

Organizational Agility

“ *It is change, continuing change, inevitable change, that is the dominant fact in society today. No sensible decision can be made any longer without taking into account not only the world as it is, but the world as it will be.* ”

— Isaac Asimov

LEARNING OBJECTIVES

After studying Chapter 9, you will be able to:

- LO 1** Discuss why it is critical for organizations to be responsive. p. 308
- LO 2** Describe the qualities of an organic organization structure. p. 310
- LO 3** Identify strategies and dynamic organizational concepts that can improve an organization’s responsiveness. p. 311
- LO 4** Explain how a firm can be both big and small. p. 314
- LO 5** Summarize how firms organize to meet customer requirements. p. 318
- LO 6** Identify ways that firms organize around different types of technology. p. 324

CHAPTER OUTLINE

The Responsive Organization

Strategy and Organizational Agility

- Organizing around Core Competencies
- Strategic Alliances
- The Learning Organization
- The High-Involvement Organization

Organizational Size and Agility

- The Case for Big
- The Case for Small
- Being Big and Small

Customers and the Responsive Organization

- Customer Relationship Management
- Total Quality Management
- ISO 9001
- Reengineering

Technology and Organizational Agility

- Types of Technology Configurations
- Organizing for Flexible Manufacturing
- Organizing for Speed: Time-Based Competition

Final Thoughts on Organizational Agility

Management Close-Up

HOW CAN WENDELL WEEKS KEEP CORNING'S FUTURE BRIGHT?

Corning chairman and CEO Wendell Weeks could be a poster child for the American success story. Weeks grew up outside Scranton, Pennsylvania, a coal town that had seen better days, and was from a middle-class family. After graduating from Lehigh University, he joined New York-based Corning during the 1980s and rose steadily, leaving only briefly to earn a Harvard MBA.

His company, founded in 1851 by Avery Houghton Sr., specializes in inventing and producing glass and high-tech ceramics. For generations Corning discoveries have helped make our everyday lives better. In 1912, for example, Corning's invention of heat-resistant glass for railroad lanterns enabled it to create Pyrex glass for science labs and kitchen cookware worldwide. The 1972 development of a ceramic that could filter pollutants led to the invention of the catalytic converter for a car's exhaust system. Over the years, Corning's process and product developments have boosted production efficiencies in other

During the telecom boom of the 1990s, Wendell Weeks led Corning Inc. to spectacular success. When the boom went bust, however, Corning had to start over. As you read this chapter, consider how Weeks capitalized on Corning's strengths to work the company back to profitability.

industries, including aeronautics, automotives, and consumer electronics.

Leading Corning's fiber-optics division during the telecom boom of the 1990s, Weeks helped generate huge profits for the company. The future of fiber optics seemed limitless. But when the telecom bubble burst in 2001, the fall could have literally wiped out the company. At that time, about 80 percent of Corning's business was built on fiber optics. The company's share price plummeted from a high of \$113 to \$1.10.

Former Corning CEO—and great-great-grandson of the founder—Jamie Houghton came out of retirement to help struggling Corning find its way. Instead of blaming Weeks for the failure and booting him out, Corning promoted him and assigned him the monumental task of turning the company around. Houghton reportedly told Weeks, "You got us here; now, get us out." Surprised that he still had a job, Weeks began searching for ways to rescue his ailing firm.¹

Like Corning, today's successful companies can't afford to stand still. They cannot rest on their previous accomplishments. If they do, they can all too easily become vulnerable—to a competitor's new product, shifts in customer preferences, or other changes in their environment. Instead, they use their current successes to continue to build a competitive advantage for the future, constantly seeking new ways to remain flexible, innovative, efficient, and responsive to their customers. One of the most important ways they have of doing that is to make sure that their organization structures and systems remain *adaptable*—prepared to meet the complex and ever-changing challenges that managers and their organizations constantly confront.

In Chapter 8, we described the formal structure of the organization. We discussed hierarchical levels, reporting relationships, division of labor, coordination—all the basic, traditional elements of structure that are fundamental for understanding the way organizations work. But a firm's formal structure is only part of the story. Organizations are not static structures but complex systems in which many people do many different things at the same time. The overall behavior of organizations does not just pop out of a chart; it emerges out of all the processes, systems, and relationships within the organization, and the ways they interact. The task of organizing, then, is a matter of designing not just the appropriate formal structure for the organization but also the appropriate processes, information flows, and technology that make the organization effective. The “structuring” of these elements is critical for the flexibility and agility today's dynamic organizations require. The organization forms that enable that agility are the subject of this chapter.

