Controlling is the final step in the management process. Managers must monitor whether goals that were established as part of the planning process are being accomplished efficiently and effectively. That's what they do when they control. Appropriate controls can help managers look for specific performance gaps and areas for improvement. As the BP story shows, things don't always go as planned. But that's why controlling is so important! In this chapter, we'll look at the fundamental elements of controlling, including the control process, the types of controls that managers can use, and contemporary issues in control.

14.1 Explain the nature and importance of control.

WHAT IS CONTROL AND WHY IS IT IMPORTANT?

"Bailout" was the magic word that cost Domino's Pizza 11,000 free pizzas. The company had prepared an Internet coupon for an ad campaign that was considered but not approved. However, when someone apparently typed "bailout" into a Domino's promotional code window and found it was good for a free medium pizza, the word spread like wildfire on the Web. Somewhere, somehow, a lack of control cost the company big time.[2]

What Is Control?

Control is the management function that involves monitoring activities to ensure that they're being accomplished as planned and correcting any significant deviations. Managers can't really know whether their units are performing properly until they've evaluated what activities have been done and have compared the actual performance with the desired standard. An effective control system ensures that activities are completed in ways that lead to the attainment of the organization's goals. The effectiveness of a control system is determined by how well it facilitates goal achievement. The more a control system helps managers achieve their organization's goals, the better it is.

Why Is Control Important?

A press operator at the Denver Mint noticed a flaw—an extra up leaf or an extra down leaf—on Wisconsin state quarters being pressed at one of his five press machines. He stopped the machine and left for a meal break. When he returned, he saw the machine running and assumed that someone had changed the die in the machine. However, after a routine inspection, the machine operator realized the die had not been changed. The faulty press had likely been running for over an hour and thousands of the flawed coins were now "co-mingled" with unblemished quarters. As many as 50,000 of the faulty coins entered circulation, setting off a coin collector buying frenzy.[4]

Can you see now why controlling is such an important managerial function? Planning can be done, an organizational structure created to facilitate efficient achievement of goals, and employees motivated through effective leadership. But there's no assurance that activities are going as planned and that the goals employees and managers are working toward are, in fact, being attained. Control is important, therefore, because it's the only way that managers know whether organizational goals are being met and if not, the reasons why. The value of the control function can be seen in three specific areas: planning, empowering employees, and protecting the workplace.

In Chapter 5, we described goals, which provide specific direction to employees and managers, as the foundation of

RIGHT OR WRONG

The practice is called "sweethearting."[3] It's when cashiers use subtle tricks to pass free goods to friends, doing things such as concealing the bar code, slipping an item behind the scanner, passing two items at a time but only charging for one. It's impossible for even the most watchful human eyes to keep it from happening. So retailers are using technology to block it. Surveillance cameras are used to record and study cashiers staffing checkout lines.

Think About:

- What do you think? Is surveillance less invasive when it's a computer watching instead of a human?
- How could organizations make sure it's being ethical in monitoring employees?

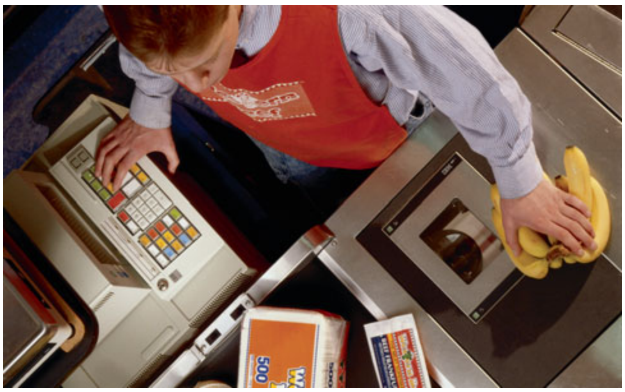
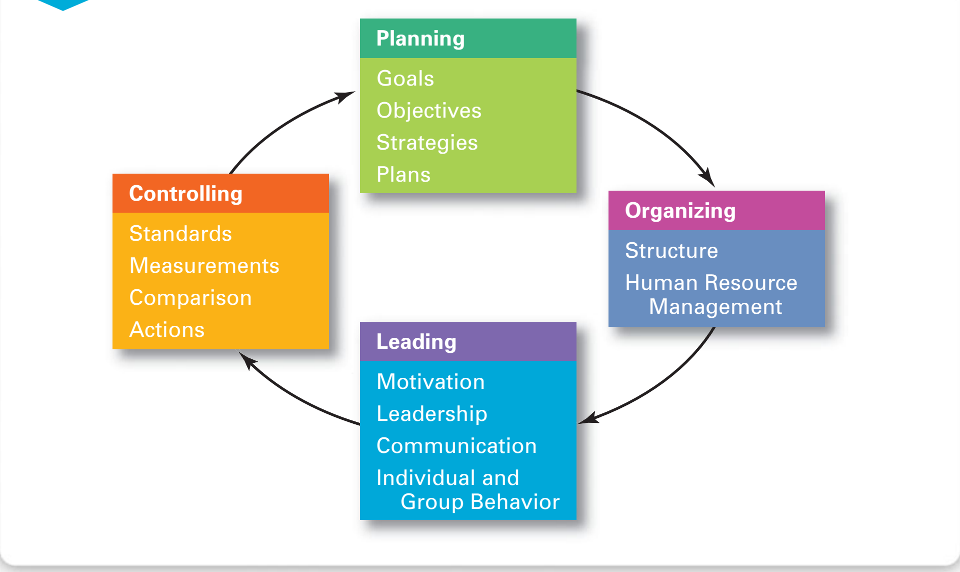

Steve Krongard/Getty Images USA, Inc.

EXHIBIT 14–1 Planning–Controlling Link



planning. However, just stating goals or having employees accept goals doesn't guarantee that the necessary actions to accomplish those goals have been taken. As the old saying goes, "The best-laid plans often go awry." The effective manager follows up to ensure that what employees are supposed to do is, in fact, being done and goals are being achieved. As the final step in the management process, controlling provides the critical link back to planning. (See Exhibit 14–1.) If managers didn't control, they'd have no way of knowing whether their goals and plans were being achieved and what future actions to take.

The second reason controlling is important is because of employee empowerment. Many managers are reluctant to empower their employees because they fear something will go wrong for which they would be held responsible. But an effective control system can provide information and feedback on employee performance and minimize the chance of potential problems.

The final reason that managers control is to protect the organization and its assets.[5] Organizations face threats from natural disasters, financial pressures and scandals, workplace violence, supply chain disruptions, security breaches, and even possible terrorist attacks. Managers must protect organizational assets in the event that any of these should happen. Comprehensive controls and backup plans will help minimize work disruptions.

WHAT TAKES PLACE AS MANAGERS CONTROL?

Describe the three steps in the control process. **14.2**

When Maggine Fuentes joined Core Systems in Painesville, Ohio, as HR manager, she knew that her top priority was reducing employee injuries. The number of injuries was "through the roof; above the industry average." The high frequency and severity of the company's injury rates not only affected employee morale but also resulted in lost workdays and affected the bottom line.[6] Fuentes relied on the control process to turn this situation around.

control
Management function that involves monitoring activities to ensure that they're being accomplished as planned and correcting any significant deviations

The **control process** is a three-step process of measuring actual performance, comparing actual performance against a standard, and taking managerial action to correct deviations or to address inadequate standards. (See Exhibit 14–2.) The control process assumes that performance standards already exist, and they do. They're the specific goals created during the planning process.

