseball player or any other professional athlete, are the sometimes ridiculously high salaries that are paid for players today truly indicative of a player's skill— or something else? If the player doesn't live up to the expectation of the previously perceived skill level or, put another way, has a "bad year," should the organization be allowed to cut his pay?

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that persons with higher economic value may be promoted faster to higher positions
in the organization.

Market controls often are used by boards of directors to manage CEOs of
major corporations. Ironically, CEOs usually are seen as the ones controlling
everyone else in the company, but the fact is that the CEO is accountable to the
board of directors, and the board must devise ways to ensure that the CEO acts in
its interest. Absent board control, CEOs may act in ways that make them look
good personally (such as making the company bigger or more diversified) but that
do not lead to higher profits for the firm. And as recent corporate scandals have
shown, without board control CEOs may also artificially inflate the firm's earn-
ings, or not fully declare expenses, making the firm look much more successful
than it really is.

Traditionally, boards have tried to control CEO performance mainly through
the use of incentive plans, in addition to base salary. These typically include
some type of bonus tied to short-term profit targets. In large U.S. companies,
most CEO compensation is now at risk, meaning it depends mainly on the per-
formance of the company. In addition to short-term incentives, boards use some type
of long-term incentives linked to the firm's share price, usually through stock options,
which we discussed in Chapter 10. Also, balanced scorecards are intended to keep
CEOs focused on the company's longer-term health. And under the Sarbanes-Oxley
Act, described in Chapter 5, board members are expected to exercise careful con-
trol over the company's financial performance, including oversight of the CEO's
compensation package.

Clan Control: The Role of Empowerment and Culture

LO **7** ▶

Increasingly, managers are discovering that control systems based solely on bureau-
cratic and market mechanisms are insufficient for directing today's workforce. There
are several reasons for this:

- *Employees' jobs have changed.* The nature of work is evolving. Employees
  working with computers, for example, have more variability in their jobs,
  and much of their work is intellectual and therefore invisible. Because of
  this, there is no one best way to perform a task, and programming or
  standardizing jobs becomes extremely difficult. Close supervision is also
  unrealistic, because it is nearly impossible to supervise activities such as
  reasoning and problem solving.
- *The nature of management has changed.* The role of managers is evolving, too.
  Managers used to know more about the job than employees did. Today, it is
  typical for employees to know more about their jobs than anyone else does. We
  refer to this as the shift from touch labor to knowledge work. When real ex-
  pertise in organizations exists at the very lowest levels, hierarchical control be-
  comes impractical.[50]
- *The employment relationship has changed.* The social contract at work is being
  renegotiated. It used to be that employees were most concerned about issues
  such as pay, job security, and the hours of work. Today, however, more and
  more employees want to be more fully engaged in their work, taking part in
  decision making, devising solutions to unique problems, and receiving
  assignments that are challenging and involving. They want to use their brains.

For these three reasons, the
concept of *empowerment* not
only has become more popular
in organizations but has be-
come a necessary aspect of a

"As a manager the important thing is not what happens when you are there, but
what happens when you are not there."

—Ken Blanchard

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manager's repertoire of control. With no "one best way" to approach a job and no way to scrutinize what employees do every day, managers must empower employees to make decisions and trust that they will act in the best interests of the firm. But this does not mean giving up control. It means creating a strong culture of high standards and integrity so that employees will exercise effective control on their own.

Recall our extensive discussion of organization culture in Chapter 2. If the organization's culture encourages the wrong behaviors, then an effort to impose effective controls will be severely hindered. But if managers create and reinforce a strong culture that encourages correct behavior, one in which everyone understands management's values and expectations and is motivated to act in accordance with them, then clan control can be a very effective control tool.[51] As we noted at the beginning of this chapter, *clan control* involves creating relationships built on mutual respect and encouraging each individual to take responsibility for his or her actions. Employees work within a guiding framework of values, and they are expected to use good judgment. For example, at Nordstrom, the fashion retailer, instead of a thick manual laying out company policies, employees are simply given a five- by eight-inch card that reads: "Use good judgment in all situations. There will be no additional rules." (See page 76.) The emphasis in an empowered organization is on satisfying customers, not on pleasing the boss. Mistakes are tolerated as the unavoidable by-product of dealing with change and uncertainty and are viewed as opportunities to learn. And team members learn together. Table 16.7 provides a set of guidelines for managing in an empowered world.

