chapter 17

Organizational Design, Effectiveness, and Innovation

Learning Objectives

When you finish studying the material in this chapter, you should be able to:

LO.1 Describe the four characteristics common to all organizations, and explain the differen between closed and open systems.

LO.2 Define the term *learning organization.*

LO.3 Review the factors that hinder an organization's ability to learn from success and failure

LO.4 Describe seven basic ways organizations are structured.

LO.5 Discuss Burns and Stalker's findings regarding mechanistic and organic organizations.

LO.6 Identify when each of the seven organization structures is the right fit.

LO.7 Describe the four generic organizational effectiveness criteria.

LO.8 Discuss the difference between innovation, invention, creativity, and integration.

LO.9 Review the myths about innovation.

LO.10 Explain the model of innovation.

How Can Companies Modify Their Meetings to Boost Innovation?

In the downturn, some small-business owners are looking for more creative ways to make conference-room time as efficient as possible, an effort they hope will ultimately trickle down to the company's bottom line.

Many managers say fostering participation is a major challenge, particularly when the attendees with valuable ideas are too reserved or timid to speak up. Without their contributions the meetings are less productive.

Dixon Schwabl Advertising in Rochester, New York, tried to lower the inhibitions of its 82 employees by arming them with water guns, which workers are instructed to bring to all meetings. Anyone who passes a negative comment at the meeting is bound to get wet.

"It helps them be more comfortable because no one will be criticized or scrutinized," says Lauren Dixon, the marketing and advertising firm's chief executive. . . .

Other entrepreneurs are relying on technology to propel the meetings and keep the employees engaged.

Managers at Russell Construction Co, introduced a new device at a recent quarterly meeting that calculates the average salary of those in attendance and determines exactly how much the meeting is costing the company based on those figures.

"I don't think people thought of time as an expense before," says Angelo Bagby, director of marketing and client relations for the 70-employee firm, which is based in Davenport, Iowa.

That initial 90-minute meeting cost the firm roughly $5,000 . . . since then, employees have used the device at smaller group meetings, helping to shave off as much as $100 per meeting, Ms. Bagby estimates.

Other small businesses are using special software to hold interactive meetings that end with tangible outlines and focus points.

AscendWorks LLC, a consulting firm in Austin, Texas, is using a program called Mindjet Catalyst that allows employees to write out the talking points of the meeting as they are being discussed. They can then easily manipulate the text, organizing it by category and subcategory.

"It's like thinking out loud, except it's on a screen," syas AscendWorks President Don Dalrymple.

Finis Price, a lawyer in Louisville, Kentucky, uses a visualization technology called Papershow to similarly engage his two paralegals, who work remotely.

"If I couldn't verbally describe something, I'd just have to say, 'You'll see what I mean after I send it," says Mr Price of his meetings prior to purchasing the technology last year. "Then, they'd call and inevitably have questions about it."[1]

The chapter-opening case highlights the relationship between organizational design and the use of technology in affecting innovation in small firms. The same relationships are important in large organizations. DuPont's innovative efforts, for example, have resulted in obtaining nearly 40% of its 2009 revenues from products introduced within the last five years. This helped DuPont's stock to increase 41% in 2010.[2] A pair of management experts echoed the importance of innovation by concluding "sooner or later, all businesses, even the most successful, run out of room to grow. Faced with this unpleasant reality, they are compelled to reinvent themselves periodically. The ability to pull off this difficult feat—to jump from the maturity stage of one business to the growth stage of the next—is what separates high performers from those whose times at the top is all too brief."[3]

The overall goal of this chapter is to provide you with a solid foundation for understanding how organizational design influences organizational effectiveness and innovation. We begin by defining the term *organization,* discussing important dimensions of organization charts, and contrasting views of organizations as closed or open systems. Our attention then turns to the various ways organizations are designed, from traditional divisions of work to more recent, popular ideas about lowering barriers between departments and companies. Next, we discuss the contingency approach to designing organizations. We then explore various criteria for assessing an organization's effectiveness, and conclude by discussing the topic of organizational innovation.

TO THE POINT

What are the four characteristics of organizational structure, and what are the key conclusions regarding closed and open systems and a learning organization?

LO.1 Organizations: Definition and Perspectives

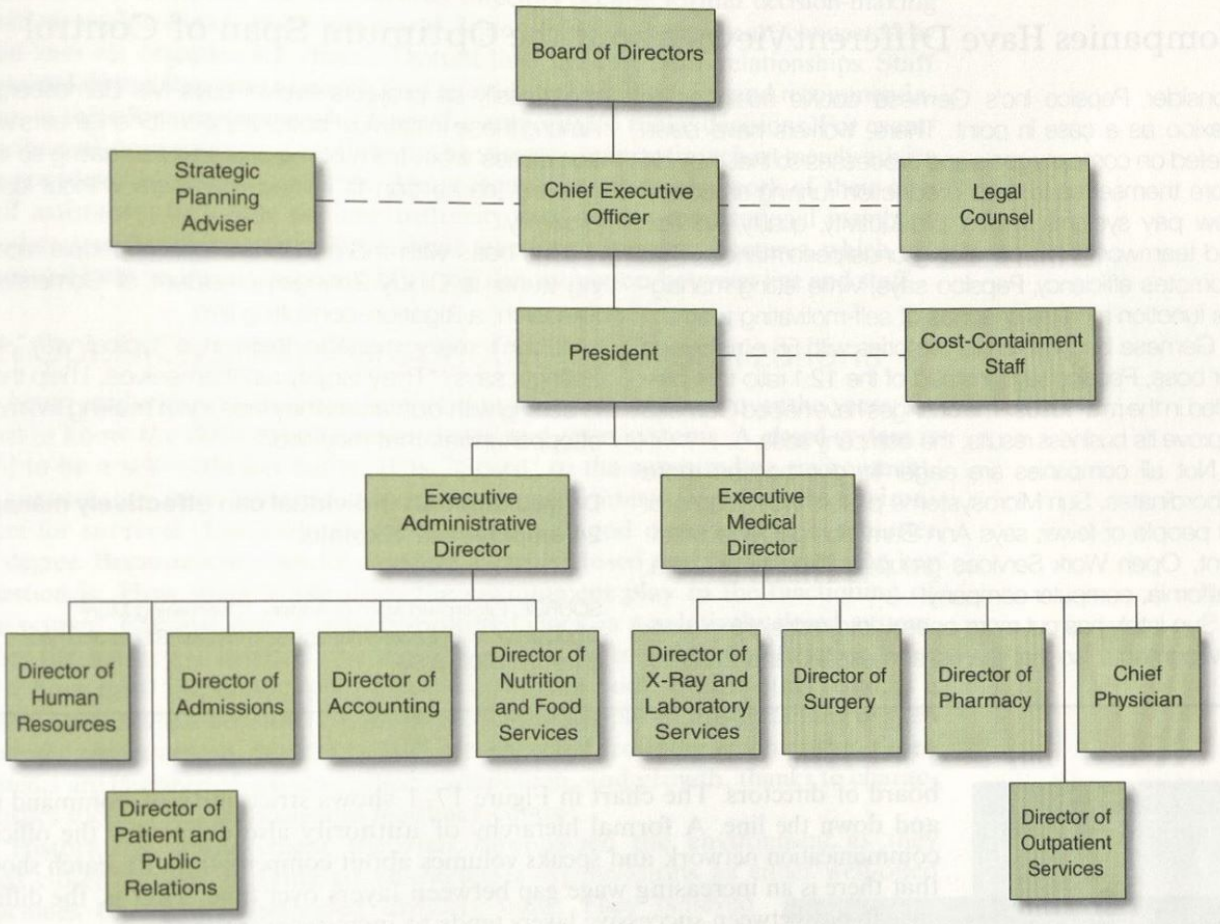
As a necessary springboard for this chapter, we need to formally define the term *organization,* clarify the meaning of organization charts, and explore two open-system perspectives of organizations.

What Is an Organization?

According to Chester I Barnard's classic definition cited in Chapter 1, an **organization** is "a system of consciously coordinated activities or forces of two or more persons."[4] Embodied in the *conscious coordination* aspect of this definition are four common denominators of all organizations: coordination of effort, a common goal, division of labor, and a hierarchy of authority.[5] Organization theorists refer to these factors as the organization's *structure.*

Coordination of effort is achieved through formulation and enforcement of policies, rules, and regulations. Division of labor occurs when the common goal is pursued by individuals performing separate but related tasks. The hierarchy of authority, also called the chain of command, is a control mechanism dedicated to making sure the right people do the right things at the right time. Historically, managers have maintained the integrity of the hierarchy of authority by adhering to the unity of command principle. The **unity of command principle** specifies that each employee should report to only one manager. Otherwise, the argument goes, inefficiency would prevail because of conflicting orders and lack of personal accountability. (Indeed, these are problems in today's more fluid and flexible organizations based on innovations such as cross-functional, self-managed, and virtual teams.) Managers in the hierarchy of authority also administer rewards and punishments. When operating in concert, the four definitional factors—coordination of effort, a common goal, division of labor, and a hierarchy of authority—enable an organization to come to life and function.

figure 17–1 Sample Organization Chart for a Hospital (executive and director levels only)



Organization Charts

An **organization chart** is a graphic representation of formal authority and division of labor relationships. To the casual observer, the term *organization chart* means the family tree–like pattern of boxes and lines posted on workplace walls. Within each box one usually finds the names and titles of current position holders. To organization theorists, however, organization charts reveal much more. The partial organization chart in Figure 17–1 reveals four basic dimensions of organizational structure: (1) hierarchy of authority (who reports to whom), (2) division of labor, (3) spans of control, and (4) line and staff positions.

connect™ Go to www.mcgrawhillconnect.com for an interactive exercise to test your knowledge of organizational charts.

Hierarchy of Authority

As Figure 17–1 illustrates, there is an unmistakable hierarchy of authority. Working from bottom to top, the 10 directors report to the two executive directors who report to the president who reports to the chief executive officer. Ultimately, the chief executive officer answers to the hospital's

organization System of consciously coordinated activities of two or more people.

unity of command principle Each employee should report to a single manager.

organization chart Boxes-and-lines illustration showing chain of formal authority and division of labor.

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Companies Have Different Views about the Optimum Span of Control

Consider Pepsico Inc's Gemesa cookie business in Mexico as a case in point. There, workers have been briefed on company goals and processes so that they do more themselves to keep production running smoothly. New pay systems reward productivity, quality, service and teamwork while penalizing underperformance. That promotes efficiency, Pepsico says, while letting managers function more as coaches of self-motivating teams.

Gemesa last year ran its factories with 56 employees per boss, Pepsico says, instead of the 12:1 ratio that prevailed in the mid-1990s. The changes have helped Gemesa improve its business results, the company adds. . . .

Not all companies are eager to give bosses more subordinates. Sun Microsystems prefers work teams of 10 people or fewer, says Ann Bamesberger, vice president, Open Work Services group, at the Santa Clara, California, computer company.

Sun lately has put more energy into redesigning work environments, so that teams can expand and contract more easily as projects evolve, says Ms Bamesberger. Among those initiatives: better support for engineers who sometimes work from home and flexible seating so that growing teams can fit in new members without losing proximity.

One boss with more than two dozen people reporting to her is Cindy Zollinger, president of Cornerstone Research, a litigation-consulting firm.

"I don't really manage them in a typical way," Ms Zollinger says. "They largely run themselves. I help them in dealing with obstacles they face, or in making the most of opportunities that they find."

Do you think an individual can effectively manage 24 employees? Explain.

SOURCE: Excerpted from G Anders, "Overseeing More Employees—with Fewer Managers," *The Wall Street Journal*, March 24, 2008, p B6.