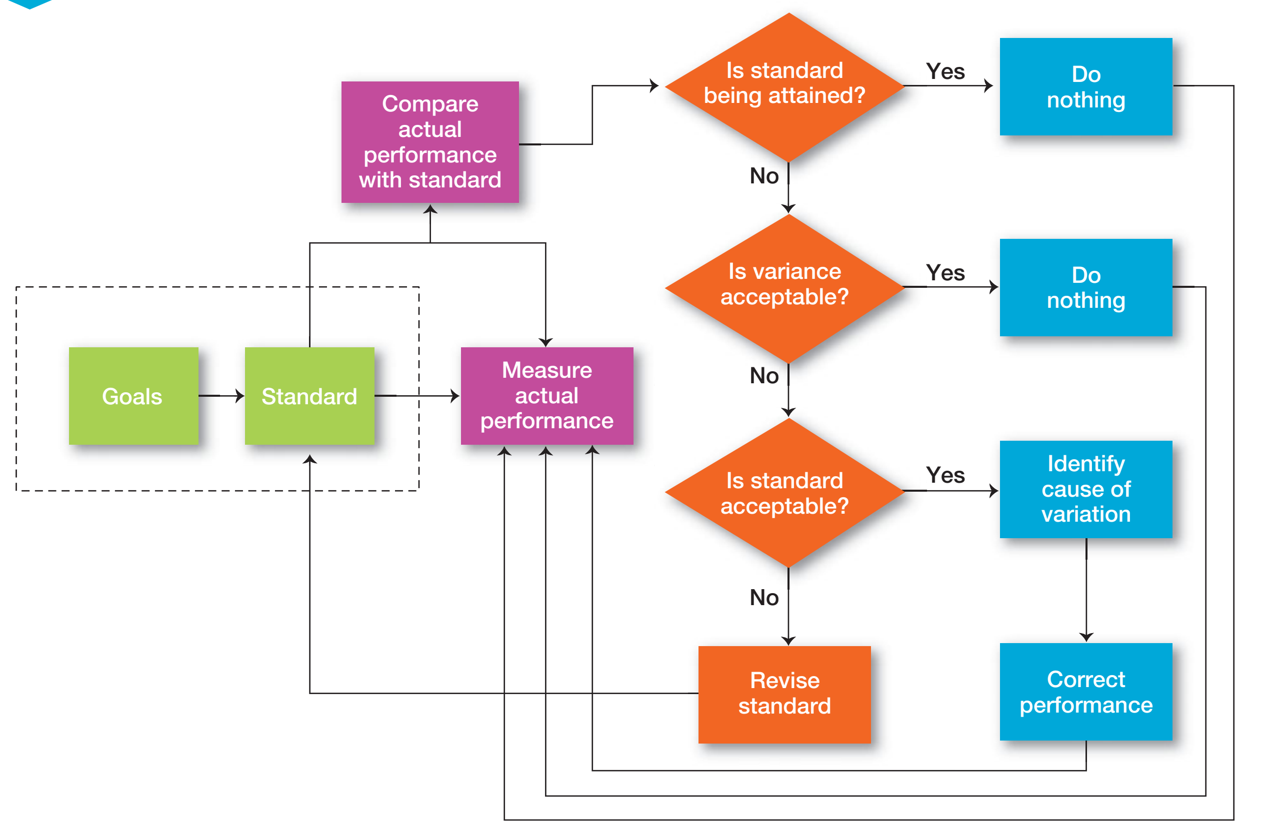
What Is Measuring?

To determine actual performance, a manager must first get information about it. Thus, the first step in control is measuring.

HOW DO MANAGERS MEASURE? Four common sources of information frequently used to measure actual performance are personal observation, statistical reports, oral reports, and written reports. Each has particular strengths and weaknesses; however, use of a combination of them increases both the number of input sources and the probability of receiving reliable information.

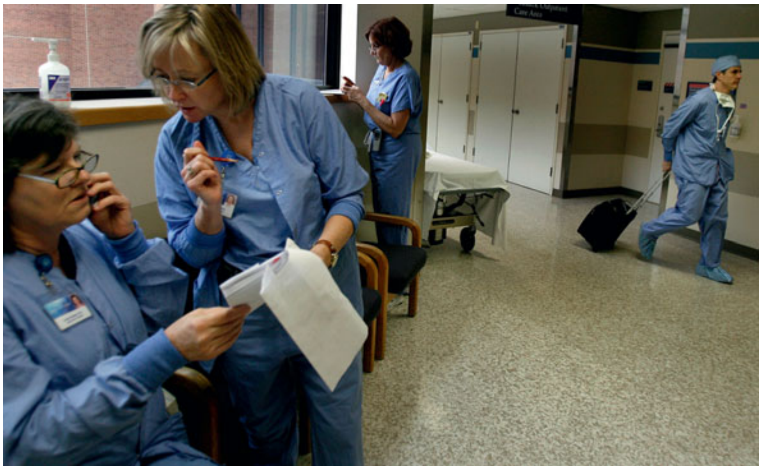
Personal observation provides firsthand, intimate knowledge of the actual activity—information that is not filtered through others. It permits intensive coverage because minor as well as major performance activities can be observed, and it provides opportunities for the manager to read between the lines. **Management by walking around (MBWA)** is a phrase used to describe when a manager is out in the work area, interacting directly with employees, and exchanging information about what's going on. Management by walking around can pick up factual omissions, facial expressions, and tones of voice that may be missed by other sources. Unfortunately, in a time when quantitative information suggests objectivity, personal observation is often considered an inferior information source. It is subject to perceptual biases; what one manager sees, another might not. Personal

EXHIBIT 14–2 The Control Process



observation also consumes a good deal of time. Finally, this method suffers from obtrusiveness. Employees might interpret a manager's overt observation as a lack of confidence or a sign of mistrust.

The widespread use of computers has led managers to rely increasingly on *statistical reports* for measuring actual performance. This measuring device, however, isn't limited to computer outputs. It also includes graphs, bar charts, and numerical displays of any form that managers can use for assessing performance. Although statistical information is easy to visualize and effective for showing relationships, it provides limited information about an activity. Statistics report on only a few key areas and may often ignore other important, often subjective, factors.



David Joles/Newscom

In controlling the quality and efficiency of its medical services, Mayo Clinic measures performance indicators that include outcomes achieved, such as readmission rates and safety records. The clinic also measures compliance with specific processes that enhance patient care, including giving the right consultations and therapies, the right medication at the right time, and the right diagnostic studies for specific problems. Through surveys, Mayo measures consumer satisfaction to ensure that every patient is treated with respect, dignity, and kindness by all members of the Mayo team, including the nurses and staff shown here working at Saint Marys Hospital, which is part of the clinic's medical center in Rochester, Minnesota.

Information can also be acquired through *oral reports*—that is, through conferences, meetings, one-to-one conversations, or telephone calls. In employee-oriented organizations where employees work closely together, this approach may be the best way to keep tabs on work performance. For instance, at the Ken Blanchard Companies in Escondido, California, managers are expected to hold one-on-one meetings with each of their employees at least once every two weeks.[7] The advantages and disadvantages of this method of measuring performance are similar to those of personal observation. Although the information is filtered, it is fast, allows for feedback, and permits expression and tone of voice as well as words themselves to convey meaning. Historically, one of the major drawbacks of oral reports has been the problem of documenting information for later reference. However, our technological capabilities have progressed in the past couple of decades to the point where oral reports can be efficiently taped and become as permanent as if they were written.