The resiliency and time investment of clan control are a double-edged sword. Clan control takes a long time to develop and an even longer time to change. This gives an organization stability and direction during periods of upheaval in the environment or the organization (e.g., during changes in the top management). Yet if managers want to establish a new culture—a new form of clan control—they must help employees unlearn the old values and embrace the new. We will talk about this transition process more in the final chapter of this book.

Clan control empowers employees to meet performance standards.

TABLE 16.7
Management Control in an Empowered Setting

1. **Put control where the operation is.** Layers of hierarchy, close supervision, and checks and balances are quickly disappearing and being replaced with self-guided teams. For centuries even the British Empire—as large as it was—never had more than six levels of management including the Queen.
2. **Use "real time" rather than after-the-fact controls.** Issues and problems must be solved at the source by the people doing the actual work. Managers become a resource to help out the team.
3. **Rebuild the assumptions underlying management control to build on trust rather than distrust.** Today's "high-flex" organizations are based on empowerment, not obedience. Information must facilitate decision making, not police it.
4. **Move to control based on peer norms.** Clan control is a powerful thing. Workers in Japan, for example, have been known to commit suicide rather than disappoint or lose face within their team. Although this is extreme, it underlines the power of peer influence. The Japanese have a far more homogeneous culture and set of values than we do. In North America, we must build peer norms systematically and put much less emphasis on managing by the numbers.
5. **Rebuild the incentive systems to reinforce responsiveness and teamwork.** The twin goals of adding value to the customer and team performance must become the dominant raison d'être of the measurement systems.

SOURCE: Gerald H. B. Ross, "Revolution in Management Control," *Management Accounting*, November 1990, pp. 23–27. Reprinted by permission.

Management Close-Up:

ASSESSING OUTCOMES AND SEIZING OPPORTUNITIES

In addition to bringing a new subway system project in ahead of schedule and within budget, Elattuvalapil Sreedharan is responsible for some small and large changes in the way construction projects are done in India. For example, Indian construction workers now wear hardhats and other safety gear because he insisted on new rules for safety. Politicians who once tried to undercut and sabotage large construction projects if their own associates were not hired now recognize that Sreedharan's methods of control are better. They "have started to acknowledge that good results are possible and to see that they get the credit" when projects are completed well. Sreedharan admits that political interference is still a problem in India's bureaucracy, but he says that "things are changing."

Travelers who use the subway system itself are treated to a whole new world beneath New Delhi's streets. Wide stairways and smooth elevators make the stations more navigable. Smart cards, quietly air-conditioned trains, and comfortable seats make the ride pleasant. Electronic signs inform riders of wait times, and the trains generally run according to schedule. Residents of New Delhi have experienced the results of a successful project, and they now want more. "It's creating inner happiness for us to travel in this way," says one passenger. "It's hard to describe."

Sreedharan remains modest about his own achievements, preferring to move on to the next project. He shows no signs of slowing. "The government entrusted me with a certain job, and I have been able to perform that job well I should say. There is a satisfaction of having done that job very nicely, well in time and achieved it well within our project cost. I view it as nothing more than a part of my duty."[52]

- Sreedharan's engineers were hand-picked to work on the subway project, and they accept his control system and exhibit the behaviors of clan control. Why is this important to the success of his projects?
- Sreedharan's control system even had an effect on the Indian bureaucracy. Why do you think he has been successful in provoking change in the bureaucracy?

KEY TERMS

Accounting audits, p. 587

Activity-based costing (ABC), p. 588

Assets, p. 589

Balanced scorecard, p. 598

Balance sheet, p. 589

Budgeting, p. 584

Bureaucratic control, p. 575

Clan control, p. 575

Concurrent control, p. 580

Control, p. 574

Current ratio, p. 589

Debt-equity ratio, p. 589

External audit, p. 583

Feedback control, p. 580

Feedforward control, p. 580

Internal audit, p. 583

Liabilities, p. 589

Management audit, p. 583

Management myopia, p. 591

Market control, p. 575

Principle of exception, p. 578

Profit and loss statement, p. 589

Return on investment (ROI), p. 591

Standard, p. 576

Stockholders' equity, p. 589

Transfer price, p. 600

SUMMARY OF LEARNING OBJECTIVES

Now that you have studied Chapter 16, you should be able to:

Explain why companies develop control systems for employees.