The "king" chess piece represents the top of the hierarchy in a game of chess. The chess pieces can also be viewed as an organization of sorts because the movement of pieces are coordinated to obtain the end-goal of capturing the opponent's king.

board of directors. The chart in Figure 17–1 shows strict unity of command up and down the line. A formal hierarchy of authority also delineates the official communication network and speaks volumes about compensation. Research shows that there is an increasing wage gap between layers over time. That is, the difference in pay between successive layers tends to increase over time.[6]

Division of Labor In addition to showing the chain of command, the sample organization chart indicates extensive division of labor. Immediately below the hospital's president, one executive director is responsible for general administration while another is responsible for medical affairs. Each of these two specialities is further subdivided as indicated by the next layer of positions. At each successively lower level in the organization, jobs become more specialized.

Spans of Control The **span of control** refers to the number of people reporting directly to a given manager. Spans of control can range from narrow to wide. For example, the president in Figure 17–1 has a narrow span of control of two. (Staff assistants usually are not included in a manager's span of control.) The executive administrative director in Figure 17–1 has a wider span of control of five. Historically, spans of 7 to 10 people were considered best. More recently, however, corporate restructuring and improved communication technologies have increased the typical span of control.[7] Despite years of debate, organization theorists and senior executives have not arrived at a consensus regarding the ideal span of control (see Real World/Real People above).

Generally, the narrower the span of control, the closer the supervision and the higher the administrative costs as a result of a higher manager-to-worker ratio. Recent emphasis on empowering employees and administrative efficiency dictates spans of control as wide as possible but guarding against inadequate supervision and lack of coordination. Wider spans also complement the trend toward greater worker autonomy and participation.

Line and Staff Positions The organization chart in Figure 17–1 also distinguishes between line and staff positions. Line managers such as the president, the two executive directors, and the various directors occupy formal decision-making positions within the chain of command. Line positions generally are connected by solid lines on organization charts. Dotted lines indicate staff relationships. **Staff personnel** do background research and provide technical advice and recommendations to their **line managers,** who have the authority to make decisions. For example, the cost-containment specialists in the sample organization chart merely advise the president on relevant matters. Apart from supervising the work of their own staff assistants, they have no line authority over other organizational members. Modern trends such as cross-functional teams and matrix structures, which are discussed later in this chapter, are blurring the distinction between line and staff.

An Open-System Perspective of Organizations

To better understand how organizational models have evolved over the years, we need to know the difference between closed and open systems. A **closed system** is said to be a self-sufficient entity. It is "closed" to the surrounding environment. In contrast, an **open system** depends on constant interaction with the environment for survival. The distinction between closed and open systems is a matter of degree. Because every worldly system is partly closed and partly open, the key question is: How great a role does the environment play in the functioning of the system? For instance, a battery-powered clock is a relatively closed system. Once the battery is inserted, the clock performs its time-keeping function hour after hour until the battery goes dead. The human body, on the other hand, is a highly open system because it requires a constant supply of life-sustaining oxygen from the environment. Nutrients also are imported from the environment. Open systems are capable of self-correction, adaptation, and growth, thanks to characteristics such as homeostasis and feedback control.

Historically, management theorists downplayed the environment as they used closed-system thinking to characterize organizations as either well-oiled machines or highly disciplined military units. They believed rigorous planning and control would eliminate environmental uncertainty. But that proved unrealistic. Drawing on the field of general systems theory that emerged during the 1950s, organization theorists suggested a more dynamic model for organizations.[8] The resulting open-system model likened organizations to the human body. Accordingly, the model in Figure 17–2 reveals the organization to be a living organism that transforms inputs into various outputs. The outer boundary of the organization is permeable. People, information, capital, and goods and services move back and forth across this boundary. Moreover, each of the five organizational subsystems—goals and values, technical, psychosocial, structural, and managerial—is dependent on the others. Feedback about such things as sales and customer satisfaction or dissatisfaction enables the organization to self-adjust and survive despite uncertainty and change. In effect, the organization is alive.

This aerial shot of a boat sitting on top of a building in Japan is a good example of an open-system. The tsunami in Japan caused open-system effects like this throughout Japan. The tsunami is feared to have killed over 10,000 people.

span of control The number of people reporting directly to a given manager.

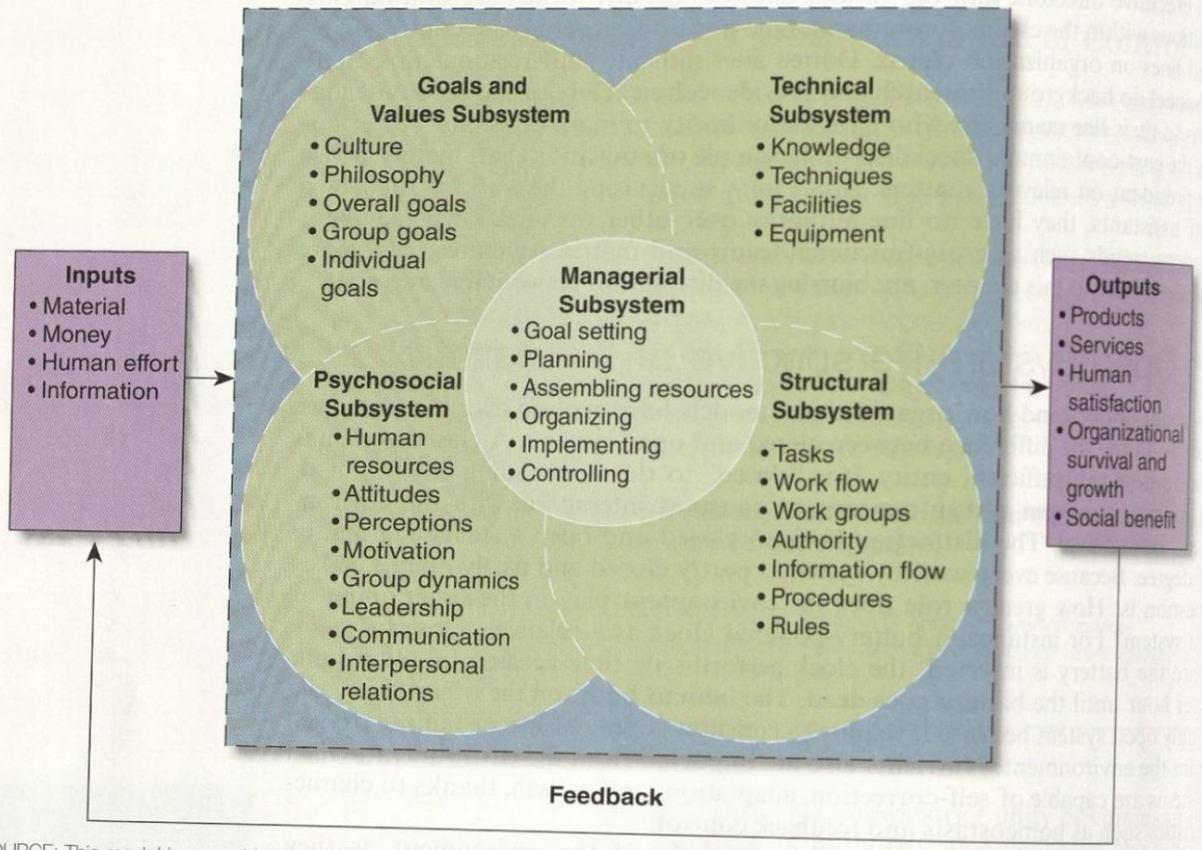
staff personnel Provide research, advice, and recommendations to line managers.

line managers Have authority to make organizational decisions.

closed system A relatively self-sufficient entity.

open system Organism that must constantly interact with its environment to survive.

figure 17–2 The Organization as an Open System



SOURCE: This model is a combination of Figures 5–2 and 5–3 in F E Kast and J E Rosenzweig, *Organization and Management: A Systems and Contingency Approach,* 4th ed (New York: McGraw-Hill, 1986), pp 112, 114. Copyright © 1986. Reprinted with permission of the McGraw-Hill Companies, Inc.

The 2011 tragedy in Japan is a good example of an open system. The crisis started with an earthquake, which led to a tsunami, and then to a nuclear accident. Open systems effects then caused many different problems for the Japanese people (e.g., nuclear exposure, food shortages, contaminated water, death, and destruction) as well as for organizations located in Japan, such as Walmart.[9] "Of its 414 Seiyu stores—as Walmart's Japanese chain is called—24 were in the Sendai and Fukushima area in northern Japan, close to the epicenter. Stores were trashed as goods fell off shelves during the temblor. A massive power outage ensued. Two stores suffered extensive damage. Close to 2,000 employees worked in the stricken region and were unaccounted for."[10] The effects of open systems also go beyond physical and geographical boundaries. For example, Ford Motor Company "halted all new orders for trucks, SUVs and cars in 'tuxedo black' and a handful of other hues due to shortages of some pigments made in Japan."[11]

LO.2 Learning Organizations

In recent years, organizational theorists have extended the open-system model by adding a "brain" to the "living body." Organizations are said to have humanlike cognitive functions, such as the abilities to perceive and interpret, solve problems, store information, and learn from experience. Today, managers read and hear a good deal about learning organizations and team mental models. Peter Senge, a professor at the Massachusetts Institute of Technology, popularized the term *learning organization* in his best-selling book *The Fifth Discipline.* He described

a learning organization as "a group of people working together to collectively enhance their capacities to create results that they truly care about."[12] A practical interpretation of these ideas results in the following definition. A **learning organization** is one that proactively creates, acquires, and transfers knowledge and that changes its behavior on the basis of new knowledge and insights.[13] The creation of a learning organization requires that organizational members use team mental models. A **team mental model** represents team members' "shared, organized understanding and mental representation of knowledge about key elements of the team's relevant environment."[14]

Learning organizations actively try to infuse their organizations, and associated team mental models, with new ideas and information. They do this by constantly scanning their external environments, hiring new talent and expertise when needed, and devoting significant resources to train and develop their employees. Next, new knowledge must be transferred throughout the organization. Learning organizations strive to reduce structural, process, and interpersonal barriers to the sharing of information, ideas, and knowledge among organizational members. They also focus on learning from both success and failure.