Actual performance may also be measured by *written reports*. Like statistical reports, they are slower yet more formal than firsthand or secondhand oral measures. This formality also often gives them greater comprehensiveness and conciseness than found in oral reports. In addition, written reports are usually easy to catalog and reference.

Given the varied advantages and disadvantages of each of these four measurement techniques, managers should use all four for comprehensive control efforts.

WHAT DO MANAGERS MEASURE? What managers measure is probably more critical to the control process than how they measure. Why? The selection of the wrong criteria can result in serious dysfunctional consequences. Besides, what we measure determines, to a great extent, what people in the organization will attempt to excel at.[8] For example, assume that your instructor has required a total of 10 writing assignments from the exercises at the end of each textbook chapter. But in the grade computation section of the syllabus, you notice that these assignments are not scored. In fact, when you ask your professor about this, she replies that these writing assignments are for your own enlightenment and do not affect your grade for the course; grades are solely a function of how well you perform on the three exams. We predict that you would, not surprisingly, exert most, if not all, of your effort toward doing well on the three exams.

Some control criteria are applicable to any management situation. For instance, because all managers, by definition, direct the activities of others, criteria such as employee satisfaction or turnover and absenteeism rates can be measured. Most managers have budgets for their area of responsibility set in monetary units (dollars, pounds, francs,

control process
A three-step process of measuring actual performance, comparing actual performance against a standard, and taking managerial action to correct deviations

management by walking around (MBWA)
When a manager is out in the work area interacting with employees

From the Past to the Present

We introduced benchmarking in the planning chapter (Chapter 5) as a way for organizations to promote quality.[9] Not surprisingly, since planning and controlling are so closely linked, it also has implications for control. Benchmarking has been a highly utilized management tool. Although Xerox is often credited with the first widespread benchmarking effort in the United States, the practice can actually be traced back much further.

The benefits of benchmarking have long been recognized in the manufacturing industry. At the Midvale Steel Company plant where he was employed, Frederick W. Taylor (of scientific management fame) used concepts of benchmarking to find the "one best way" to perform a job and to find the best worker to perform the job. Even Henry Ford recognized the benefits. Based on the techniques used at Chicago slaughterhouses where carcasses were hung from hooks mounted on a monorail, with each man performing his job and then pushing the carcass to the next work station, Ford's assembly line used the same concept for producing cars, beginning in 1913. "The idea that revolutionized manufacturing was imported from another industry."

Today, managers in diverse industries such as health care, education, and financial services are discovering what manufacturers have long recognized—the benefits of benchmarking. For instance, the American Medical Association developed more than 100 standard measures of performance to improve medical care. Carlos Ghosn, CEO of Nissan, benchmarked Walmart's operations in purchasing, transportation, and logistics. At its most basic, benchmarking means learning from others. However, as a tool for monitoring and measuring organizational and work performance, benchmarking can be used to identify specific performance gaps and potential areas of improvement.

Think About:

- What are the benefits of benchmarking? The challenges in doing it?
- Could the concept of benchmarking apply in your personal life? Discuss.

lire, and so on). Keeping costs within budget is, therefore, a fairly common control measure. However, any comprehensive control system needs to recognize the diversity of activities among managers. For example, a production manager in a paper tablet manufacturing plant might use measures of the quantity of tablets produced per day, tablets produced per labor hour, scrap tablet rate, or percentage of rejects returned by customers. On the other hand, the manager of an administrative unit in a government agency might use number of document pages produced per day, number of orders processed per hour, or average time required to process service calls. Marketing managers often use measures such as percent of market held, number of customer visits per salesperson, or number of customer impressions per advertising medium.

As you might imagine, some activities are more difficult to measure in quantifiable terms. It is more difficult, for instance, for a manager to measure the performance of a medical researcher or a middle school counselor than of a person who sells life insurance. But most activities can be broken down into objective segments that allow for measurement. The manager needs to determine what value a person, department, or unit contributes to the organization and then convert the contribution into standards.

Most jobs and activities can be expressed in tangible and measurable terms. When a performance indicator cannot be stated in quantifiable terms, managers should look for and use subjective measures. Certainly, subjective measures have significant limitations. Still, they are better than having no standards at all and ignoring the control function. If an activity is important, the excuse that it's difficult to measure is inadequate. In such cases, managers should use subjective performance criteria. Of course, any analysis or decisions made on the basis of subjective criteria should recognize the limitations of the data.

How Do Managers Compare Actual Performance to Planned Goals?

The comparing step determines the variation between actual performance and the standard. Although some variation in performance can be expected in all activities, it's critical to determine an acceptable **range of variation** (see Exhibit 14–3). Deviations outside this range need attention. Let's work through an example.

Chris Tanner is a sales manager for Green Earth Gardening Supply, a distributor of specialty plants and seeds in the Pacific Northwest. Chris prepares a report during the first week of each month that describes sales for the previous month, classified by product line.

EXHIBIT 14–3 Acceptable Range of Variation

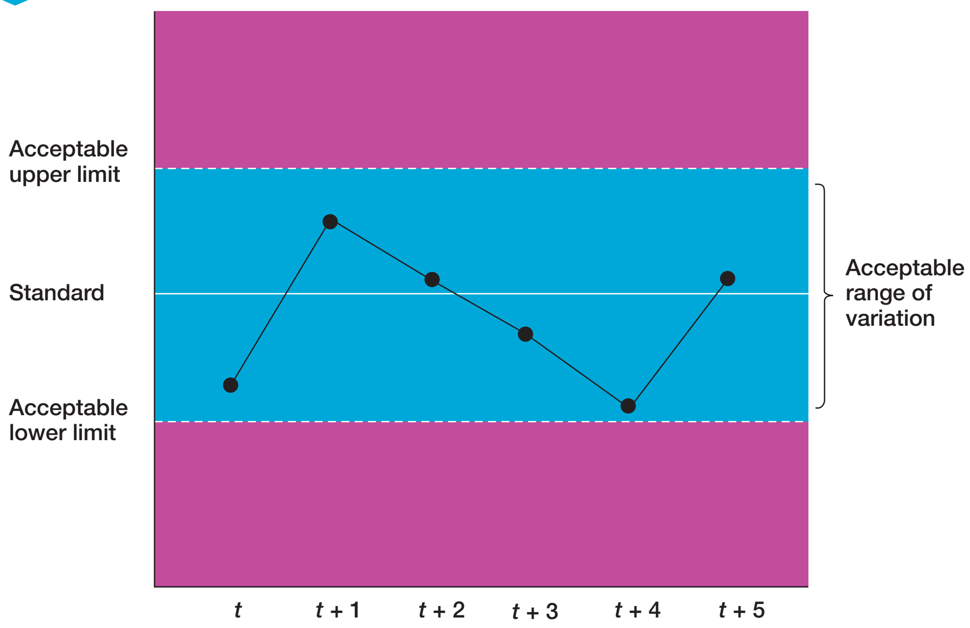


Exhibit 14–4 displays both the sales goals (standard) and actual sales figures for the month of June. After looking at the numbers, should Chris be concerned? Sales were a bit higher than originally targeted, but does that mean there were no significant deviations? That depends on what Chris thinks is *significant*; that is, outside the acceptable range of variation. Even though overall performance was generally quite favorable, some product lines need closer scrutiny. For instance, if sales of heirloom seeds, flowering bulbs, and annual flowers continue to be over what was expected, Chris might need to order more product from nurseries to meet customer demand. Because sales of vegetable plants were 15 percent below goal, Chris may need to run a special on them. As this example shows, both overvariance and undervariance may require managerial attention, which is the third step in the control process.