Left to their own devices, employees may act in ways that do not benefit the organization. Control systems are designed to eliminate idiosyncratic behavior and keep employees directed toward achieving the goals of the firm. Control systems are a steering mechanism for guiding resources, for helping each individual act on behalf of the organization.

Summarize how to design a basic bureaucratic control system.

The design of a basic control system involves four steps: (1) setting performance standards, (2) measuring performance, (3) comparing performance with the standards, and (4) eliminating unfavorable deviations by taking corrective action. Performance standards should be valid and should cover issues such as quantity, quality, time, and cost. Once performance is compared with the standards, the principle of exception suggests that the manager needs to direct attention to the exceptional cases that have significant deviations. Then the manager takes the action most likely to solve the problem.

Describe the purposes for using budgets as a control device.

Budgets combine the benefits of feedforward, concurrent, and feedback controls. They are used as an initial guide for allocating resources, a reference point for using funds, and a feedback mechanism for comparing actual levels of sales and expenses with their expected levels. Recently, companies have modified their

budgeting processes to allocate costs over basic processes (such as customer service) rather than to functions or departments. By changing the way they prepare budgets, many companies have discovered ways to eliminate waste and improve business processes.

Define basic types of financial statements and financial ratios used as controls.

The basic financial statements are the balance sheet and the profit and loss statement. The balance sheet compares the value of company assets to the obligations the company owes to owners and creditors. The profit and loss statement shows company income relative to costs incurred. In addition to these statements, companies look at liquidity ratios (whether the company can pay its short-term debts), leverage ratios (the extent to which the company is funding operations by going into debt), and profitability ratios (profit relative to investment). These ratios provide a goal for managers as well as a standard against which to evaluate performance.

List procedures for implementing effective control systems.

To maximize the effectiveness of controls, managers should (1) establish valid performance standards, (2) provide adequate information to employees, (3) ensure acceptability, (4) maintain open communication, and (5) see that multiple approaches are used (such as bureaucratic, market, and clan control).

Identify ways in which organizations use market control mechanisms.

Market controls can be used at the level of the corporation, the business unit or department, or the individual. At the corporate level, business units are evaluated against one another based on profitability. At times, less profitable businesses are sold while more profitable businesses receive more resources. Within business units, transfer pricing may be used to approximate market mechanisms to control transactions among departments. At the individual level, market mechanisms control the wage rate of employees and can be used to evaluate the performance of individual managers.

Discuss the use of clan control in an empowered organization.

Approaching control from a centralized, mechanistic viewpoint is increasingly impractical. In today's organizations, it is difficult to program "one best way" to approach work, and it is often difficult to monitor performance. To be responsive to customers, companies must harness the expertise of employees and give them the freedom to act on their own initiative. To maintain control while empowering employees, companies should (1) use self-guided teams, (2) allow decision making at the source of the problems, (3) build trust and mutual respect, (4) base control on a guiding framework of norms, and (5) use incentive systems that encourage teamwork.

DISCUSSION QUESTIONS

1. What controls can you identify in the management of your school or at a company where you now work (or recently worked)? If you can, interview a manager or employee of the organization to learn more about the controls in use there. How might the organization's performance change if those controls were not in place?

2. How are leadership and control different? How are planning and control different? How are structure and control different?

3. Imagine you are the sales manager of a company that sells medical supplies to hospitals nationwide. You have 10 salespeople reporting to you. You are responsible for your department achieving a certain level of sales each year. In general terms, how might you go about taking each step in the control cycle?

4. In the situation described in Question 3, what actions would you need to take if sales fell far below the budgeted level? What, if any, actions would you need to take if sales far exceeded the sales budget? If sales are right on target, does effective controlling require any response from you? (Would your answer differ if the department were on target overall, but some salespeople fell short and others exceeded their targets?)

5. Besides sales and expenses, identify five other important control measures for a business. Include at least one nonfinancial measure.