The Responsive Organization

LO 1

The formal structure is put in place to *control* people, decisions, and actions. But in today's fast-changing business environment, *responsiveness*—quickness, agility, the ability to adapt to changing demands—is more vital than ever to a firm's survival.²



The bottom line

SPEED

Speed is vital to an organization's survival.

mechanistic organization

A form of organization that seeks to maximize internal efficiency.

organic structure

An organizational form that emphasizes flexibility.

Many years after Max Weber wrote about the concept of bureaucracy, two British management scholars (Burns and Stalker) described what they called the **mechanistic organization**.³ The common mechanistic structure they described was similar to Weber's bureaucracy, but they went on to suggest that in the modern corporation, the mechanistic structure is not the only option. The **organic structure** stands in stark contrast to the mechanistic organization. It is much less rigid and, in fact, emphasizes flexibility. The organic structure can be described as follows:

1. Jobholders have broader responsibilities that change as the need arises.
2. Communication occurs through advice and information rather than through orders and instructions.
3. Decision making and influence are more decentralized and informal.
4. Expertise is highly valued.
5. Jobholders rely more heavily on judgment than on rules.
6. Obedience to authority is less important than commitment to the organization's goals.
7. Employees depend more on one another and relate more informally and personally.

Figure 9.1 contrasts the formal structure of an organization—epitomized by the organization chart—to the informal structure, which is much more organic. Astute managers are keenly aware of the network of interactions among the organization's members, and they structure around this network to increase agility. People in organic organizations work more as teammates than as subordinates who take orders from the boss, thus breaking away from the traditional bureaucratic form.⁴

The ideas underlying the organic structure and networks are the foundation for the newer forms of organization described in this chapter. The more organic a firm

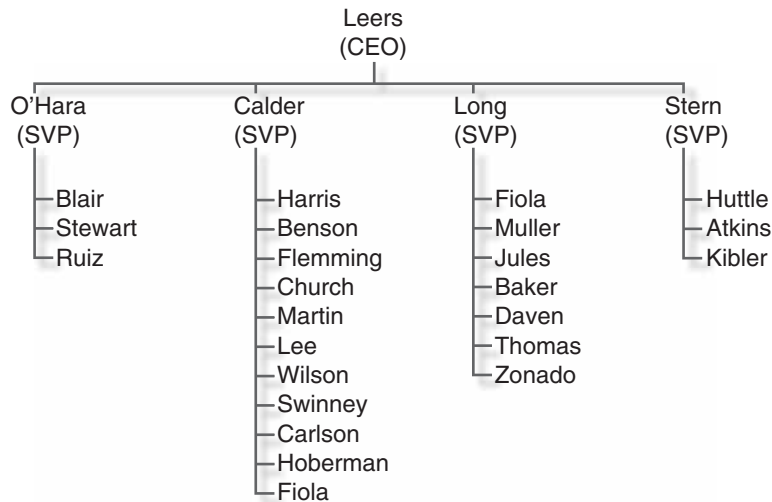


FIGURE 9.1(a)
Organization Chart Shows
Who's on Top

SOURCE: Adapted from D. Krackhardt and J. R. Hanson, "Information Networks: The Company behind the Chart," July–August 1993, pp. 104–11. Copyright © 1993 by the Harvard Business School Publishing Corporation; all rights reserved.