EXHIBIT 14–4 Example of Determining Significant Variation: Green Earth Gardening Supply—June Sales

PRODUCT	STANDARD	ACTUAL	OVER (UNDER)
Vegetable plants	1,075	913	(612)
Perennial flowers	630	634	4
Annual flowers	800	912	112
Herbs	160	140	(20)
Flowering bulbs	170	286	116
Flowering bushes	225	220	(5)
Heirloom seeds	540	672	132
Total	3,600	3,777	177

range of variation
The acceptable parameters of variance between actual performance and a standard

AND THE SURVEY SAYS...[10]

68 percent of workers say that they participated in a Super Bowl office pool; 56 percent have participated in a March Madness basketball office pool.

1.7 hours a day is what employees spend doing nothing, costing businesses $4.4 billion a day.

29.3 percent of fraud cases were in the amount of $100,000 to $499,999.

42 percent of employees who have stolen items from work say it's because they need the items.

88 percent of all data breaches involved insider negligence.

7 percent of revenues is what insider fraud is equal to.

58 percent of employees say they have a boss who plays online games at work.

2 years is the average length of time from fraud start to detection.

What Managerial Action Can Be Taken?

Managers can choose among three possible courses of action: do nothing, correct the actual performance, or revise the standards. Because "do nothing" is self-explanatory, let's look at the other two.

HOW DO YOU CORRECT ACTUAL PERFORMANCE? Depending on what the problem is, a manager could take different corrective actions. For instance, if unsatisfactory work is the reason for performance variations, the manager could correct it by things such as training programs, disciplinary action, changes in compensation practices, and so forth. One decision that a manager must make is whether to take **immediate corrective action**, which corrects problems at once to get performance back on track or to use **basic corrective action**, which looks at how and why performance deviated before correcting the source of deviation. It's not unusual for managers to rationalize that they don't have time to find the source of a problem (basic corrective action) and continue to perpetually "put out fires" with immediate corrective action. Effective managers analyze deviations and if the benefits justify it, take the time to pinpoint and correct the causes of variance.

HOW DO YOU REVISE THE STANDARD? It's possible that the variance was a result of an unrealistic standard—too low or too high a goal. In such cases, it's the standard that needs corrective action, not the performance. If performance consistently exceeds the goal, then a manager should look at whether the goal is too easy and needs to be raised. On the other hand, managers must be cautious about revising a standard downward. It's natural to blame the goal when an employee or a team falls short. For instance, students who get a low score on a test often attack the grade cutoff standards as too high. Rather than accept the fact that their performance was inadequate, they will argue that the standards are unreasonable. Likewise, salespeople who don't meet their monthly quota often want to blame what they think is an unrealistic quota. The point is that when performance isn't up to par, don't immediately blame the goal or standard. If you believe the standard is realistic, fair, and achievable, tell employees that you expect future work to improve, and then take the necessary corrective action to help make that happen.

WHAT SHOULD MANAGERS CONTROL?

14.3 **Discuss** the types of controls organizations and managers use.

Cost efficiency. The length of time customers are kept on hold. Customers being satisfied with the service provided. These are just a few of the important performance indicators that executives in the intensely competitive call-center service industry measure. To make good decisions, managers in this industry want and need this type of information so they can control work performance.

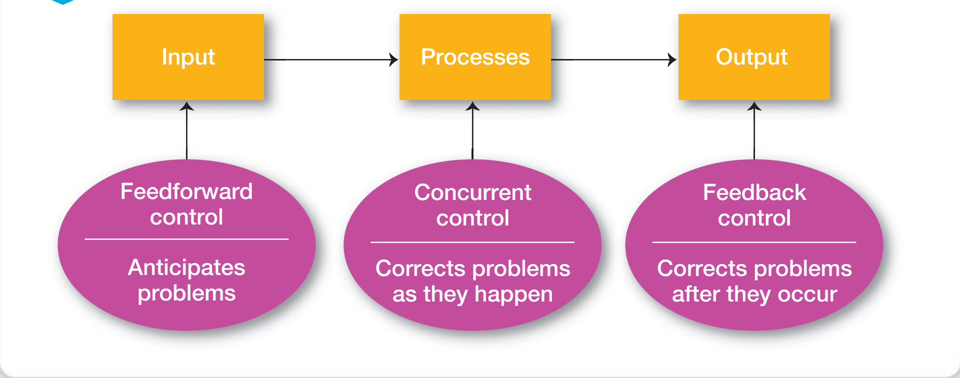
How do managers know what to control? In this section, we're first going to look at the decision of *what* to control in terms of when control takes place. Then, we're going to discuss some different areas in which managers might choose to establish controls.

When Does Control Take Place?

Management can implement controls before an activity commences, while the activity is going on, or after the activity has been completed. The first type is called feedforward control, the second is concurrent control, and the last is feedback control (see Exhibit 14–5).

WHAT IS FEEDFORWARD CONTROL? The most desirable type of control—**feedforward control**—prevents problems because it takes place before the actual activity.[11] For instance, when McDonald's opened its first restaurant in Moscow, it sent company quality control experts to help Russian farmers learn techniques for growing high-quality potatoes and to help bakers learn processes for baking high-quality breads. Why? McDonald's demands consistent product quality no matter the geographical location. They want french fries in Moscow to taste

EXHIBIT 14–5 "When" Does Control Take Place?



like those in Omaha. Still another example of feedforward control is the scheduled preventive maintenance programs on aircraft done by the major airlines. These schedules are designed to detect and hopefully to prevent structural damage that might lead to an accident.

The key to feedforward controls is taking managerial action *before* a problem occurs. That way, problems can be prevented rather than having to correct them after any damage—poor-quality products, lost customers, lost revenue, etc.—has already been done. However, these controls require timely and accurate information that isn't always easy to get. Thus, managers frequently end up using the other two types of control.

WHEN IS CONCURRENT CONTROL USED? **Concurrent control**, as its name implies, takes place while a work activity is in progress. For instance, the director of business product management at Google and his team keep a watchful eye on one of Google's most profitable businesses—online ads. They watch "the number of searches and clicks, the rate at which users click on ads, the revenue this generates—everything is tracked hour by hour, compared with the data from a week earlier and charted."[12] If they see something that's not working particularly well, they fine-tune it.

Technical equipment (such as computers and computerized machine controls) can be designed to include concurrent controls. For example, you've probably experienced this with word-processing software that alerts you to a misspelled word or incorrect grammatical usage. Also, many organizational quality programs rely on concurrent controls to inform workers whether their work output is of sufficient quality to meet standards.