6. What are the pros and cons of bureaucratic controls such as rules, procedures, and supervision?

7. Suppose a company at which executives were rewarded for meeting targets based only on profits and stock price switches to a balanced scorecard that adds measures for customer satisfaction, employee engagement, employee diversity, and ethical conduct. How, if at all, would you expect executives' performance to change in response to the new control system? How, if at all, would you expect the company's performance to change?

8. Google has recently begun offering Google Apps, such as Gmail, Google Calendar, and Docs & Spreadsheets, as collaboration tools for employees. Describe how the company could use market controls to determine whether Google employees will use these software programs or competing software (e.g., Word and Excel).

9. How effective is clan control as a control mechanism? What are its strengths? Its limitations? When would a manager rely on clan control the most?

10. Does empowerment imply the loss of control? Why or why not?

11. Some people use the concept of "personal control" to describe the application of business control principles to individual careers. Thinking about your school performance and career plans, which steps of the control process (Figure 16.1) have you been applying effectively? How do you keep track of your performance in meeting your career and life goals? How do you measure your success? Does clan control help you meet your personal objectives?

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CONCLUDING CASE

The Grizzly Bear Lodge

Diane and Rudy Conrad own a small lodge outside Yellowstone National Park. Their lodge has 15 rooms that can accommodate up to 40 guests, with some rooms set up for families. Diane and Rudy serve a continental breakfast on weekdays and a full breakfast on weekends, included in the room rates they charge. Their busy season runs from May through September, but they remain open until Thanksgiving and reopen in April for a short spring season. They currently employ one cook and two waitpersons for the breakfasts on weekends, handling the other breakfasts themselves. They also have several housekeeping staff members, a groundskeeper, and a front-desk employee. The Conrads take pride in the efficiency of their operation, including the loyalty of their employees, which they attribute to their own form of clan control. If a guest needs something—whether it's a breakfast catered to a special diet or an extra set of towels—Grizzly Bear workers are empowered to supply it.

The Conrads are considering expanding their business. They have been offered the opportunity to buy the property next door, which would give them the space to build an annex containing an additional 20 rooms. Currently, their annual sales total $300,000. With expenses running at $230,000—including mortgage, payroll, maintenance, and so forth—the Conrads' annual income is $70,000. They want to expand and make improvements without cutting back on the personal service they offer to their guests. In fact, in addition to hiring more staff to handle the larger facility, they are considering collaborating with more local businesses to offer guided rafting, fishing, hiking, and horseback riding trips. They also want to expand their food service to include dinner during the high season, which means renovating the restaurant area of the lodge and hiring more kitchen and wait staff. Ultimately, the Conrads would like the lodge to be open year-round, offering guests opportunities to cross-country ski, ride snowmobiles, or hike in the winter. They hope to offer holiday packages for Thanksgiving, Christmas, and New Year's celebrations in the great outdoors. The Conrads report that their employees are enthusiastic about their plans and want to stay with them through the expansion process. "This is our dream business," says Rudy. "We're only at the beginning."

QUESTIONS

1. Discuss how Rudy and Diane can use feedforward, concurrent, and feedback controls both now and in the future at the Grizzly Bear Lodge to ensure their guests' satisfaction.

2. What might be some of the fundamental budgetary considerations the Conrads would have as they plan the expansion of their lodge?

3. Describe how the Conrads could use market controls to plan and implement their expansion.

EXPERIENTIAL EXERCISES

16.1 Safety Program

OBJECTIVE

To understand some of the specific activities that fall under the management functions *planning, organizing, controlling and staffing,* and *directing.*

INSTRUCTIONS

After reading the following case, briefly describe the kinds of steps you would take as production manager in trying to solve your safety problem. Be sure to relate your answer specifically to the activities of *planning, organizing, controlling and staffing,* and *directing.*

MANAGING THE VAMP CO. SAFETY PROGRAM

If there are specific things that a manager does, how are they done? What does it "look like" when one manages? The following describes a typical situation in which a manager performs managerial functions:

As production manager of the Vamp Stamping Company, you've become quite concerned over the metal stamping shop's safety record. Accidents that resulted in operators' missing time on the job have increased quite rapidly in the past year. These more serious accidents have jumped from 3 percent of all accidents reported to a current level of 10 percent.

Because you're concerned about your workers' safety as well as the company's ability to meet its customers' orders, you want to reduce this downtime accident rate to its previous level or lower within the next six months.