LO.3 **Learning from Success** Success provides the *opportunity* to learn what an organization did right in terms of accomplishing a goal or implementing a project. We italicized the word *opportunity* because there are three key factors that distract or impede learning from success.[15] The first is the self-serving bias discussed in Chapter 7. This bias reflects the tendency to take more personal responsibility for success than failure and can lead managers to assume that success was due to their insights and talents and not to random events or external factors outside of management's control. The second pertains to the decision-making bias of overconfidence, which was reviewed in Chapter 12. This bias leads to the inflated perception that management is better than it actually is, which in turn can cause managers to "dismiss new innovations, dips in customer satisfaction, and increases in quality problems, and to make overly risky moves." The final distracter pertains to the natural tendency of "not asking why" we succeeded at something. "Success is commonly interpreted as evidence not only that your existing strategy and practices work but also that you have all the knowledge and information you need," along with the necessary skills. The takeaway from this discussion is that managers can learn from success by avoiding these learning traps. It also is important to remember that short-term success will not guarantee long-term success. This means that it is important to be vigilant about studying the causes of success over time.[16]

Learning from Failure A G Lafley, CEO of Procter & Gamble from 2000 to 2009, believes that managers can learn from their mistakes and failures. He told a reporter from *Harvard Business Review* that he made plenty of mistakes and that he had "my fair share of failure. But you have to get past the disappointment and the blame and really understand what happened and why it happened. And then, more important, decide what you have learned and what you are going to do differently next time."[17] Lafley's views on learning certainly contributed to P&G's success under his leadership: "sales doubled, profits quadrupled, and P&G's market value increased by more than $100 billion."[18]

Lafley's success begs the question of why more organizations and managers don't make it a point to learn from failure. Why do you think this happens? Some

learning organization Proactively creates, acquires, and transfers knowledge throughout the organization.

team mental model Team members' shared understanding and knowledge about their work environment.

table 17–1 Factors that Detract from an Organization's Ability to Learn from Failure

FACTOR	DESCRIPTION AND RECOMMENDATION
1. The blame game	The tendency to blame failure on a person rather than on internal processes, systems, or external events.
2. The inability to recognize that failures are not created equal	Failures range from preventable (e.g., a person did not follow an accepted procedure or process) to noncontrollable (e.g., Ford's inability to produce black-colored cars because it could not get the needed materials from Japan during the 2011 crisis). It takes more time and effort to learn from failures caused by complex systems.
3. Not having a learning culture	People are afraid to point out or discuss failures. Managers are encouraged to create a psychologically safe culture that encourages employees to spot and discuss potential failures. It is critical to focus on processes and systems rather than on people.
4. Not detecting the lead indicators of failure	Analysis of failures focuses on people rather than on processes. Organizations are encouraged to identify and measure the status of short-term factors that lead to long-term success.
5. The self-serving bias	The tendency to blame failure on others or external events. It is important to consider the extent to which the causes of failure are controllable. It also is more beneficial to focus on controllable causes.
6. The reluctance to experiment	When people are uncertain about the causes of failure they are reluctant to experiment with different solutions. Conduct experiments and accept the idea that failure is part of the improvement process.

SOURCE: Based on A C Edmonson, "Strategies for Learning from Failure," *Harvard Business Review,* April 2011, pp 48–55.

experts suggest that the reason stems from our being programmed during childhood to believe that failure is bad and should be avoided. After all, who wants to talk about their weaknesses and failures? Although people may not like to talk about their failures, many managers believe that learning from failure is pretty easy. You simply need to ask people involved to meet and reflect on what went wrong and then encourage them to avoid these trappings on future projects. Unfortunately, this simplistic approach is unlikely to produce significant learning according to Amy Edmondson, professor at Harvard Business School.

Professor Edmonson studied organizational failures for 20 years and concluded that there are a host of factors that deter the extent to which organizations learn from failure (see Table 17–1).[19] She recommends that organizations focus on overcoming the barriers shown in Table 17–1 in order to maximize learning from failure. We conclude by noting results from a recent study on organizational learning. The researchers wanted to know if organizations learn more from success or failure. What do you think? Results indicated that organizations learned from both success and failure, but learning was stronger and longer lasting when it was based on failure.[20]

Creating a Learning Infrastructure Professor Edmondson proposed the following four-step process for developing a learning infrastructure:

Example. First, organizations that focus on execution-as-learning use the best knowledge obtainable (which is understood to be a moving target) to inform the design of specific process guidelines. Second, they enable their employees to collaborate by making information available when and where it's needed. Third, they

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Admiral Thad Allen Changed Mental Models When Dealing with the Aftermath of Hurricane Katrina

Here is what Admiral Allen said to an interviewer from the *Harvard Business Review* in response to a question about how leaders create unity of effort when responding to a crisis with multiple constituents.

"I'm a big fan of Peter Senge . . . who talks about learning organizations and the use of mental models. You have to understand at a very large, macro level what the problem is that you're dealing with and what needs to be done to achieve the effects you want—and you have to be able to communicate that.

With Katrina, it was clear to me after about 24 hours in New Orleans that we weren't dealing only with a natural disaster. Had the levees not collapsed, ground zero for Hurricane Katrina would have been Bay St Lous and Waverland, Mississippi, which basically got wiped off the map. But when the levees were breached and New Orleans flooded, it became a different event, and I'm not sure we recognized that as a nation. We were still treating the entire issue as if it were just a hurricane."

Admiral Allen went on to explain how the initial mental model of "hurricane" needed to be changed because it was impeding progress in dealing with the crisis. For example, under the hurricane response the federal government released resources to the local government, which was problematic because there was no functional local government during this period. Allen thus reframed the mission or mental model to one of "mass effect." This led to a new response in which the federal government and US military started to combine efforts to provide security, remove water from the city, conduct house-to-house searches, and so on.

Why did the mental model associated with "hurricanes" lead to an ineffective response from the federal government?

SOURCE: Excerpted from "You Have to Lead from Everywhere," *Harvard Business Review,* November 2010, p 77.

routinely capture process data to discover how work is really being done. Finally, they study these data in an effort to find ways to improve.[21]

You can see that this process requires the use of evidence-based decision making, which was discussed in Chapter 12. Following this four-step process should encourage employees to view learning as a daily activity. Retired Coast Guard Admiral Thad Allen is a good example of someone who tried to create a learning organization when he was directing the federal response to hurricanes Katrina and Rita (see Real World/Real People above).

Organization Design

Organizational design is defined as "the structures of accountability and responsibility used to develop and implement strategies, and the human resource practices and information and business processes that activate those structures."[22] The general idea behind the study of organizational design is that organizations are more effective or successful when their structure supports the execution of corporate strategies. This in turn has led researchers, consultants, and managers to consider how organizations might best structure themselves.[23] Many managers underestimate the complexity of this task. Consider the case of Yahoo!.

TO THE POINT

What are the similarities and differences between the seven basic ways organizations are structured?

organizational design A structure of accountability and responsibility that an organization uses to execute its strategies.

Just as an organization's structure should fit with its vision and strategies, so to must a building's structure match the vision of an architect or designer. This new building in Frankfurt, Germany, is being constructed for the European Central Bank (ECB).

Example. In December 2006, then CEO Terry Semel announced a sweeping reorganization of the company, replacing Yahoo's product-aligned structure with one focused on users and advertiser customers. Seven product units were merged into a group called Advertisers and Publishers. A unit dubbed Technology would provide infrastructure for the two new operating groups. The idea was to accelerate growth by exploiting economies of scope across Yahoo's rich collection of audience and advertiser products. Semel's team had thought they'd carefully defined roles and responsibilities under the new structure, but decision making and execution quickly became bogged down. Audience demanded tailored solutions that Technology could not provide at a reasonable cost. . . . In response, Yahoo executives created new roles and management levels to coordinate the units. The organization ballooned to 12 layers, product development slowed as decisions stalled, and overhead costs increased.[24]

Yahoo! clearly adopted the wrong organizational design. Unfortunately, changes in organizational design, such as the one at Google, frequently produce bad results.

For example, a McKinsey & Company survey of 1,890 executives revealed that only 8% experienced positive results after making structural changes. This finding is consistent with a study of 57 reorganizations by consulting firm Bain & Company. Results revealed that most reorgs had no effect, and some led to lower organizational performance.[25] What then is a manager supposed to do about determining the best organizational design?

While there is no simple answer to this question, you will never be able to address this issue without an understanding of the different types of structure that exist. This section thus provides an overview of seven fundamental types of organizational structures. The following section then attempts to help you determine when these structures may be most effective.[26]

LO.4 Traditional Designs

Organizations defined by a traditional approach tend to have functional, divisional, and/or matrix structures. Each of these structures relies on a vertical hierarchy and attempts to define clear departmental boundaries and reporting relationships. Let us consider each type of structure.

Functional Structure

A functional structure groups people according to the business functions they perform, for example, manufacturing, marketing, and finance. A manager is responsible for the performance of each of these functions, and employees tend to identify strongly with their particular function, such as sales or engineering. The organization chart in Figure 17–1 illustrates a functional structure. Responsibility at this hospital is first divided into administrative and medical functions, and within each category, directors are responsible for each of the functions. This arrangement puts together people who are experts in the same or similar activities. Thus, as a small company grows and hires more production workers, salespeople, and accounting staff, it typically groups them together with a supervisor who understands their function.

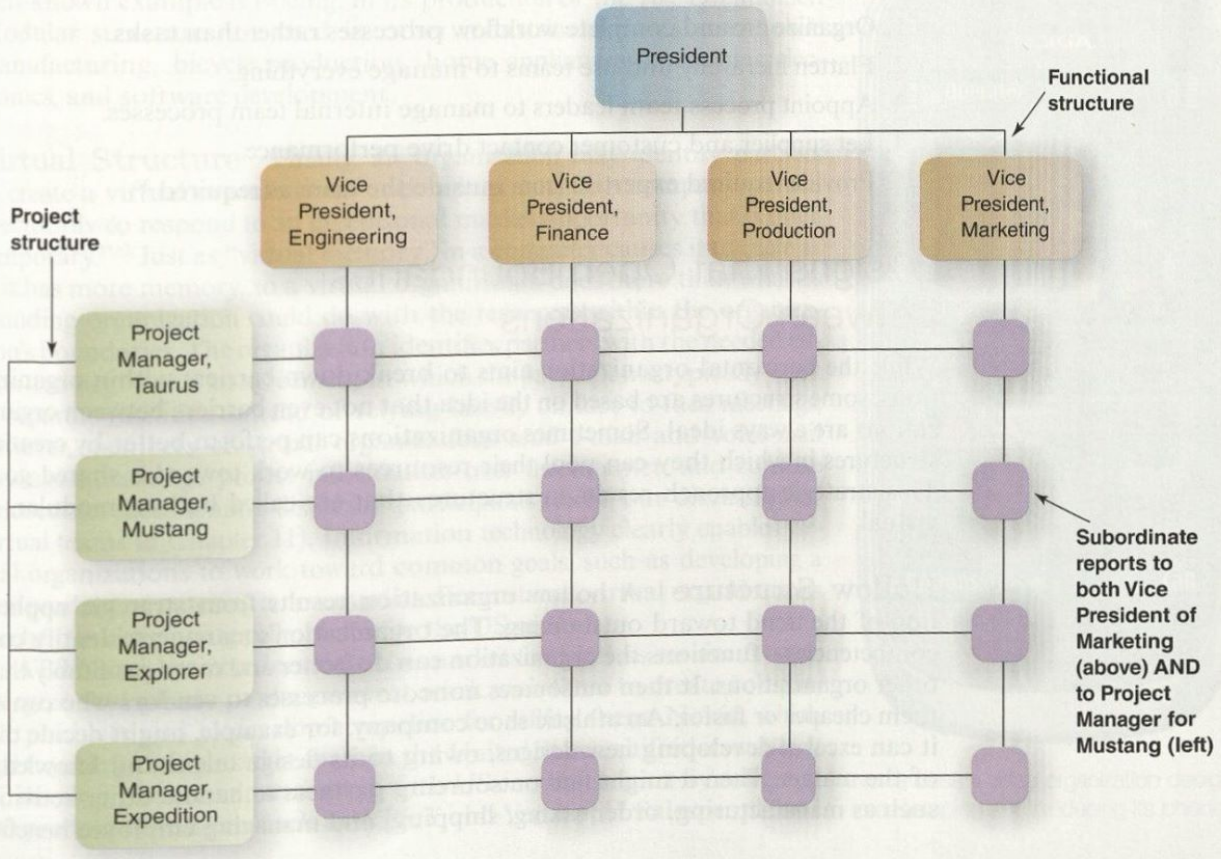
Divisional Structure

In a divisional structure, the organization groups together activities related to outputs, such as type of product or type (or location)

of customer. For example, General Electric has four businesses (major product divisions): GE Technology Infrastructure, GE Finance, GE Energy Infrastructure, and GE Consumer & Industrial. These major business areas are subdivided further into either product or geographic divisions.[27] The people in a division can become experts at making a particular type of product or serving the particular needs of their customer group or geographic area. Typically, each division has a functional structure. Some organizations have concluded that using a functional or divisional structure divides people too much, ultimately creating silos within the organization. This in turn detracts from the extent to which employees collaborate and share best practices across functions. One way to address this problem while still focusing on hierarchy is to create a matrix structure.