The best-known form of concurrent control, however, is direct supervision. For example, Nvidia's CEO Jen-Hsun Huang had his office cubicle torn down and replaced with a conference table so he's now available to employees at all times to discuss what's going on.[13] Even GE's CEO Jeff Immelt spends 60 percent of

Nissan North America used feedback control to correct defects in vehicles produced at its Canton, Mississippi, assembly plant. In this photo, a Nissan production technician at the plant explains how a defect-analysis and problem-solving team of technicians and engineers identified quality problems that occurred during vehicle design and production processes. Team members worked with suppliers to reengineer parts and formed cross-functional quality teams to correct problems reported on quality surveys or in warranty data. They studied each part of the assembly line to detect and fix problems that resulted in squeaks, rattles, and other defects. Feedback control gave Nissan managers information they needed to make new plans for preventing problems before the production phase.

Rogelio Solis/AP Images

immediate corrective action
Corrective action that addresses problems at once to get performance back on track

basic corrective action
Corrective action that looks at how and why performance deviated before correcting the source of deviation

feedforward control
Control that takes place before a work activity is done

concurrent control
Control that takes place while a work activity is in progress

his workweek on the road talking to employees and visiting the company's numerous locations.[14] All managers can benefit from using concurrent control because they can correct problems before they become too costly. MBWA, which we described earlier in this chapter, is a great way for managers to do this.

WHY IS FEEDBACK CONTROL SO POPULAR? The most popular type of control relies on feedback. In **feedback control**, the control takes place *after* the activity is done. For instance, remember our earlier Denver Mint example. The flawed Wisconsin quarters were discovered with feedback control. The damage had already occurred even though the organization corrected the problem once it was discovered. And that's the major problem with this type of control. By the time a manager has the information, the problems have already occurred, leading to waste or damage. However, in many work areas, the financial area being one example, feedback is the only viable type of control.

Feedback controls do have two advantages.[15] First, feedback gives managers meaningful information on how effective their planning efforts were. Feedback that shows little variance between standard and actual performance indicates that the planning was generally on target. If the deviation is significant, a manager can use that information to formulate new plans. Second, feedback can enhance motivation. People want to know how well they're doing, and feedback provides that information.

In What Areas Might Managers Need Controls?

Most organizations consist of countless activities taking place in different locations and functional areas of the organization. So *what* gets controlled? We need to look at some of the specific areas and control tools that managers can use.

HOW DO MANAGERS KEEP TRACK OF FINANCES? Every business wants to earn a profit. To achieve this goal, managers need financial controls. For instance, they might analyze quarterly income statements for excessive expenses. They might calculate financial ratios to ensure that sufficient cash is available to pay ongoing expenses, that debt levels haven't become too high, or that assets are being used productively.

Traditional financial measures managers might use include ratio analysis and budget analysis. Exhibit 14–6 summarizes some of the most popular financial ratios that managers

EXHIBIT 14–6 Popular Financial Ratios

OBJECTIVE	RATIO	CALCULATION	MEANING
Liquidity	Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	Tests the organization's ability to meet short-term obligations
	Acid test	$\frac{\text{Current assets} - \text{Inventories}}{\text{Current liabilities}}$	Tests liquidity more accurately when inventories turn over slowly or are difficult to sell
Leverage	Debt to assets	$\frac{\text{Total debt}}{\text{Total assets}}$	The higher the ratio, the more leveraged the organization
	Times interest earned	$\frac{\text{Profits before interest and taxes}}{\text{Total interest charges}}$	Measures how many times the organization is able to cover its interest expenses
Activity	Inventory turnover	$\frac{\text{Sales}}{\text{Inventory}}$	The higher the ratio, the more efficiently inventory assets are being used
	Total asset turnover	$\frac{\text{Sales}}{\text{Total assets}}$	The fewer assets used to achieve a given level of sales, the more efficiently management is using the organization's total assets
Profitability	Profit margin on sales	$\frac{\text{Net profit after taxes}}{\text{Total sales}}$	Identifies the profits that are being generated
	Return on investment	$\frac{\text{Net profit after taxes}}{\text{Total assets}}$	Measures the efficiency of assets to generate profits

will analyze. Liquidity ratios measure an organization's ability to meet its current debt obligations. Leverage ratios examine the organization's use of debt to finance its assets and whether it's able to meet the interest payments on the debt. Activity ratios assess how efficiently a company is using its assets. Finally, profitability ratios measure how efficiently and effectively the company is using its assets to generate profits. These ratios are calculated using selected information from the organization's two primary financial statements (the balance sheet and the income statement) and are sometimes expressed as a percentage. Because you've probably studied these ratios in other accounting or finance courses, or will in the near future, we won't elaborate on how they're calculated. We mention them here to remind you that managers use such ratios as internal control tools.

Budgets are another type of financial control tool that are used for planning and controlling. When a budget is formulated, it's a planning tool because it indicates which work activities are important and what and how much resources should be allocated to those activities. Budgets are also used for controlling because they provide managers with quantitative standards against which to measure and compare resource consumption. If deviations are significant enough to require action, the manager examines what has happened and tries to uncover why. With this information, necessary action can be taken. For example, if you use a personal budget for monitoring and controlling your monthly expenses, you might find that one month your miscellaneous expenses were higher than you had budgeted for. At that point, you might cut back spending in another area or work extra hours to get more income.

HOW IS AN ORGANIZATION'S INFORMATION CONTROLLED? Some 77 million accounts on Sony's PlayStation network were hacked, exposing those users to years of identity-theft risk. A computer with personal information (Social Security numbers, birth dates, etc.) on some 26.5 million military veterans stored on it was stolen from the residence of a Department of Veteran Affairs employee who had taken the computer home without authorization. Although the computer was eventually recovered with no loss of personal information, the situation could have been damaging to a large number of people. And these are just a few of the attacks on companies' information resources.[16] Talk about the need for information controls! Managers deal with information controls in two ways: (1) as a tool to help them control other organizational activities, and (2) as an organizational area they need to control.

Managers need the right information at the right time and in the right amount to help them *monitor and measure organizational activities*. In measuring actual performance, managers need information about what is happening within their area of responsibility and about the standards in order to be able to compare actual performance with the standard. They also rely on information to help them determine if deviations are acceptable. Finally, they rely on information to help them develop appropriate courses of action. Information *is* important! Most of the information tools that managers use come from the organization's management information system.

A **management information system (MIS)** is a system used to provide managers with needed information on a regular basis. In theory, this system can be manual or computer-based, although most organizations have moved to computer-supported applications. The term *system* in MIS implies order, arrangement, and purpose. Further, an MIS focuses specifically on providing managers with *information* (processed and analyzed data), not merely *data* (raw, unanalyzed facts). A library provides a good analogy. Although it can contain millions of volumes, a library doesn't do you any good if you can't find what you want quickly. That's why librarians spend a great deal of time cataloging a library's collections and ensuring that materials are returned to their proper locations. Organizations today are like well-stocked libraries with an abundance of data. What is lacking, however, is an ability to process that data so that the right information is available to the right person when he or she

feedback control
Control that takes place after a work activity is done

management information system (MIS)
A system used to provide management with needed information on a regular basis

Valery Sharifulin/Newscom

Cisco Systems, the global leader in networking equipment, uses a Balanced Scorecard approach in evaluating its performance. In addition to measuring performance in the financial, internal processes, and people/innovation/growth areas, Cisco developed a scorecard to address its commitment to customer satisfaction, a core value that drives the company's success. Each year Cisco sets goals for customer satisfaction and uses a customer loyalty measurement system to track its success with customers, such as Russia's mobile operator SkyLink shown here. Managers use the information they receive from annual customer satisfaction surveys to establish goals for each of Cisco's functional areas and for hiring and resource allocation decisions.

needs it. An MIS collects data and turns them into relevant information for managers to use.