You call the accident trend to the attention of your production supervisors, pointing out the seriousness of the situation and their continuing responsibility to enforce the gloves and safety goggles rules. Effective immediately, every supervisor will review his or her accident reports for the past year, file a report summarizing these accidents with you, and state their intended actions to correct recurring causes of the accidents. They will make out weekly safety reports as well as meet with you every Friday to discuss what is being done and any problems they are running into.

You request the union steward's cooperation in helping the safety supervisor set up a short program on shop safety practices.

Because the machine operators are having the accidents, you encourage your supervisors to talk to their workers and find out what they think can be done to reduce the downtime accident rate to its previous level.

While the program is going on, you review the weekly reports, looking for patterns that will tell you how effective the program is and where the trouble spots are. If a supervisor's operators are not decreasing their accident rate, you discuss the matter in considerable detail with the supervisor and his or her key workers.

SOURCE: From Theodore T. Herbert, *The New Management: Study Guide,* 4th ed., p. 41. Copyright © 1983 Pearson Education. Reprinted by permission of Pearson Education, Inc., Upper Saddle River, NJ.

16.2 Preliminary, Concurrent, and Feedback Control

OBJECTIVES

1. To demonstrate the need for control procedures.
2. To gain experience in determining when to use preliminary, concurrent, and feedback controls.

INSTRUCTIONS

1. Read the text materials on preliminary, concurrent, and feedback control.
2. Read the Control Problem Situation and be prepared to resolve those control problems in a group setting.
3. Your instructor will divide the class into small groups. Each group completes the Preliminary, Concurrent, and Feedback Control Worksheet by achieving consensus on the types of control that should be applied in each situation. The group also develops responses to the discussion questions.
4. After the class reconvenes, group spokespersons present group findings.

DISCUSSION QUESTIONS

1. For which control(s) was it easier to determine application? For which was it harder?
2. Would this exercise be better assigned to groups or to individuals?

CONTROL PROBLEM SITUATION

Your management consulting team has just been hired by Technocron International, a rapidly growing producer of electronic surveillance devices that are sold to commercial and government end users. Some sales are made through direct selling, and some through industrial resellers. Direct-sale profits are being hurt by what seem to be exorbitant expenses paid to a few of the salespeople, especially those who fly all over the world in patterns that suggest little planning and control. There is trouble among the resellers because standard contracts have not been established and each reseller has an entirely different contractual relationship. Repayment schedules vary widely from customer to customer. Also, profits are reduced by the need to specialize most orders, making mass production almost impossible. However, no effort has been made to create interchangeable components. There are also tremendous inventory problems. Some raw materials and parts are bought in such small quantities that new orders are being placed almost daily. Other orders are so large that there is hardly room to store everything. Many of these purchased components are later found to be defective and unusable, causing production delays. Engineering changes are made that make large numbers of old components still in storage obsolete. Some delays result from designs that are very difficult to assemble, and assemblers complain that their corrective suggestions are ignored by engineering. To save money, untrained workers are hired and assigned to experienced "worker-buddies" who are expected to train them on the job. However, many of the new people are too poorly educated to understand their assignments, and their worker-buddies wind up doing a great deal of their work. This, along with the low pay and lack of consideration from engineering, is causing a great deal of worker unrest and talk of forming a union. Last week alone there were nine new worker grievances filed, and the U.S. Equal Employment Opportunity Commission has just announced intentions to investigate two charges of discrimination on the part of the company. There is also a serious cash-flow problem, as a number of long-term debts are coming due at the same time. The cash-flow problem could be relieved somewhat if some of the accounts payable could be collected.

The CEO manages corporate matters through five functional divisions: operations, engineering, marketing, finance, and human resources management and general administration.

Preliminary, Concurrent, and Feedback Control Worksheet

Technocron International is in need of a variety of controls. Complete the following matrix by noting the preliminary, concurrent, and feedback controls that are needed in each of the five functional divisions.

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Divisions	Preliminary Controls	Concurrent Controls	Feedback Controls
HRM and general administration	_____	_____	_____
Operations	_____	_____	_____
Engineering	_____	_____	_____
Marketing	_____	_____	_____
Finance	_____	_____	_____