Matrix Structure Organizations use matrix structures when they need stronger horizontal alignment or cooperation in order to meet their goals. For example, Hachette Filipacchi Media, the world's largest magazine publisher, is restructuring its US operations into a matrix structure. CEO Alain Lemarchand is doing this because he wants to create greater integration and collaboration between three chief brands of women's titles and the functions of editorial, ad sales, business development, and event marketing.[28] A matrix structure combines a vertical structure with an equally strong horizontal overlay. This generally combines functional and divisional chains of command to form a grid with two command structures, one shown vertically by function, and the other shown horizontally, by product line, brand, customer group, or geographic region. In the example shown in Figure 17–3, Ford might set up vice presidents for each functional group and project managers for each make of car. Employees would

figure 17–3 Matrix Structure



report to two managers: one in charge of the function they perform and the other in charge of the project they are working on.

Matrix organizations historically received a bad reputation for being too complex and confusing. The reality is that it takes much more collaboration and integration to effectively implement this structure. Jay Galbraith, an expert on matrix structures, noted that matrix structures frequently fail because management fails to create complementary and reinforcing changes to the organization's IT systems, human resource procedures (e.g., performance appraisals, rewards, selection criteria), planning and budgeting processes, organizational culture, internal processes, and so on. He concluded that "organization structures do not fail; managements fail at implementation."[29] This type of structure increasingly is being used by companies expanding into international markets.

Focus on Collaboration: Horizontal Design

The traditional approach of dividing up work according to functions, products, and customers is dissatisfying to managers who want to focus on bringing people together, without internal boundaries keeping them apart. If you want people to share knowledge and continually improve the way things are done, you need to create an environment in which collaboration feels easy and natural. Many organizations with this viewpoint have emphasized horizontal relationships among people who are working on shared tasks more than on vertical relationships in a traditional organizational design.

This horizontal approach to organizational design tends to focus on work processes. A process consists of every task and responsibility needed to meet a customer need, such as developing a new product or filling a customer order. Completing a process requires input from people in different functions, typically organized into a cross-functional team (described in Chapter 11). Thus, teamwork is a feature of organizations designed horizontally. Two experts in organization design have identified five principles for designing a horizontal organization:

1. Organize around complete workflow processes rather than tasks.
2. Flatten hierarchy and use teams to manage everything.
3. Appoint process team leaders to manage internal team processes.
4. Let supplier and customer contact drive performance.
5. Provide required expertise from outside the team as required.[30]

Designs That Open Boundaries between Organizations

While the horizontal organization aims to break down barriers within organizations, some structures are based on the idea that not even barriers between organizations are always ideal. Sometimes organizations can perform better by creating structures in which they can pool their resources to work toward a shared goal. This strategic approach results in structures that are called hollow, modular, or virtual.

Hollow Structure A hollow organization results from strategic application of the trend toward outsourcing. The organization's managers identify core competencies—functions the organization can do better and more profitably than other organizations. It then outsources noncore processes to vendors who can do them cheaper or faster. An athletic shoe company, for example, might decide that it can excel at developing new designs, owing to its design talent and knowledge of the market. Then it might find outsourcing partners to handle other activities such as manufacturing, order taking, shipping, and managing employee benefits.

The more processes that are outsourced, the more the resulting organization is "hollow"—and focused on what it does best. Furniture company Herman Miller goes outside the organization for design expertise. CEO Brian Walker explains the advantages:

Example. This external network ensures that we are always taking a fresh look at problems faced by our customers without subjecting it to our own filters. If you have only an internal design staff, even an enormously talented one, you are inherently limited by their existing world view and experiences. Our ability to tap into a broader outside network lets us . . . get a fresh perspective on existing or emerging problems.[31]

Herman Miller also uses other organizations for manufacturing; Walker says the company is "more . . . an integrator than a manufacturer," which makes it less resistant to new product ideas because it doesn't have to change manufacturing processes itself.

A hollow structure is useful when an organization is faced with strong price competition and there are enough companies to perform the required outsourced processes.

Modular Structure A modular organization, like a hollow organization, uses outsourcing. But instead of outsourcing processes, it outsources parts of a product, such as components of a jet or subroutines of a software program. The modular organization is responsible for ensuring that the parts meet quality requirements, that the parts arrive in a timely fashion, and that the organization is capable of efficiently combining the parts into the final whole. This design is useful when a company can identify product modules and create design interfaces that allow it to assemble parts into a working order. A well-known example is Boeing, in its production of the 787 Dreamliner. Modular structures are used in other industries such as automobile manufacturing, bicycle production, home appliances, consumer electronics, and software development.

Virtual Structure Finally, an organization may identify partners to create a virtual organization, "a company outside a company created specifically to respond to an exceptional market opportunity that is often temporary."[32] Just as "virtual memory" in a computer causes it to seem as if it has more memory, so a virtual organization does more than what its founding organization could do with the resources within the organization's boundaries. The organization identifies partners with the needed talents and negotiates an agreement in which the participants typically work in separate facilities. Instead of relying heavily on face-to-face meetings, however, members of virtual organizations send e-mail and voice-mail messages, exchange project information over the Internet, and convene videoconferences among dispersed participants (recall our discussion of virtual teams in Chapter 11). Information technology clearly enables virtual organizations to work toward common goals, such as developing a new product or entering a new market. For instance, virtual organizations can help in developing cell phones for the US market.

AT&T and Verizon dominate the market for wireless service to such a degree that phone producers must work with them to create compatible products and to develop a pipeline for selling them. Nokia, which had trouble gaining market share in the United States, shifted its strategy "to develop phones in partnership with US carriers, in part by assigning 300 product developers each to AT&T and Verizon."[33] Salespeople and

Nokia uses a virtual organization design in developing and producing its phones.

R&D personnel also are assigned to work with particular wireless carriers. In general, a virtual organization demands flexibility, and managers must be able to lead and motivate people in separate locations. This structure is valuable for organizations that want to grow through partnerships with other companies.[34]

Back to the Chapter-Opening Case

Assume you are working on a project within a matrix structure and that some of the project team members are working virtually. Explain how you might use the types of technology discussed in the case to improve planning sessions between project team members.

TO THE POINT

What are the key learning points regarding mechanistic and organic organizations, and when should managers use each of the seven basic organizational structures?

The Contingency Approach to Designing Organizations

According to the **contingency approach to organization design,** organizations tend to be more effective when they are structured to fit the demands of the situation. The purpose of this section is to extend the previous one by introducing you to the contingency approach to organization design. We review a landmark study, drawing a distinction between centralized and decentralized decision making, and then discuss when each of seven organization designs previously discussed is most likely to be effective.

LO.5 Mechanistic versus Organic Organizations

A landmark contingency design study was reported by a pair of British behavioral scientists, Tom Burns and G M Stalker. In the course of their research, they drew a very instructive distinction between what they called mechanistic and organic organizations. **Mechanistic organizations** are rigid bureaucracies with strict rules, narrowly defined tasks, and top-down communication. A mechanistic organization generally would have one of the traditional organization designs described earlier in this chapter and a hierarchical culture—see the discussion of culture types in Chapter 3. The "orderliness" of this structure is expected to produce reliability and consistency in internal processes, thereby resulting in higher efficiency, quality, and timeliness. You can imagine how valuable this type of structure might be for a company in the nuclear power industry where mistakes and errors can be catastrophic. It is important to note that being mechanistic does not mean that an organization should not be responsive to employee and customer feedback. Toyota, a company noted for being more mechanistic, fell into this trap and ended up with a recall involving faulty accelerator pedals and rusted spare-tire-carriers (see Real World/Real People on page 509).

Oppositely, **organic organizations** are flexible networks of multitalented individuals who perform a variety of tasks. An example is Eileen Fisher, Inc, which designs and manufactures women's clothing. The company's leadership includes Susan Schor, who—in the words of founder Eileen Fisher—"came in and created her own place:" heading all aspects of "people and culture," including employee development, social consciousness, human resources, and internal communications. Schor's accomplishments include crafting an organizational structure in which all employees work in teams run by facilitators and "no one reports to anyone. Instead, we 'connect into' someone else."[35] These qualities of an organic organization are easiest to maintain with the lowered boundaries of horizontal and virtual organizations. Internet technology and social media has made such arrangements

real WORLD // real PEOPLE

Has Toyota Become Too Mechanistic?

The *shusa* or chief engineer at Toyota wields much power and authority. This individual has "complete responsibility for a vehicle, beginning with its conception and sometimes lasting through its entire sales life." The *shusa* is accountable for the success of a vehicle and defines its intended market. They also are responsible for meeting goals related to cost, weight, performance, and quality. There are 38 *shusas* at Toyota and they are "highly respected and are granted near-absolute authority." You can see the mechanistic nature of Toyota's structure.

The role of *sushas* within Toyota's structure came under scrutiny when Katusake Watanabe was president from 2005–2009. Watanabe told the *sushas* to increase profitability by aggressively cutting costs. They pursued this goal with vigor around the world. "When they cut too deeply, feedback was not quick to reach them." . . .

"When Toyota customers began to raise questions about the quality of their vehicles, either because they performed unsafely or just looked cheap, Toyota brushed off the complaints and delayed finding solutions. Some current and former Toyota executives in the US came to believe that the *shusas* were responsible for the company's defensiveness. They thought the *shusas* deflected questions about quality and were reluctant to take the problems to top management because they feared losing face." . . .

"As the company grew, its Japanese leaders never relinquished the iron grip they exercised over the company's operations . . . and continued to make all important decisions in Japan. Instead of globalizing, Toyota colonized."

Why did a mechanistic structure cause problems at Toyota?

SOURCE: Excerpted from A Taylor III, "How Toyota Lost Its Way," *Fortune*, July 26, 2010, p 110.

more practical by enabling individuals to develop networks of people with whom they can readily share information as needed.[36]

Back to the Chapter-Opening Case

1. Will Dixon Schwabl Advertising's approach toward running meetings result in a more mechanistic or organic organization? Explain your rationale.
2. Would a mechanistic or organic organization be more likely to foster innovation?

A Matter of Degree Importantly, as illustrated in Table 17–2, each of the mechanistic-organic characteristics is a matter of degree. Organizations tend to be relatively mechanistic or relatively organic. Pure types are rare because divisions, departments, or units in the same organization may be more or less mechanistic or organic. From an employee's standpoint, which organization structure would you prefer?

Different Approaches to Decision Making Decision making tends to be centralized in mechanistic organizations and decentralized in organic organizations. **Centralized decision making** occurs when key decisions are made by top

contingency approach to organization design Creating an effective organization–environment fit.

mechanistic organizations Rigid, command-and-control bureaucracies.

organic organizations Fluid and flexible networks of multitalented people.

centralized decision making Top managers make all key decisions.

table 17–2 Characteristics of Mechanistic and Organic Organizations

CHARACTERISTIC	MECHANISTIC ORGANIZATION		ORGANIC ORGANIZATION
1. Task definition and knowledge required	Narrow; technical	→	Broad; general
2. Linkage between individual's contribution and organization's purpose	Vague or indirect	→	Clear or direct
3. Task flexibility	Rigid; routine	→	Flexible; varied
4. Specification of techniques, obligations, and rights	Specific	→	General
5. Degree of hierarchical control	High	→	Low (self-control emphasized)
6. Primary communication pattern	Top-down	→	Lateral (between peers)
7. Primary decision-making style	Authoritarian	→	Democratic; participative
8. Emphasis on obedience and loyalty	High	→	Low

SOURCE: Adapted from discussion in T Burns and G M Stalker, *The Management of Innovation* (London: Tavistock, 1961), pp 119–25.

management. Carol Bartz, Yahoo's former CEO, for example, decided to implement a more top-down style of management because she wanted to make the company more efficient.[37] **Decentralized decision making** occurs when important decisions are made by middle- and lower-level managers. Generally, centralized organizations are more tightly controlled while decentralized organizations are more adaptive to changing situations. Semco, a Brazilian manufacturer, turned to a more decentralized structure when it needed to spark dramatic change. Ricardo Semler became CEO when Semco was headed for bankruptcy; he eliminated most senior-management jobs and pushed decision making down to lower levels of self-managed teams. The outcomes have been promising.