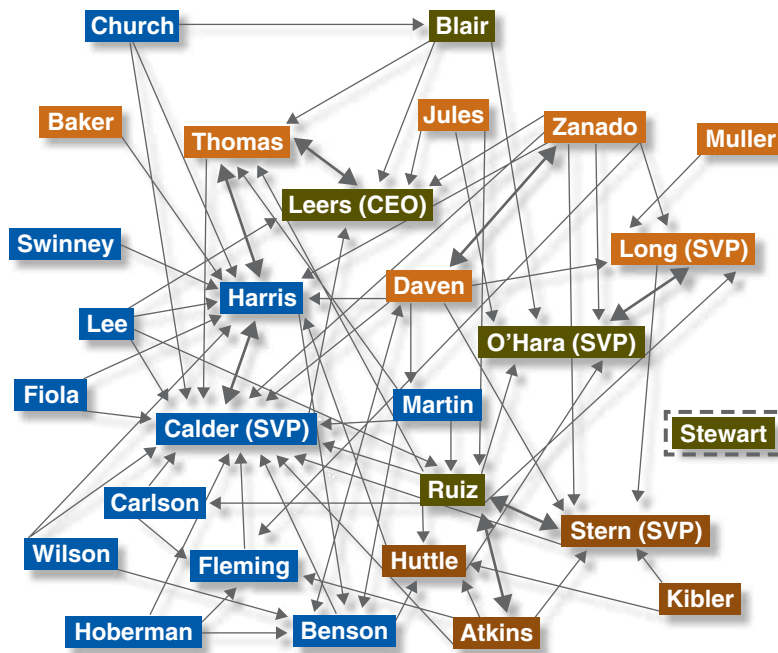


FIGURE 9.1(b)
Advice Network Reveals
Knowledge Flow

SOURCE: Adapted from D. Krackhardt and J. R. Hanson, "Information Networks: The Company behind the Chart," July–August 1993, pp. 104–11. Copyright © 1993 by the Harvard Business School Publishing Corporation; all rights reserved.

is, the more responsive it will be to changing competitive demands and market realities. Managers in progressive companies place a premium on being able to act, and act fast. They want to act in accordance with customer needs and other outside pressures. They want to take actions to correct past mistakes and also to prepare for an uncertain future. They want to be able to respond to threats and opportunities. The particular form—and degree—of organic structure the organization adopts to accomplish these goals will depend on its *strategy*, its *size*, its *customers*, and its *technology*. We will consider each of these in turn.

Strategy and Organizational Agility

LO 2

Certain strategies, and the structures, processes, and relationships that accompany them, seem particularly well suited to improving an organization's ability to respond quickly and effectively to the challenges it faces. They reflect its managers' determination to fully leverage its people and assets to make the firm more agile and competitive. These strategies and structures are based on the firm's core competencies, its strategic alliances, its ability to learn, and its ability to engage all the people in the organization in achieving its objectives.

Organizing around Core Competencies

A recent, different, and important perspective on strategy and organization hinges on the concept of *core competence*.⁵ As you learned in Chapter 4, a core competence is the capability—knowledge, expertise, skill—that underlies a company's ability to be a leader in providing a range of specific goods or services. It allows the company to compete on the basis of its core strengths and expertise, not just on what it produces. For example, Barnes & Noble's core competence is book merchandising. A core competence gives value to customers, makes the company's products different from—and better than—those of competitors, and can be used in creating new products. Think of core competencies as the roots of competitiveness and products as the fruits.

Successfully developing a world-class core competence opens the door to a variety of future opportunities; failure means being foreclosed from many markets. Thus, a well-understood, well-developed core competence can enhance a company's responsiveness and competitiveness. Strategically, this means that companies should commit to excellence and leadership in competencies, and strengthen them, before they commit to winning market share for specific products. Organizationally, this means that the corporation should be viewed as a portfolio of competencies, not just a portfolio of specific businesses. Companies should strive for core competence leadership, not just product leadership.

Managers who want to strengthen their firms' competitiveness via core competencies need to focus on several related issues:

- Identify existing core competencies.
- Acquire or build core competencies that will be important for the future.
- Keep investing in competencies so that the firm remains world class and better than competitors.
- Extend competencies to find new applications and opportunities for the markets of tomorrow.⁶

Consider which of these issues Corning's CEO addressed, as discussed in the "Management Close-Up: Taking Action" feature.

Keep in mind that it's not enough for an organization to *have* valuable resources that provide competencies; those resources have to be *managed* in a way that gives the organization an advantage over competitors.⁸ That means managers have to do three things. First, they must accumulate the right resources (such as talented people) by determining what resources they need, acquiring and developing those resources, and eliminating resources that don't provide value. Next, they combine the resources in ways that give the organization capabilities, such as researching new products or resolving problems for customers. These combinations may involve knowledge sharing and alliances between departments or with other organizations. Finally, managers need to leverage or exploit their resources. They do this by identifying the opportunities where their competencies deliver value to customers—say, by creating new products or by delivering existing products better than competitors—and then by coordinating and deploying the employees and other resources needed to respond to those opportunities.