It seems that every week, there's another news story about information security breaches. A recent survey found that 85 percent of privacy and security professionals acknowledged a reportable data breach occurred within their organizations within the last year alone.[17] Because information is critically important to everything an organization does, managers must have comprehensive and secure controls in place to *protect that information*. Such controls can range from data encryption to system firewalls to data backups, and other techniques as well.[18] Problems can lurk in places that an organization might not even have considered, like search engines. Sensitive, defamatory, confidential, or embarrassing organizational information has found its way into search engine results. For instance, detailed monthly expenses and employee salaries on the National Speleological Society's Web site turned up in a Google search.[19] Equipment such as laptop computers and even RFID (radio-frequency identification) tags are vulnerable to viruses and hacking. Needless to say, information controls should be monitored regularly to ensure that all possible precautions are in place to protect important information.

WHAT IS THE BALANCED SCORECARD APPROACH TO CONTROL? The **balanced scorecard** approach is a way to evaluate organizational performance from more than just the financial perspective.[20] A balanced scorecard typically looks at four areas that contribute to a company's performance: financial, customer, internal processes, and people/innovation/growth assets. According to this approach, managers should develop goals in each of the four areas and then measure whether the goals are being met.

Although a balanced scorecard makes sense, managers will tend to focus on areas that drive their organization's success and use scorecards that reflect those strategies.[21] For example, if strategies are customer-centered, then the customer area is likely to get more attention than the other three areas. Yet, you can't focus on measuring only one performance area because others are affected as well. For instance, at IBM Global Services in Houston, managers developed a scorecard around an overriding strategy of customer satisfaction. However, the other areas (financial, internal processes, and people/innovation/growth) support that central strategy. The division manager described it as follows, "The internal processes part of our business is directly related to responding to our customers in a timely manner, and the learning and innovation aspect is critical for us since what we're selling our customers above all is our expertise. Of course, how successful we are with those things will affect our financial component."[22]

WHAT CONTEMPORARY CONTROL ISSUES DO MANAGERS CONFRONT?

14.4 **Discuss** contemporary issues in control.

The employees of Integrated Information Systems Inc. didn't think twice about exchanging digital music over a dedicated office server they had set up. Like office betting on college and pro sports, it was technically illegal, but harmless, or so they thought. But after the company had to pay a $1 million settlement to the Recording Industry Association of America, managers wished they had controlled the situation better.[23] Control is an important managerial function. We're going to look at two control issues that managers face today: cross-cultural differences and workplace concerns.

Do Controls Need to Be Adjusted for Cultural Differences?

The concepts of control that we've discussed are appropriate for organizational units that aren't geographically distant or culturally distinct. But what about global organizations? Would control systems be different, and what should managers know about adjusting controls for national differences?

Methods of controlling employee behavior and operations can be quite different in different countries. In fact, the differences in organizational control systems of global organizations are primarily in the measurement and corrective action steps of the control process. In a global corporation, for instance, managers of foreign operations tend not to be closely controlled by the home office if for no other reason than that distance keeps managers from being able to observe work directly. Because distance creates a tendency for formalized controls, the home office of a global company often relies on extensive, formal reports for control. The global company may also use information technology to control work activities. For instance, Seven and i Holdings (Japan's biggest retail conglomerate and parent company of the 7-Eleven convenience store chain in the United States) uses automated cash registers not only to record sales and monitor inventory but also to schedule tasks for store managers and to track their use of the built-in analytical graphs and forecasts. If managers don't use them enough, they're told to increase their activities.[24]

Technology's impact on control is most evident in comparisons of technologically advanced nations with more primitive countries. Organizations in technologically advanced nations such as the United States, Japan, Canada, Great Britain, Germany, and Australia use indirect control devices—particularly computer-related reports and analyses—in addition to standardized rules and direct supervision to ensure that activities are going as planned. In less technologically advanced countries, direct supervision and highly centralized decision making are the basic means of control.

TECHNOLOGY AND THE MANAGER'S JOB

MONITORING EMPLOYEES

Technological advances have made the process of managing an organization much easier.[25] But technological advancements have also provided employers a means of sophisticated employee monitoring. Although most of this monitoring is designed to enhance worker productivity, it could, and has been, a source of concern over worker privacy. These advantages bring with them difficult questions regarding what managers have the right to know about employees and how far they can go in controlling employee behavior, both on and off the job. Consider the following:

- The mayor of Colorado Springs, Colorado, reads the e-mail messages that city council members send to each other from their homes. He defended his actions by saying he was making sure that e-mails to each other were not being used to circumvent the state's "open meeting" law that requires most council business to be conducted publicly.
- The U.S. Internal Revenue Service's internal audit group monitors a computer log that shows employee access to taxpayers' accounts. This monitoring activity allows management to check and see what employees are doing on their computers.
- American Express has an elaborate system for monitoring telephone calls. Daily reports provided to supervisors detail the frequency and length of calls made by employees, as well as how quickly incoming calls are answered.
- Employers in several organizations require employees to wear badges at all times while on company premises. These badges contain a variety of data that allow employees to enter certain locations in the organization. Smart badges, too, can transmit where the employee is at all times!

Just how much control a company should have over the private lives of its employees also becomes an issue. Where should an employer's rules and controls end? Does the boss have the right to dictate what you do on your free time and in your own home? Could your boss keep you from engaging in riding a motorcycle, skydiving, smoking, drinking alcohol, or eating junk food? Again, the answers may surprise you. Today many organizations, in their quest to control safety and health insurance costs, are delving into their employees' private lives.

Although controlling employees' behaviors on and off the job may appear unjust or unfair, nothing in our legal system prevents employers from engaging in these practices. Rather, the law is based on the premise that if employees don't like the rules, they have the option of quitting. Managers, too, typically defend their actions in terms of ensuring quality, productivity, and proper employee behavior. For instance, an IRS audit of its southeastern regional offices found that 166 employees took unauthorized looks at the tax returns of friends, neighbors, and celebrities.

Think About:

- When does management's need for information about employee performance cross over the line and interfere with a worker's right to privacy?
- Is technology being misused?
- Is any action by management acceptable as long as employees are notified ahead of time that they will be monitored? What's your opinion?

balanced scorecard
A performance measurement tool that looks at more than just the financial perspective

Also, constraints on what corrective action managers can take may affect managers in foreign countries because laws in some countries do not allow managers the option of closing facilities, laying off employees, or bringing in a new management team from outside the country. Finally, another challenge for global companies in collecting data is comparability. For instance, a company's manufacturing facility in Mexico might produce the same products as a facility in Scotland. However, the Mexican facility might be much more labor intensive than its Scottish counterpart (to take advantage of lower labor costs in Mexico). If top-level executives were to control costs by, for example, calculating labor costs per unit or output per worker, the figures would not be comparable. Managers in global companies must address these types of global control challenges.

What Challenges Do Managers Face in Controlling the Workplace?

Today's workplaces present considerable control challenges for managers. From monitoring employees' computer usage at work to protecting the workplace against disgruntled employees intent on doing harm, managers need controls to ensure that work can be done efficiently and effectively as planned.