Example. The move initially caused inefficiencies and higher costs but eventually allowed low-level innovation to flourish. . . . Inventory backlogs have eased, product lines have expanded, and sales have jumped. . . . After the company's reorganization, revenues climbed from $4 million to $212 million.[38]

Experts on the subject warn against extremes of centralization or decentralization. The challenge is to achieve a workable balance between the two extremes. A management consultant put it this way:

Example. The modern organization in transition will recognize the pull of two polarities: a need for greater centralization to create low-cost shared resources; and a need to improve market responsiveness with greater decentralization. Today's winning organizations are the ones that can handle the paradox and tensions of both pulls. These are the firms that analyze the optimum organizational solution in each particular circumstance, without prejudice for one type of organization over another. The result is, almost invariably, a messy mixture of decentralized units sharing cost-effective centralized resources.[39]

Centralization and decentralization are not an either–or proposition; they are an and–also balancing act.

Practical Research Insights When they classified a sample of actual companies as either mechanistic or organic, Burns and Stalker discovered one type was not superior to the other. Each type had its appropriate place, depending on the environment. When the environment was relatively stable and certain, the successful organizations tended to be mechanistic. Organic organizations tended to be the successful ones when the environment was unstable and uncertain.[40]

Another interesting finding comes from a study of 42 voluntary church organizations. As the organizations became more mechanistic (more bureaucratic) the intrinsic motivation of their members decreased. Mechanistic organizations apparently undermined the volunteers' sense of freedom and self-determination. Additionally, the researchers believe their findings help explain why bureaucracy tends to feed on itself: "A mechanistic organizational structure may breed the need for a more extremely mechanistic system because of the reduction in intrinsically motivated behavior."[41] Thus, bureaucracy begets greater bureaucracy.

Most recently, field research in two factories, one mechanistic and the other organic, found expected communication patterns. Command-and-control (downward) communication characterized the mechanistic factory. Consultative or participative (two-way) communication prevailed in the organic factory.[42]

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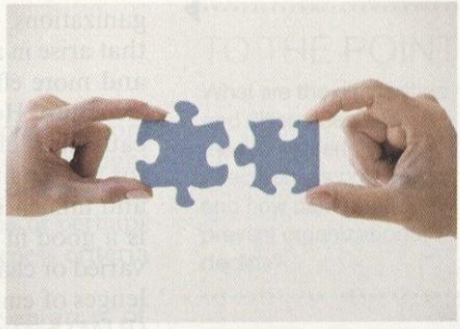
connect Go to www.mcgrawhillconnect.com for a self-assessment to determine your preferred organizational structure.

Both Mechanistic and Organic Structures Have Their Places Although achievement-oriented students of organizational behavior (OB) typically express a distaste for mechanistic organizations, not all organizations or subunits can or should be organic. For example, McDonald's could not achieve its admired quality and service standards without extremely mechanistic restaurant operations. Imagine the food and service you would get if McDonald's employees used their own favorite ways of doing things and worked at their own pace. On the other hand, mechanistic structure alienates some employees because it erodes their sense of self-control.

LO.6 Getting the Right Fit

All of the organization structures described in this chapter are used today because each structure has advantages and disadvantages that make it appropriate in some cases. For example, the clear roles and strict hierarchy of an extremely mechanistic organization are beneficial when careful routines and a set of checks and balances are important, as at a nuclear power facility. In a fast-changing environment with a great deal of uncertainty, an organization would benefit from a more organic structure that lowers boundaries between functions and organizations. Let us consider each of the seven basic organization designs.

A functional structure can save money by grouping together people who need similar materials and equipment. Quality standards can be maintained because supervisors understand what department members do and because people in the same function develop pride in their specialty. Workers can devote more of their time to what they do best. These benefits are easiest to realize in a stable environment, where the organization doesn't depend on employees to coordinate their efforts to solve varied problems. Today, fewer organizations see their environment as stable, so more are moving away from strictly functional structures.



Building a puzzle requires the pieces to fit with each other. The same is true about organizational performance. Organizations are more effective when the organizational design fits with the organization's vision and strategies. Creating this fit is not easy in today's constantly changing economic environment.

decentralized decision making
Lower-level managers are empowered to make important decisions.

downside of these structures is that organizations give up expertise and control in the functions or operations that are outsourced. Still, like divisional and horizontal organizations, they can focus on customers or products, leaving their partners to focus on their own specialty area. In India, when Tata Motors wanted to develop a $2,500 compact car, it decided its own engineers needed assistance, so Tata adopted a modular structure. Each of its suppliers tackled designing particular components to be as inexpensive as possible while still meeting quality standards, and Tata focused on coordinating their work.[49] An example of a successful hollow organization is one global manufacturer that shifted its focus to developing products and contracted with outsourcing firms to make the products in the manufacturer's own facilities, handling the process from ordering materials to shipping the finished product. The arrangement maintained quality while cutting labor costs by 40% by avoiding inefficiency and duplication of work.[50]

The success of organizations that work across boundaries depends on managers' ability to get results from people over whom they do not have direct formal authority by virtue of their position in the organization. Boeing, for example, has been embarrassed by its setbacks in manufacturing the Dreamliner from components provided by a network of suppliers, which did not always meet their commitments to Boeing. Also, individuals in these organizations may not have the same degree of commitment as do employees of a traditional organization, so motivation and leadership may be more difficult. Therefore, these designs are the best fit when organizations have suitable partners they trust; when efficiency is very important; when the organization can identify functions, processes, or product components to outsource profitably; and in the case of a virtual organization, when the need to be met is temporary. In a study of managers in 20 organizations that extensively collaborate with other companies, these efforts most often succeeded in companies that select and train for teamwork skills, invest in processes that promote collaboration, set up tools and systems for sharing information, and treat collaboration as one of the company's ongoing programs requiring leadership.[51] Another recent study of 177 international strategic alliances further showed that open structures work best when there is a high level of trust between partnering organizations.[52]

Organizational Effectiveness (and the Threat of Decline)

TO THE POINT

What are the similarities and differences among the four generic effectiveness criteria, and how can managers prevent organizational decline?

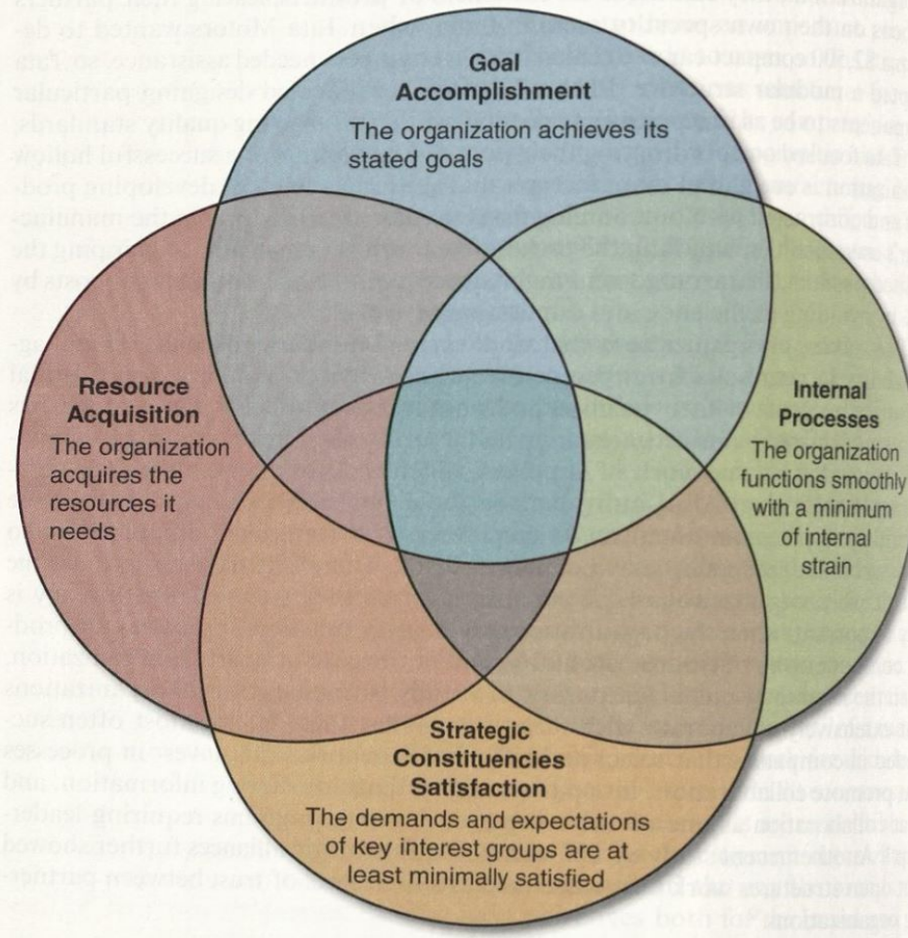
How effective are you? If someone asked you this apparently simple question, you would likely ask for clarification before answering. For instance, you might want to know if they were referring to your grade point average, annual income, actual accomplishments, ability to get along with others, public service, or perhaps something else entirely. So it is with modern organizations. Effectiveness criteria abound.

Assessing organizational effectiveness is an important topic for an array of people, including managers, job hunters, stockholders, government agencies, and OB specialists. The purpose of this section is to introduce a widely applicable and useful model of organizational effectiveness; we also will deal with the related problem of organizational decline.

LO.7 Generic Organizational-Effectiveness Criteria

A good way to better understand this complex subject is to consider four generic approaches to assessing an organization's effectiveness (see Figure 17–4). These effectiveness criteria apply equally well to large or small and profit or not-for-profit organizations. Moreover, as denoted by the overlapping circles in Figure 17–4,

figure 17–4 Four Ways to Assess Organizational Effectiveness



SOURCES: Adapted from discussion in K Cameron, "Critical Questions in Assessing Organizational Effectiveness," *Organizational Dynamics,* Autumn 1980, pp 66–80; and K S Cameron, "Effectiveness as Paradox: Consensus and Conflict in Conceptions of Organizational Effectiveness," *Management Science,* May 1986, pp 539–53.

connect Go to www.mcgrawhillconnect.com for an interactive exercise to test your knowledge of the generic organizational effectiveness criteria.

the four effectiveness criteria can be used in various combinations. The key thing to remember is "no single approach to the evaluation of effectiveness is appropriate in all circumstances or for all organization types."[53] What do Coca-Cola and France Télécom, for example, have in common, other than being large profit-seeking corporations? Because a multidimensional approach is required, we need to look more closely at each of the four generic effectiveness criteria.

Goal Accomplishment Goal accomplishment is the most widely used effectiveness criterion for organizations. Key organizational results or outputs are compared with previously stated goals or objectives. Deviations, either plus or minus, require corrective action. This is simply an organizational variation of the personal goal-setting process discussed in Chapter 9. Effectiveness, relative to the criterion of goal accomplishment, is gauged by how well the organization meets or exceeds its goals.