Core competence can be a source of quality and innovation.

Management Close-up

TAKING ACTION

To fix Corning, Wendell Weeks first considered what the company represents at its core: its values, its people, and a culture built around innovation. He thought about how Corning added value: by making what Corning calls “keystone components” for the world’s major industries. As Weeks put it, “We are never about the products we make, because those will continue to change.”

Meeting with his top 200 managers, Weeks described the situation facing Corning, as well as his plans for turning the company around. Vowing that Corning would stay true to its core ideals, he took the message to Corning’s plants around the world.

Weeks examined the company’s research and development pipeline for the best opportunities. Before his promotion to Corning’s fiber-optics unit in 1992, Weeks had worked in its liquid crystal display (LCD) glass business. Although the LCD business had been losing money for years, Corning scientists knew the glass had many applications: televisions and computer monitors, laptop and notebook computers, and many other portable devices. As the technology for big-screen TVs evolved, demand for LCD glass grew. Corning increased its production of LCD glass, and soon the glass drove the bulk of the company’s profits. For 2006, the company posted record earnings, based largely on the production of LCD glass.

Aside from its domestic business, Corning opened its first LCD glass manufacturing plant in China. With China’s growing manufacturing capabilities and rising middle class, Corning promised more investment in that emerging market. The company projected growing global demand for the glass in 2008.⁷

- Wendell Weeks began the turnaround of Corning by considering what he called “the core of the company”: an innovative culture that responded to the changing demands of the marketplace. How did this attribute lead to Corning’s turnaround?
- Corning operates in five business units: Display Technologies, Telecommunications, Environmental Technologies, Specialty Materials, and Life Sciences. How did these core competencies influence Weeks’s turnaround strategy?

Strategic Alliances

As we discussed in Chapter 8, the modern organization has a variety of links with other organizations. These links are more complex than the standard relationships with traditional stakeholders such as suppliers and clients. Today even fierce *competitors* are working together at unprecedented levels to achieve their strategic goals. For example, Federal Express has drop-off boxes at U.S. Postal Service facilities. The New York Times Company and Monster Worldwide formed an alliance in which job advertisements for 19 newspapers will carry the Monster.com brand. The arrangement gives the newspaper company, whose papers include the *New York Times* and *Boston Globe*, a stronger online presence and gives Monster better visibility in local job markets, which have traditionally been dominated by local papers.⁹ In these and other examples, strategic alliances allow participants to respond to customer demands or environmental threats far faster and less expensively than each would be able to do on its own.

A **strategic alliance** is a formal relationship created with the purpose of joint pursuit of mutual goals. In a strategic alliance, individual organizations share administrative authority, form social links, and accept joint ownership. Such alliances are blurring firms’ boundaries. They occur between companies and their competitors, governments, and universities. Such partnering often crosses national and cultural boundaries. Companies form strategic alliances to develop new technologies, enter

LO 3

strategic alliance

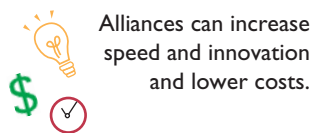
A formal relationship created among independent organizations with the purpose of joint pursuit of mutual goals.

Airlines, which are fierce competitors as they each try to secure their space in the skies, actually form alliances designed to improve customer service. Member airlines of Star Alliance share ground facilities such as baggage claim, customer lounges, ticketing, and check-in counters. They also share check-in lanes during peak travel times. All of these shared activities help smooth the way for travelers, particularly those with tight connections and who are traveling on multiple airlines. Star Alliance staff (employees of member airlines) notify each other when flights are late, asking them to wait for connecting passengers, if possible. And although the alliance makes every effort to make sure passengers' luggage is not lost, those who do come up empty handed receive a Star Alliance overnight kit. Star Alliance airlines also purchase joint advertising and even make large fuel purchases together, reducing costs. In the future the alliance may begin making joint purchases of such items as coffee and airsick bags.