IS MY WORK COMPUTER REALLY MINE? If you work, do you think you have a right to privacy at your job? What can your employer find out about you and your work? You might be surprised at the answers! Employers can (and do), among other things, read your e-mail (even those marked "personal or confidential"), tap your telephone, monitor your work by computer, store and review computer files, monitor you in an employee bathroom or dressing room, and track your whereabouts in a company vehicle. And these actions aren't that uncommon. In fact, some 30 percent of companies have fired workers for misusing the Internet and another 28 percent have terminated workers for e-mail misuse.[26]

Why do managers feel they need to monitor what employees are doing? A big reason is that employees are hired to work, not to surf the Web checking stock prices, watching online videos, playing fantasy baseball, or shopping for presents for family or friends. Recreational on-the-job Web surfing is thought to cost billions of dollars in lost work productivity annually. In fact, a survey of U.S. employers said that 87 percent of employees look at non-work-related Web sites while at work and more than half engage in personal Web site surfing every day.[27] Watching online video has become an increasingly serious problem not only because of the time being wasted by employees but because it clogs already-strained corporate computer networks.[28] If you had to guess the video site viewed most often at work, what would you guess? If you said YouTube, you'd be absolutely correct![29] However, as innocent as it may seem (after all, it may be just a 30-second video), all this nonwork adds up to significant costs to businesses.

Another reason that managers monitor employee e-mail and computer usage is that they don't want to risk being sued for creating a hostile workplace environment because of offensive messages or an inappropriate image displayed on a coworker's computer screen. Concerns about racial or sexual harassment are one reason companies might want to monitor or keep backup copies of all e-mail. Electronic records can help establish what actually happened so managers can react quickly.[30]

Finally, managers want to ensure that company secrets aren't being leaked.[31] In addition to typical e-mail and computer usage, companies are monitoring instant messaging, blogs, and other social media outlets, and banning phone cameras in the office. Managers need to be certain that employees are not, even inadvertently, passing information on to others who could use that information to harm the company.

Because of the potentially serious costs and given the fact that many jobs now entail computers, many companies have workplace monitoring policies. Such policies should control employee behavior in a nondemeaning way and employees should be informed about those policies.

IS EMPLOYEE THEFT ON THE RISE? Would you be surprised to find that up to 85 percent of all organizational theft and fraud is committed by employees, not outsiders?[32] And it's a costly problem—estimated to be about $4,500 per worker per year.[33] In a recent survey of U.S. companies, 20 percent said that workplace theft has become a moderate to very big problem.[34]

Employee theft is defined as any unauthorized taking of company property by employees for their personal use.[35] It can range from embezzlement to fraudulent filing of expense reports to removing equipment, parts, software, or office supplies from company premises. Although retail businesses have long faced serious potential losses from employee theft, loose financial controls at start-ups and small companies and the ready availability of information technology have made employee stealing an escalating problem in all kinds and sizes of organizations. It's a control issue that managers need to educate themselves about and be prepared to deal with it.[36]


Autumn Cruz/Newscom

A growing number of employee thieves sell their stolen property on auction sites like eBay. For example, a former purchasing agent for California's state Department of Child Support Services was charged with embezzlement, grand theft, and possession of stolen property for stealing $320,000 in taxpayer money with a state-issued credit card that had no spending limit and no pre-approval required for purchases. The employee bought household items shown here for her own use or resold them on eBay and used the money to buy expensive items like the Lexus sports car. After filing an unusually large number of expenses, the employee's activity triggered a state audit that led to her arrest. To deter and reduce theft, the child services agency now requires pre-approval for employee purchases and has hired two internal auditors.

Why do employees steal? The answer depends on whom you ask.[37] Experts in various fields—industrial security, criminology, clinical psychology—have different perspectives. The industrial security people propose that people steal because the opportunity presents itself through lax controls and favorable circumstances. Criminologists say that it's because people have financial-based pressures (such as personal financial problems) or vice-based pressures (such as gambling debts). And the clinical psychologists suggest that people steal because they can rationalize whatever they're doing as being correct and appropriate behavior ("everyone does it," "they had it coming," "this company makes enough money and they'll never miss anything this small," "I deserve this for all that I put up with," and so forth).[38] Although each approach provides compelling insights into employee theft and has been instrumental in attempts to deter it, unfortunately, employees continue to steal. What can managers do?

The concept of feedforward, concurrent, and feedback control is useful for identifying measures to deter or reduce employee theft.[39] Exhibit 14–7 summarizes several possible managerial actions.

WHAT CAN MANAGERS DO ABOUT WORKPLACE VIOLENCE? A truck driver for a beer and wine distributor facing dismissal fatally shot eight coworkers outside Hartford, Connecticut, on August 3, 2010. On July 12, 2010, a man opened fire at his former company in Albuquerque, killing two people and wounding four others before fatally shooting himself. On November 5, 2009, at Fort Hood, Texas, an Army psychiatrist fatally shot 13 people and injured 32. On June 25, 2008, in Henderson, Kentucky, an employee at a plastics plant returned hours after arguing with his supervisor over his not wearing safety goggles and for using his cell phone while working on the assembly line. He shot and killed the supervisor, four other coworkers, and himself. In April 2007, the same month in which the Virginia Tech shootings occurred, a gunman at his former workplace in Troy, Michigan, and one at NASA in Houston shot and killed a person. On January 30, 2006, a former employee who was once removed from a Santa Barbara, California, postal facility because of "strange behavior" came back and shot five workers to death, critically wounded another, and killed herself. On January 26, 2005, an autoworker at a Jeep plant in Toledo, Ohio, who had met the day before with plant managers about a problem with his work, came in and killed a supervisor and wounded two other employees before killing himself.[40] Is workplace violence really an issue for managers? Yes. The latest data

employee theft
Any unauthorized taking of company property by employees for their personal use

EXHIBIT 14–7 Controlling Employee Theft

FEEDFORWARD	CONCURRENT	FEEDBACK
Engage in careful prehiring screening.	Treat employees with respect and dignity.	Make sure employees know when theft or fraud has occurred—not naming names but letting people know that these incidents are not acceptable.
Establish specific policies defining theft, fraud, and discipline procedures.	Openly communicate the costs of stealing.	Use the services of professional investigators.
Involve employees in writing policies.	Let employees know on a regular basis about their successes in preventing theft and fraud.	Redesign control measures.
Educate and train employees about the policies.	Use video surveillance equipment if conditions warrant.	Evaluate your organization's culture and the relationships of managers and employees.
Have professionals review your internal security controls.	Install "lock out" options on computers, telephones, and e-mail.	
	Use corporate hotlines for reporting incidences.	
	Set a good example.	