Productivity improvement, involving the relationship between inputs and outputs, is a common organization-level goal. Goals also may be set for organizational efforts such as minority recruiting, sustainability, customer satisfaction, employee satisfaction, quality improvement, and output. For example, Hyundai currently has capacity to produce 5.8 million cars and trucks and has established the goal

of growing capacity to 6.5 million units by 2012. The company also is putting the goal of vehicle quality at the top of its list of strategic goals. Hyundai "developed a two-part quality target it calls GQ 3-3-5-5, as Joon-Sang Kim, executive vice president of Hyundai-Kia's Quality Division, explained in an interview. Hyundai aims to finish in the top three in actual quality within three years as measured by Power's dependability survey—and to finish in the top five in perceived quality in five years."[54] Given today's competitive pressures and e-business revolution, *innovation* and *speed* are very important organizational goals for many companies.

Resource Acquisition This second criterion relates to inputs rather than outputs. An organization is deemed effective in this regard if it acquires necessary factors of production such as raw materials, labor, capital, and managerial and technical expertise. Charitable organizations such as the Salvation Army and United Way judge their effectiveness in terms of how much money they raise from private and corporate donations.

Internal Processes This dimension of effectiveness focuses on "what the organization must excel at" to effectively meet its financial objectives and customers' expectations. A team of researchers have identified four critical high-level internal processes that managers are encouraged to measure and manage. These processes influence productivity, efficiency, quality, safety, and a host of other internal metrics. The processes include organizational activities associated with (1) innovation, (2) customer service and satisfaction, (3) operational excellence, and (4) being a good corporate citizen.[55] Companies tend to adopt continuous improvement programs, recall our discussion of TQM in Chapter 1, in pursuit of improving their internal processes. Consider what Hyundai has done to improve the quality of its internal processes.

Example. It installed Six Sigma at its engineering center to measure its improvement. It made quality a cross-functional responsibility, with involvement from procurement, finance, and sales and marketing. It enlisted outside suppliers and put them together with designers and engineers to work out problems before they occurred. Quality oversight meetings, which had been poorly attended, became must-go events after Chairman Chung began to show up for twice-monthly gatherings.[56]

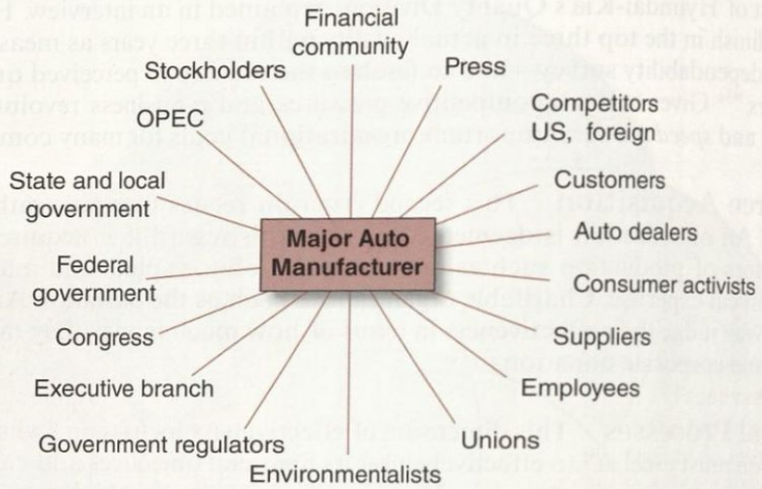
Strategic Constituencies Satisfaction Organizations both depend on people and affect the lives of people. Consequently, many consider the satisfaction of key interested parties to be an important criterion of organizational effectiveness.

A **strategic constituency** is any group of individuals who have some stake in the organization—for example, resource providers, users of the organization's products or services, producers of the organization's output, groups whose cooperation is essential for the organization's survival, or those whose lives are significantly affected by the organization.[57]

Strategic constituencies (or *stakeholders*) generally have competing or conflicting interests.[58] For instance, customers at gas pumps were not cheering when gas companies raised the price of gasoline in 2011 in response to unrest in the

strategic constituency Any group of people with a stake in the organization's operation or success.

figure 17–5 A Sample Stakeholder Audit Identifying Strategic Constituencies



SOURCE: From N C Roberts et al., "The Stakeholder Audit Goes Public," *Organizational Dynamics*, Winter 1989. © 1989. Reprinted with permission from Elsevier.

Middle East. Strategic constituents or stakeholders can be identified systematically through a stakeholder audit.

A **stakeholder audit** enables management to identify all parties significantly impacted by the organization's performance (see Figure 17–5). Conflicting interests and relative satisfaction among the listed stakeholders can then be dealt with.

A never-ending challenge for management is to strike a workable balance among strategic constituencies so as to achieve at least minimal satisfaction on all fronts.

Multiple Effectiveness Criteria: Some Practical Guidelines

Experts on the subject recommend a multidimensional approach to assessing the effectiveness of modern organizations. This means no single criterion is appropriate for all stages of the organization's life cycle. Nor will a single criterion satisfy competing stakeholders. Well-managed organizations mix and match effectiveness criteria to fit the unique requirements of the situation. For example, Irdeto Holdings, which provides content protection for pay TV and video recordings, decided on a structural change after determining that sales were growing fastest in Asia, which already accounted for almost 40% of the company's revenues. To meet business goals for serving this important geographic market, Irdeto's executives decided to convert the company's Beijing office into a second headquarters (the first headquarters is located near Amsterdam). This change serves an important constituency—Asian customers—but raised concerns with Amsterdam employees. Responding to that second constituency, Irdeto's CEO, Graham Kill, announced plans to build a new Amsterdam office building and explained that employees can enjoy an exciting career path if they are willing to rotate between the two headquarters cities. Management also has had to address internal processes, especially in developing Chinese managers to take initiative in decision making and to think about issues affecting the entire corporation, not just Asian markets.[59]

Managers need to identify and seek input from strategic constituencies. This information, when merged with the organization's stated mission and philosophy,

enables management to derive an appropriate *combination* of effectiveness criteria. The following guidelines are helpful in this regard:

- *The goal accomplishment approach* is appropriate when "goals are clear, consensual, time-bounded, measurable."[60]
- *The resource acquisition approach* is appropriate when inputs have a traceable effect on results or output. For example, the amount of money the World Wildlife Fund receives through donations dictates the level of services provided.
- *The internal processes approach* is appropriate when organizational performance is strongly influenced by specific processes (e.g., cross-functional teamwork).
- *The strategic constituencies approach* is appropriate when powerful stakholders can significantly benefit or harm the organization.

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Keeping these basic concepts of organizational effectiveness in mind, we turn our attention to preventing organizational decline.

What Are the Warning Signs of Ineffectiveness?

What do Circuit City, Lehman Brothers, Blockbuster, General Motors, Chrysler, and A&P have in common? They all declared bankruptcy within the last few years. Do you think top management in these companies had measures of effectiveness such as total revenue, profit, or market share that shed light on their future demise? Evidence suggests that they did.[61] This implies that managers may need to look for lead indicators of ineffectiveness that show up long before poor performance shows up in measures of effectiveness. Fortunately, researchers have identified such a list.

Short of illegal conduct, there are 16 early warning signs of organizational decline:

1. Excess personnel.
2. Tolerance of incompetence.
3. Cumbersome administrative procedures.
4. Disproportionate staff power (e.g., technical staff specialists politically overpower line managers, whom they view as unsophisticated and too conventional).
5. Replacement of substance with form (e.g., the planning process becomes more important than the results achieved).
6. Scarcity of clear goals and decision benchmarks.
7. Fear of embarrassment and conflict (e.g., formerly successful executives may resist new ideas for fear of revealing past mistakes).
8. Loss of effective communication.
9. Outdated organizational structure.[62]
10. Increased scapegoating by leaders.
11. Resistance to change.
12. Low morale.

stakeholder audit Systematic identification of all parties likely to be affected by the organization.

13. Special interest groups are more vocal.
14. Decreased innovation.
15. Unwillingness to experiment with new ideas.
16. Poor track record of execution.[63]

Managers who monitor these early warning signs of organizational decline are better able to take corrective action in a timely and effective manner. However, research has uncovered a troublesome perception tendency among entrenched top management teams. In companies where there had been little if any turnover among top executives, there was a tendency to attribute organizational problems to *external* causes (e.g., competition, the government, technology shifts). Oppositely, *internal* attributions tended to be made by top management teams with *many* new members. Thus, proverbial "new blood" at the top appears to be a good insurance policy against misperceiving the early-warning signs of organizational decline.

LO.8 Organizational Innovation

TO THE POINT

How can managers increase innovation?

IBM, Google, Microsoft, Procter & Gamble, GE, Tata, Chrysler, Carlsberg, Banner Health, HP, Ford, Boeing, and Pixar all have something in common—the desire to innovate. The health care industry, for example, is under intense pressure to innovate given the need to provide high-quality care at a reasonable cost to a growing number of people.[64] This trend should not be surprising given that technological innovation is a key source of productivity and economic growth.[65] **Innovation** "is the creation of something new that makes money; it finds a pathway to the consumer."[66] This definition highlights two key aspects of innovation. First, innovation is different from *invention,* which entails the creation of something new, and *creativity,* which was defined in Chapter 12 as a process of developing something new or unique. The former CEO of Procter & Gamble A G Lafley discussed this distinction in an interview with *BusinessWeek:* "You need creativity and invention, but until you can connect that creativity to the customer in the form of a product or service that meaningfully changes their lives, I would argue you don't have innovation." He uses the example of diapers to make his case. "We invented a material back in the 60s that would absorb a lot of water. Until we converted it into a Pampers disposable baby diaper, it was just a new kind of material. We created this entirely new product category, and that created an industry."[67] Second, innovation also is different from *integration,* which involves actions associated with getting multiple people, units, departments, functions, or sites to work together in pursuit of a goal, idea, or project.[68] As you will learn in this section, successful innovation relies on invention, creativity, and integration.

We are discussing the topic of innovation in this chapter because it is an organizational issue. That is, innovation requires us to integrate concepts pertaining to individual behavior, groups and social processes, and organizational processes (recall the topical model of OB shown in Figure 1–5). It is important to have a good understanding about innovation because it serves as the gasoline that fuels the economic engine of companies and countries alike. Interestingly, the United States' standing as an innovative nation has been falling over the last decade. A study by the Boston Consulting Group and the National Association of Manufacturers revealed that the United States is the eighth most innovative country in the world, behind (1) Singapore, (2) South Korea, (3) Switzerland, (4) Iceland, (5) Ireland, (6) Hong Kong, and (7) Finland. Another recent study further showed that US companies were planning to decrease their spending on innovation in 2009 and to reduce its importance as a strategic priority.[69] Time will tell whether or not this was a good decision.

real WORLD // real PEOPLE

IBM Is a Model of Innovation

IBM's CEO, Sam Palmisano, is remaking the company by innovating. The company had 5,896 patents in 2010, and it was ranked as the 12th most admired company in the world by *Fortune*. Palmisano takes a long-term view in running the company, and he is a strong believer in using research to determine future market trends.

"The company maintains nine research labs around the world and seven 'collaboratories' it has built with customers like Beijing center to develop high-tech railroads. In addition to business-related projects like developing new series for Indian mobile-phone operators, IBM funds experiments such as material research that may develop new products. But Palmisano sees even those super-technical 'blue-sky' projects as critical to understanding where he needs to take IBM, and how he should organize its assets and businesses.

Once a year, in a knock-down, drag-out marathon of a discussion, he spends a day with lab directors predicting the future and adjusting corporate strategy to address it. You don't dare show up unprepared, lab directors say, because he understands your work and he has his own position on its value. This session is where he can observe chip improvements that will change the way IBM markets and sells servers, for example.