Although Star Alliance seeks to offer uniformity of ground services, the group encourages individual airlines to maintain their own unique character in the air, such as specialty meals or specific in-flight services.¹⁰



Music and Coffee—A Harmonious Strategic Alliance! Apple and Starbucks created a partnership that allows Apple customers to sync to the Starbucks wireless internet network instantly from their iPod Touch, Macs, and iPhones to download music. Shown here is a Starbucks customer, Steve Carpenter (right), using his iPhone to capture a song at a Starbucks in Miami Beach, Florida.



Alliances can increase speed and innovation and lower costs.

learning organization

An organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights.

new markets, and reduce manufacturing costs. Not only can alliances enable companies to move ahead faster and more efficiently, but they also are sometimes the only practical way to bring together the variety of specialists needed for operating in today's complex and fast-changing environment. Rather than hiring the experts who understand the technology and market segments for each new product, companies can form alliances with partners that already have those experts on board.¹¹

Managers typically devote plenty of time to screening potential partners in financial terms. But for the alliance to work, the partners also must consider one another's areas of expertise and the incentives involved in the structure of the alliance. A comparison of research and development alliances found that the most innovation occurred when the partners were experts in moderately different types of research. If the partners were very different, they shared ideas and innovated more when the alliance was set up through equity (stock) ownership; for similar partners, a contract to do the research was associated with more innovation.¹²

Managers also must foster and develop the human relationships in the partnership. Asian companies seem to be the most comfortable with the nonfinancial, "people" side of alliances; European companies the next so; and U.S. companies the least. Thus, U.S. companies may need to pay extra attention to the human side of alliances. Table 9.1 shows some recommendations for how to do this. In fact, most of the ideas apply not only to strategic alliances but to any type of relationship.¹³

The Learning Organization

Being responsive requires continually changing and learning new ways to act. Some experts have stated that the only sustainable advantage is learning faster than the competition. This has led to a new term that is now part of the vocabulary of most managers: the learning organization.¹⁴ A **learning organization** is an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights.¹⁵ Google, Toyota, and IDEO are good examples of learning organizations. Such organizations are skilled at solving problems,

The best alliances are true partnerships that meet these criteria:
1. <i>Individual excellence</i> : Both partners add value, and their motives are positive (pursue opportunity) rather than negative (mask weaknesses).
2. <i>Importance</i> : Both partners want the relationship to work because it helps them meet long-term strategic objectives.
3. <i>Interdependence</i> : The partners need each other; each helps the other reach its goal.
4. <i>Investment</i> : The partners devote financial and other resources to the relationship.
5. <i>Information</i> : The partners communicate openly about goals, technical data, problems, and changing situations.
6. <i>Integration</i> : The partners develop shared ways of operating; they teach each other and learn from each other.
7. <i>Institutionalization</i> : The relationship has formal status with clear responsibilities.
8. <i>Integrity</i> : Both partners are trustworthy and honorable.

SOURCE: Adapted from R. M. Kanter, "Collaborative Advantage: The Art of Alliances," July–August 1994, pp. 96–108. Copyright © 1994 by the Harvard Business School Publishing Corporation; all rights reserved.

TABLE 9.1
How I's Can Become We's

experimenting with new approaches, learning from their own experiences, learning from other organizations, and spreading knowledge quickly and efficiently.

How do firms become true learning organizations? There are a few important ingredients.¹⁶

1. Their people engage in disciplined thinking and attention to details, making decisions based on data and evidence rather than guesswork and assumptions.
2. They search constantly for new knowledge and ways to apply it, looking for expanding horizons and opportunities rather than quick fixes to current problems. The organization values and rewards individuals who expand their knowledge and skill in areas that benefit the organization.
3. They carefully review both successes and failures, looking for lessons and deeper understanding.
4. Learning organizations benchmark—they identify and implement the best business practices of other organizations, stealing ideas shamelessly.
5. They share ideas throughout the organization via reports, information systems, informal discussions, site visits, education, and training. Employees work with and are mentored by more-experienced employees.

The High-Involvement Organization

Participative management is becoming increasingly popular as a way to create a competitive advantage. Particularly in high-technology companies facing stiff international competition, the aim is to generate high levels of commitment and involvement as employees and managers work together to achieve organizational goals.