Sources: Based on A. H. Bell and D. M. Smith, "Protecting the Company Against Theft and Fraud," *Workforce Online,* www.workforce.com (December 3, 2000); J. D. Hansen, "To Catch a Thief," *Journal of Accountancy* (March 2000), pp. 43–46; and J. Greenberg, "The Cognitive Geometry of Employee Theft," in *Dysfunctional Behavior in Organizations: Nonviolent and Deviant Behavior* (Stamford, CT: JAI Press, 1998), pp. 147–193.

available (2009) showed that 12 percent of work-related deaths in the United States were workplace homicides.[41] But workplace violence doesn't just include homicides. The U.S. National Institute of Occupational Safety and Health says that each year, some 2 million American workers are victims of some form of workplace violence such as verbal abuse, yelling at coworkers, purposeful damage of machines or furniture, or assaulting coworkers. In an average week, one employee is killed and at least 25 are seriously injured in violent assaults by current or former coworkers. According to a Department of Labor survey, 58 percent of firms reported that managers received verbal threats from workers.[42] Anger, rage, and violence in the workplace are intimidating to coworkers and adversely affect their productivity. The annual cost to U.S. businesses is estimated to be between $20 and $35 billion.[43] And office rage isn't a uniquely American problem. A survey of aggressive behaviors in Europe's workplaces found that between 5 percent and 20 percent of European workers are affected by workplace violence.[44]

What factors are believed to contribute to workplace violence? Undoubtedly, employee stress caused by job uncertainties, declining value of retirement accounts, long hours, information overload, other daily interruptions, unrealistic deadlines, and uncaring managers play a role. Even office layout designs with small cubicles where employees work amidst the noise and commotion from those around them have been cited as contributing to the problem.[45] Other experts have described dangerously dysfunctional work environments characterized by the following as primary contributors to the problem:[46]

- Employee work driven by TNC (time, numbers, and crises)
- Rapid and unpredictable change where instability and uncertainty plague employees
- Destructive communication style where managers communicate in excessively aggressive, condescending, explosive, or passive-aggressive styles; excessive workplace teasing or scapegoating
- Authoritarian leadership with a rigid, militaristic mind-set of managers versus employees; employees not allowed to challenge ideas, participate in decision making, or engage in team-building efforts

Ilvy Njiokiktjien/Newscom

Swedish furniture retailer IKEA has raised its security level at all of its stores throughout Europe following explosions caused by bombs at stores in Germany, France, Belgium, and the Netherlands. Store managers evacuated the stores after the explosions, and bomb-sniffing dogs searched the stores. The explosions intimidated employees and customers, although they did not seriously injure anyone. As a safety precaution to make employees and shoppers feel safer, IKEA put extra security guards in its stores, established other security measures not divulged, and closely monitored police investigations to determine a motive for the violence.

EXHIBIT 14–8 Controlling Workplace Violence

FEEDFORWARD	CONCURRENT	FEEDBACK
Ensure management's commitment to functional, not dysfunctional, work environments.	Use MBWA (managing by walking around) to identify potential problems; observe how employees treat and interact with each other.	Communicate openly about violent incidents and what's being done.
Provide employee assistance programs (EAPs) to help employees with behavioral problems.	Allow employees or work groups to "grieve" during periods of major organizational change.	Investigate incidents and take appropriate action.
Enforce organizational policy that any workplace rage, aggression, or violence will not be tolerated.	Be a good role model in how you treat others.	Review company policies and change, if necessary.
Use careful prehiring screening.	Use corporate hotlines or some other mechanism for reporting and investigating incidents.	
Never ignore threats.	Use quick and decisive intervention.	
Train employees about how to avoid danger if a situation arises.	Get expert professional assistance if violence erupts.	
Clearly communicate policies to employees.	Provide necessary equipment or procedures for dealing with violent situations (cell phones, alarm system, code names or phrases, and so forth).	

Sources: Based on M. Gorkin, "Five Strategies and Structures for Reducing Workplace Violence," *Workforce Management Online,* December 3, 2000; "Investigating Workplace Violence: Where Do You Start?" *Workforce Management Online,* December 3, 2000; "Ten Tips on Recognizing and Minimizing Violence," *Workforce Management Online,* December 3, 2000; and "Points to Cover in a Workplace Violence Policy," *Workforce Management Online,* December 3, 2000.

- Defensive attitude with little or no performance feedback given; only numbers count; and yelling, intimidation, or avoidance as the preferred ways of handling conflict
- Double standards in terms of policies, procedures, and training opportunities for managers and employees
- Unresolved grievances due to an absence of mechanisms or only adversarial ones in place for resolving them; dysfunctional individuals protected or ignored because of long-standing rules, union contract provisions, or reluctance to take care of problems
- Emotionally troubled employees and no attempt by managers to get help for these people
- Repetitive, boring work and little chance for doing something else or for new people coming in
- Faulty or unsafe equipment or deficient training, which keeps employees from being able to work efficiently or effectively
- Hazardous work environment in terms of temperature, air quality, repetitive motions, overcrowded spaces, noise levels, excessive overtime, and so forth; to minimize costs, a failure to hire additional employees when workload becomes excessive leading to potentially dangerous work expectations and conditions
- Culture of violence perpetuated by a history of individual violence or abuse, violent or explosive role models, or tolerance of on-the-job alcohol or drug abuse

Reading through this list, you surely hope that workplaces where you'll spend your professional life won't be like this. However, the competitive demands of succeeding in a 24/7 global economy put pressure on organizations and employees in many ways.

What can managers do to deter or reduce possible workplace violence? Once again, the concept of feedforward, concurrent, and feedback control can help identify actions that managers can take.[47] Exhibit 14–8 summarizes several suggestions.

14 Review

CHAPTER SUMMARY

14.1 Explain the nature and importance of control. Control is the management function that involves monitoring activities to ensure that they're being accomplished as planned and correcting any significant deviations.

As the final step in the management process, controlling provides the link back to planning. If managers didn't control, they'd have no way of knowing whether goals were being met.

Control is important because (1) it's the only way to know whether goals are being met and, if not, why; (2) it provides information and feedback so managers feel comfortable empowering employees; and (3) it helps protect an organization and its assets.

14.2 Describe the three steps in the control process. The three steps in the control process are measuring, comparing, and taking action. Measuring involves deciding how to measure actual performance and what to measure. Comparing involves looking at the variation between actual performance and the standard (goal). Deviations outside an acceptable range of variation need attention.

Taking action can involve doing nothing, correcting the actual performance, or revising the standards. Doing nothing is self-explanatory. Correcting the actual performance can involve different corrective actions, which can either be immediate or basic. Standards can be revised by either raising or lowering them.

14.3 Discuss the types of controls organizations and managers use. Feedforward controls take place before a work activity is done. Concurrent controls take place while a work activity is being done. Feedback controls take place after a work activity is done.

Financial controls that managers can use include financial ratios (liquidity, leverage, activity, and profitability) and budgets. One information control managers can use is an MIS, which provides managers with needed information on a regular basis. Others include comprehensive and secure controls, such as data encryption, system firewalls, data backups, and so forth, that protect the organization's information. Also, balanced scorecards provide a way to evaluate an organization's performance in four different areas rather than just from the financial perspective.

14.4 Discuss contemporary issues in control. Adjusting controls for cross-cultural differences may be needed primarily in the areas of measuring and taking corrective actions.

Workplace concerns include workplace privacy, employee theft, and workplace violence. For each of these, managers need to have policies in place to control inappropriate actions and ensure that work is getting done efficiently and effectively.

UNDERSTANDING THE CHAPTER

1. What is the role of control in management?
2. Describe four methods managers can use to acquire information about actual work performance.
3. How are planning and control linked? Is the control function linked to the organizing and leading functions of management? Explain.
4. Contrast feedforward, concurrent, and feedback controls.
5. Why do you think feedback control is the most popular type of control? Justify your response.
6. In Chapter 8 we discussed the "white-water rapids" view of change. Do you think it's possible to establish and maintain effective standards and controls in this type of environment? Discuss.
7. Why is it that what is measured is more critical to the control process than how it is measured?
8. "Every individual employee in an organization plays a role in controlling work activities." Do you agree with this statement, or do you think control is something that only managers are responsible for? Explain.