Why is IBM so successful at innovating?

SOURCE: Excerpted from "IBM," *Fortune,* March 21, 2011, pp 117, 123.

To guide our investigation into how organizations can be more innovative, this section discusses myths about innovation and presents a model of innovation.

LO.9 Myths about Innovation

We would like to dispel two myths about innovation. The first focuses on the notion that innovation involves an epiphany or eureka moment. In other words, some people think that innovation is a spur-of-the-moment thing in which an idea is hatched, such as Isaac Newton discovering gravity after being hit on the head by an apple while sitting under a tree. This is a nice story, but it does not represent reality. Others conceive innovation as something that occurs when a person is in the right place at the right time. Nothing could be further from the truth. Innovation does not occur like a thunderbolt. Rather, it is a time-consuming activity that takes hard work and dedication.

Jack and Suzy Welch note that "it emerges incrementally, in bits and chugs, forged by a mixed bag of co-workers from up, down, and across an organization, sitting and wrangling it out in the trenches."[70] Innovation is hard work and requires an investment in time and resources. IBM is a good example (see Real World/ Real People above). "For 17 years running, Big Blue has been granted more US patents than any other applicant." In 2009, IBM spent $6 billion on R&D, which amounts to 6% of IBM's nearly $100 billion in total revenue.[71]

Apple's former CEO Steve Jobs once was asked, "How do you systematize innovation?" He answered,

Apple's iPhone is one of the most innovative products of the 21st century. What do you foresee being the next innovative product released by Apple?

innovation Creation of something new that is used by consumers.

"You don't."[72] The second myth is that innovation can be systematized. If it could, everyone would do it. There simply are too many challenges associated with innovation that make its success unpredictable. These challenges are discussed when we review a model of innovation in the next section.

LO.10 A Model of Innovation

Innovation is not a static event. Rather, it is a dynamic process that ebbs and flows over time and can lead to many potential benefits, including revenue growth, new products and services, lower costs, improved products and services, and improved processes. These benefits can manifest in both the short and long term. Honda Motor, for example, is investing millions in robotics research that is not expected to pay off for quite some time. It invented a robot that can follow four mental commands. "Honda says it foresees consumer applications—thinking a car trunk open, for instance. But R&D director Yasuhisa Arai concedes that 'practical uses are still way in the future.'"[73]

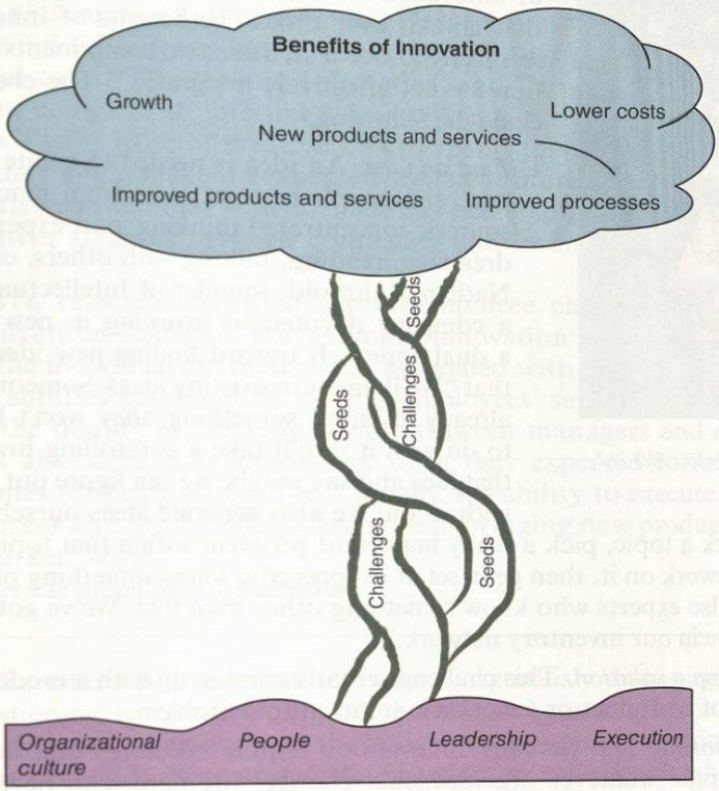
The process of growing a tree is a useful metaphor for understanding how organizations can become more innovative. Seeds are the starting point for growing trees. Over time, seeds evolve into strong trunks with the proper water, oxygen, nutrients, and sunlight. A healthy trunk enables a tree to survive and produce a canopy for all to enjoy its beauty, shade, or pollination. Innovation follows a similar process. You will learn that experts have uncovered six seeds of innovation that organizations can use to begin the process of becoming more innovative. These seeds will not produce innovation, however, unless an organization effectively manages a set of key challenges. Managing the seeds and challenges of innovation produces the trunk of innovation. Finally, innovation also needs special nutrients to help it grow, prosper, and deliver intended benefits. These nutrients include the proper organizational culture, leadership, people, and execution. Figure 17–6 shows that there are three components that influence the benefits of innovation: seeds of innovation, challenges of innovation, and nutrients of innovation. Let us consider each component.

Seeds of Innovation

Seeds of innovation represent the starting point of organizational innovation. After studying hundreds of innovations, an expert identified six seeds of innovation.[74] They are

1. *Hard work in a specific direction.* Most innovations come from dedicated people diligently working to solve a well-defined problem. This hard work can span many years.
2. *Hard work with direction change.* Innovations frequently occur when people change their approach toward solving a problem. In other words, hard work closes some doors and opens others.
3. *Curiosity and experimentation.* Innovations can begin when people are curious about something of interest, and experimentation is used to test for the viability of curious ideas.[75] This seed of innovation requires an organizational culture that supports experimentation. The founder of Intuit, Scott Cook, recognizes this conclusion and is trying to create a culture of innovation by reinforcing the belief that "failing is perfectly fine. Whatever happens, he tells his staff, you're doing right because you've created evidence, which is better than anyone's intuition. He says the organization is buzzing with experiments."[76]
4. *Wealth and money.* Innovations frequently occur because an organization or an individual simply wants to make money. Fiat's being near bankruptcy, for instance, drove the company to look for innovative ways to cut costs and

figure 17–6 A Model of Innovation



grow market share in the United States. This is the reason Fiat took a stake in Chrysler in return for releasing small-car technology.[77]

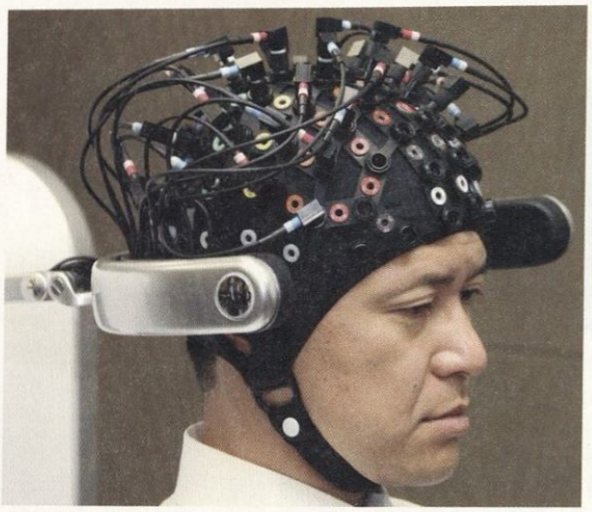
5. *Necessity.* Many innovations grow from the desire to achieve something or to complete a task that is needed to accomplish a broader goal. For example, "Xerox hired two researchers the company calls 'innovation managers' who will hunt for inventions and products from Indian startups that Xerox might adapt for North America. And Hewlett-Packard is using its research lab in India to see how it can migrate Web-interface applications for mobile phones in Asia and Africa to developed markets."[78]
6. *Combination of seeds.* Many innovations occur as a result of multiple factors.

For example, Google trys to fuel innovation by allowing employees to spend 20% of their time on projects outside of their main job. This strategy allows employee curiosity to meld with hard work to produce new products.

Back to the Chapter-Opening Case

Which of the seeds of innovation were used by the companies featured in the case? Provide examples.

seeds of innovation Starting point of organizational innovation.



Honda's robotics research is looking to literally tap into our brains for new products.

Challenges of Innovation Figure 17–6 illustrates that the challenges of innovation and the seeds of innovation are interwoven in a dynamic relationship that unfolds over time. The benefits of innovation are less likely to occur if these two components of innovation are not effectively integrated.[79] The challenges include the following:

1. *Find an idea.* An idea is needed to create something new, and people can get ideas from many different sources: concentrated thinking, past experience, daydreaming, reading, talking with others, or intuition. Nathan Myhrvold, founder of Intellectual Ventures, a company devoted to investing in new ideas, has a dual approach toward finding new ideas. He said that "We'll invest in existing ideas. Someone will have already invented something; they won't know what to do with it. We'll take a controlling investment in that idea and say maybe we can figure out what to do with it. But we also generate ideas ourselves. We try to pick a topic, pick a really important problem within that topic, do some homework on it, then get a set of experts who know something of the topic. But also experts who know something other than that. We've got about 100 people in our inventory network."[80]
2. *Develop a solution.* This challenge entails coming up with a model or prototype of a product or a workable solution to a problem.
3. *Sponsorship and funding.* Innovations require resources and someone to champion whatever organizational changes are needed to develop a new product or service. Tata Motors, for example, has committed billions of dollars to research and development.
4. *Reproduction.* The company must figure out how to profitably make the new product or deliver a new service.
5. *Reach your potential customer.* Many innovations fail because the company cannot figure out how to get the new product or service in the hands of consumers. Some experts recommend the use of job mapping. Job mapping "breaks down the task the customer wants done into a series of discrete process steps. By de-constructing a job from beginning to end, a company gains a complete view of all the points at which a customer might desire more help from a product or service—namely, at each step in the job."[81] Job mapping helps companies determine how customers might best use new products and services.
6. *Beat your competitors.* Remember that other companies may be pursuing the same breakthroughs. It is better to focus on a smaller number of innovations.
7. *Timing.* Customers must be ready for the new product or service and employees must be prepared to make whatever changes are necessary to turn the innovation into reality. The timing of the innovation needs to be considered.
8. *Keep the lights on.* Organizations must still make money while they are pursuing innovation. It is important to stay focused on keeping current customers happy while engaging in innovative activities.

Nutrients of Innovation Organizations are more likely to experience the benefits of innovation when the dynamic interplay between the seeds and

challenges of innovation are supported and reinforced by the nutrients of innovation: an organization's culture, leadership, people, and ability to execute. For example, a recent meta-analysis revealed that innovation was positively associated with market, adhocracy, and clan cultures—recall our discussion in Chapter 3.[82] GE already has put this research finding into use in a training program called "Leadership, Innovation, and Growth." Teams attending the training complete an internal assessment regarding the extent to which the culture is supportive of creativity. Participants then use the results to discuss how they might make the work environment more innovation friendly.[83] Research also showed that transformational leadership was helpful in creating innovative alliances between companies and in encouraging employees' creativity.[84]

Moreover, research identified several employee characteristics that can help organizations innovate. For example, innovation was positively associated with the individual characteristics associated with creativity, the level of skills and abilities possessed by people, employees' self-efficacy for innovation, and the quality of the relationship between managers and employees. Employees also were more innovative when they expected to receive positive outcomes for being innovative.[85] Finally, the ability to execute ultimately makes or breaks an organization's attempts at bringing new products and services to market. Why?

Consider the definition of **execution.**

Example. Execution is a systematic process of rigorously discussing hows and whats, questioning, tenaciously following through, and ensuring accountability. It includes making assumptions about the business environment, assessing the organization's capabilities, linking strategy to operations and the people who are going to implement the strategy, synchronizing those people and their various disciplines, and linking rewards to outcomes. It also includes mechanisms for changing assumptions as the environment changes and upgrading the company's capabilities to meet the challenges of an ambitious strategy. In its most fundamental sense, execution is a systematic way of exposing reality and acting on it.[86]

This definition highlights that execution requires organizations to effectively manage people, groups, and organizational processes and systems in the pursuit of innovation. In the end, the innovation process must be managed. John Donahoe, EBay's CEO, commented on the relationship between innovation and execution during an interview for the *Harvard Business Review.* In response to the question "So what's your biggest challenge now, execution or innovation?" he replied, "I think it's the intersection of the two. We have to keep innovating, but we have to execute at scale, and the challenge is how to balance the pace of change in the eyes of the consumer. Existing users often don't like the changes initially, because they're used to a certain way of shopping, yet new users do like them."[87] This example highlights that the consumer ultimately determines what is and what is not an innovative product or service.

execution Process of discussing hows and whats, questioning, following through, and ensuring accountability.

Summary of Key Concepts

1. *Describe the four characteristics common to all organizations, and explain the difference between closed and open systems.* They are coordination of effort (achieved through policies and rules), a common goal (a collective purpose), division of labor (people performing separate but related tasks), and a hierarchy of authority (the chain of command). Closed systems, such as a battery-powered clock, are relatively self-sufficient. Open systems, such as the human body, are highly dependent on the environment for survival. Organizations are said to be open systems.
2. *Define the term learning organization.* A learning organization is one that proactively creates, acquires, and transfers knowledge and changes its behavior on the basis of new knowledge and insights.
3. *Review the factors that hinder an organization's ability to learn from success and failure.* There are three factors that distract learning from success: the self-serving bias, overconfidence, and the natural tendency of "not asking why." Table 17–1 identifies six factors that inhibit learning from failure.
4. *Describe seven basic ways organizations are structured.* Traditional designs include (*a*) functional structures, in which work is divided according to function; (*b*) divisional structures, in which work is divided according to product or customer type or location; and (*c*) matrix structures, with dual-reporting structures based on product and function. Organizations also may be designed (*d*) horizontally, with cross-functional teams responsible for entire processes. Organization design also may reduce barriers between organizations, becoming (*e*) hollow organizations, which outsource functions; (*f*) modular organizations, which outsource the production of a product's components; or (*g*) virtual organizations, which temporarily combine the efforts of members of different companies in order to complete a project.
5. *Discuss Burns and Stalker's findings regarding mechanistic and organic organizations.* British researchers Burns and Stalker found that mechanistic (bureaucratic, centralized) organizations tended to be effective in stable situations. In unstable situations, organic (flexible, decentralized) organizations were more effective. These findings underscored the need for a contingency approach to organization design.
6. *Identify when each of the seven organization structures is the right fit.* Mechanistic organizations and functional structures may be necessary when tight control is important and the environment is stable. Organic organizations allow for innovation in a rapidly changing environment. Divisional structures are a good fit when the organization needs deep knowledge of varied customer groups and the ability to respond to customer demands quickly. A matrix organization can deliver the advantages of functional and divisional structures if the company has superior managers who communicate extensively, foster commitment and collaboration, and negotiate effectively to establish goals and priorities consistent with the organization's strategy.

   A horizontal design is a good fit when specialization is less important than the ability to respond to varied or changing customer needs. Hollow, modular, and virtual designs are best when organizations have suitable partners they trust; efficiency is very important; the organization can identify functions, processes, or product components to outsource; and in the case of a virtual organization, when the need to be met is temporary.
7. *Describe the four generic organizational effectiveness criteria.* They are goal accomplishment (satisfying stated objectives), resource acquisition (gathering the necessary productive inputs), internal processes (building and maintaining healthy organizational systems), and strategic constituencies satisfaction (achieving at least minimal satisfaction for all key stakeholders).
8. *Discuss the difference between innovation, invention, creativity, and integration.* Innovation is creating something new, that is commercialized. In contrast, invention is simply the creation of something new and creativity is the process of developing something new or unique. Integration involves actions associated with getting multiple people, units, departments, functions, or sites to work together in pursuit of a goal, idea, or project. Innovation relies on invention, creativity, and integration.
9. *Review the myths of innovation.* There are two key myths about innovation. The first is the myth that innovation involves an epiphany or eureka moment. The second is that innovation can be systematized.
10. *Explain the model of innovation.* Innovation is a dynamic process that involves the simultaneous effects of seeds of innovation and challenges of innovation. That said, the benefits of innovation only occur when the interaction between seeds and challenges is nurtured by the nutrients of innovation, which include organizational culture, leadership, people, and execution.

Key Terms

Organization, 496
Unity of command principle, 496
Organization chart, 497
Span of control, 498
Staff personnel, 499
Line managers, 499
Closed system, 499
Open system, 499
Learning organization, 501

OB in Action Case Study

Experts Propose a Process for Increasing Innovation[88]

Most great ideas for enhancing corporate growth and profits aren't discovered in the lab late at night, or in the isolation of the executive suite. They come from the people who daily fight the company's battles, who serve the customers, explore new markets and fend off the competition.

In other words, the employees.

Companies that have successfully made innovation part of their regular continuing strategy did so by harnessing the creative energies and the insights of their employees across functions and ranks. That's easy to say. But how, exactly, did they do it? One powerful answer, we found, is in what we like to call innovation communities.

Every company does it a little differently, but innovation communities typically grow from a seed planted by senior management—a desire for a new product, market or business process. A forum of employees then work together to make desire a reality.

Innovation communities tackle projects too big, too risky and too expensive to be pursued by individual operating units. They can be created with little additional cost, because no consultants are needed. After all, those in the midst of the fray already know most of the details relevant to the project. . . .

Innovation communities are a way of giving new shape and purpose to knowledge that your employees already possess. The detailed discussions that take place, led by senior managers, often represent a company's most productive and economical engine for increased profits.

Here, then, are seven key characteristics that we have identified as being part of successful innovation communities.

CREATE THE SPACE TO INNOVATE. Line managers and employees occupied with operational issues normally don't have the time to sit around and discuss ideas that lead to cross-organizational innovation. Innovation communities create a space in which employees from across the organization can exchange ideas. . . .

Each year at food retailer Supervalu Inc, 35 to 40 mid- and director-level managers break up into four teams to discuss strategic issues suggested by executives in the different business units. The managers discuss issues outside their own areas of expertise and work on their leadership development at the same time. Over periods of five to six months, they hold electronic meetings at least weekly and meet in person at least five to six times, all while continuing to perform their regular duties. . . .

GET A BROAD VARIETY OF VIEWPOINTS. It's essential to involve people from different functions, locations and ranks, not only for their unique perspectives, but also to ensure buy-in throughout the company afterward. Innovation communities focus on creating enthusiasm as well as new products. At Honda Motor Co, innovation groups in the US draw members from sales, engineering and development, and from different business units across North America. Some companies, like General Electric Co, involve customers and business clients in the new-product discussions as well. . . .

CREATE A CONVERSATION BETWEEN SENIOR MANAGEMENT AND PARTICIPANTS. By definition, innovation communities can't work in isolation: To create sustainable cross-organizational innovation, it's important that ideas flow to senior managers. If they don't, innovations will tend to have limited, local effects that don't benefit the organization as a whole. . . .

But establishing effective strategic conservations is perhaps the most challenging factor for the success of innovation communities. For example, they require that truth be allowed to speak to power. If participants are inhibited, ideas that result are likely to be limited in impact, affecting a few units instead of the entire organization.

Discussion shouldn't be without limits. Senior managers should set the topics and keep discussions on course, because "blue-sky" conversations, while fun, generally waste time. . . .

PARTICIPANTS SHOULD BE PULLED TO JOIN, NOT PUSHED. Members need to be enthusiastic about participating. Employees can't be forced to reveal their thoughts or be imaginative.

Immediate rewards, like cash, usually drive people to focus on winning the prize instead of following the often-twisting but ultimately satisfying path to successful innovation. Instead, try explaining how the forum's work has the potential to benefit the organization, its customers, or broader social goals.

Another incentive: Make it clear that participation in innovation communities will be helpful for career advancement.

TAPPING UNUSED TALENT AND ENERGY KEEPS PRODUCT-DEVELOPMENT COSTS LOW. One reason these forums are economical is because they tap into unused energy. An innovation community sends a message that senior management is listening and that employees will benefit from participating. In many cases potential contributors are just waiting to be asked.

Permanent structures aren't required and productivity needn't suffer. Innovation-community leaders and teams participate for a limited time as they must continue to perform their regular roles.

COLLATERAL BENEFITS CAN BE AS IMPORTANT AS THE INNOVATIONS THEMSELVES. Innovation communities promote learning on both a personal and organizational level by bringing people together to exchange ideas. The repeated discussions and problem-solving missions can give rise to valuable social networks that lead to further exchanges of ideas in the future. . . .

MEASUREMENT IS KEY. Innovation communities are sustainable only if they can produce demonstrable value. Otherwise senior management loses interest.

All of the organizations we've noted try to gauge the success of their communities, based on how many ideas are implemented and with what results.

Questions for Discussion

1. How do innovation communities promote an open system?
2. How would the use of innovation communities help companies to learn from both success and failure? Discuss.
3. What type of organizational structure is represented by the use of innovation communities? Explain your rationale.
4. To what extent does the process to create innovative communities rely on the characteristics of organic organizations? Provide examples.
5. To what extent is the process of creating innovative communities consistent with the model of innovation?
6. How does the process of creating innovative communities overcome the challenges of innovation? Explain.

Legal/Ethical Challenge

One of the Fastest Growing Businesses Involves Spying on Consumers? Is This Ethical?[89]

Many companies believe that the use of sophisticated software that tracks our internet behavior is an innovative way to get information that can be used to increase their revenue.

"Hidden inside Ashley Hayes-Beaty's computer, a tiny file helps gather personal details about her, all to be put up for sale for a tenth of a penny. The file consists of a single code . . . that secretly identifies her as a 26-year-old female in Nashville, Tennessee.

The code knows that her favorite movies include *The Princess Bride, 50 First Dates*, and *10 Things I Hate About You.* It knows she enjoys the *Sex and the City* series. It knows she browses entertainment news and likes to take quizzes."

Upon learning about the file, Ashley concluded it was "eerily correct." Ms Hayes behavior is being monitored without her knowledge or permission by Lotame Solutions Inc. The company uses special software called a "beacon" to track what people type on websites. "Lotame packages that data into profiles about individuals, without determining a person's name, and sells the profiles to companies seeking customers." That said, Eric Porres, Lotame's chief marketing officer, indicated that the profile can be segmented "all the way down to one person." Lotame also claimed that you can remove yourself from their system, assuming you even know that you are being tracked by the system.

"The information that companies gather is anonymous, in the sense that Internet users are identified by a number assigned to their computer, not by a specific person's name."

Many companies are unaware that their websites were tagged with beacons and that intrusive files were being attached to anyone who visited their website. The courts have not ruled on the legality of these complex tracking procedures.

How do you feel about the practice of someone tracking your Internet behavior without your approval or awareness?

1. Give me a break, this is the Internet age. Tracking is fair game and it provides useful information to companies so they can target products that meet our needs. Besides, you can get off Latame's system if you don't want to be tracked. Further, tracking can be

used to catch pedophiles and other types of criminal behavior.

2. I can accept the idea of tracking, but companies like Latame should get our approval before they start collecting data.
3. This is an invasion of privacy, and it should be disallowed by the courts.
4. I am against any attempts to police what goes on when we use the Internet.

Web Resources

For study material and exercises that apply to this chapter, visit our website at **www.mhhe.com/kreitner10e**