In a **high-involvement organization**, top management ensures that there is a consensus about the direction in which the business is heading. The leader seeks input from his or her top management team and from lower levels of the company. Task forces, study groups, and other techniques are used to foster participation in decisions that affect the entire organization. Also fundamental to the high-involvement organization

high-involvement organization

A type of organization in which top management ensures that there is consensus about the direction in which the business is heading.

When companies need to be highly responsive, a high-involvement organization is key. Especially in high-technology companies where competition is tough, it's important for all employees to be on the front line and be able to react quickly to change.



is continual feedback to participants regarding how they are doing compared with the competition and how effectively they are meeting the strategic agenda.

Structurally, this usually means that even lower-level employees have a direct relationship with a customer or supplier and thus receive feedback and are held accountable for a good or service delivery. The organizational form is a flat, decentralized structure built around a customer, good, or service. Employee involvement is particularly powerful when the environment changes rapidly, work is creative, complex activities require coordination, and firms need major breakthroughs in innovation and speed—in other words, when companies need to be more responsive.¹⁷

Organizational Size and Agility

LO 4

One of the most important characteristics of an organization—and one of the most important factors influencing its ability to respond effectively to its environment—is its size. Large organizations are typically less organic and more bureaucratic. For example, Unilever, whose many consumer brands include Hellman's, Ben & Jerry's, Lipton, Vaseline, Dove, and Slim-Fast, has more than 200,000 employees worldwide. In many countries, the company has operated as three independent business lines—food, personal care, and ice cream and frozen food—each with its own supply chain and marketing budget.¹⁸

In large organizations, jobs become more specialized. More distinct groups of specialists get created because large organizations can add a new specialty at lower proportional expense. The complexity created by these numerous specialties makes the organization harder to control. As a result, in the past management added more levels to keep spans of control from becoming too large. To cope with complexity, large companies tend to become more bureaucratic. Rules, procedures, and paperwork are introduced.

Thus, with size comes greater complexity, and complexity brings a need for increased control. In response, organizations adopt bureaucratic strategies of control. The conventional wisdom is that bureaucratization increases efficiency but decreases a company's ability to innovate. So, are larger companies more responsive to competitive demands or not? Let's see.

The Case for Big

Bigger was better after World War II, when foreign competition was limited and growth seemed limitless. To meet high demand for its products, U.S. industry embraced high-volume, low-cost manufacturing methods. IBM, General Motors (GM), and Sears all grew into behemoths during those decades.

Alfred Chandler, a pioneer in strategic management, noted that big companies were the engine of economic growth throughout the 20th century.¹⁹ Size creates *scale economies*, that is, lower costs per unit of production. And size can offer specific advantages such as lower operating costs, greater purchasing power, and easier access to capital. Wal-Mart, among the largest companies in America, has the purchasing power to buy merchandise in larger volumes



The bottom line

COST

Large size often leads to scale economics.

Walmart's huge size has enabled it to set up a highly efficient distribution system in which suppliers work to keep costs low, an important competitive advantage for its low-price strategy.



and sell it at lower prices than its competitors can. Size also creates **economies of scope**; materials and processes employed in one product can be used to make other, related products. With such advantages, huge companies with lots of money may be the best at taking on large foreign rivals in huge global markets.

The Case for Small


But a huge, complex organization can find it hard to manage relationships with customers and among its own units. Bureaucracy can run rampant. Too much success can breed complacency, and the resulting inertia hinders change. Experts suggest that this is a surefire formula for being “left in the dust” by hungry competitors. As consumers demand a more diverse array of high-quality, customized products supported by excellent service, giant companies have begun to stumble. Some evidence exists, for example, that as firms get larger and their market share grows, customers begin to view their products as having lower quality. Also, once a company has captured a big share of the market, future growth is complicated because winning over more customers requires costlier efforts or a fresh approach. When growth was slowing at Walmart, the company tried branching into affordable but fashionable clothing. But cutting-edge fashion has not been an area of expertise for the company, and the initial efforts flopped.²⁰

Larger companies also are more difficult to coordinate and control. While size may enhance efficiency by spreading fixed costs out over more units, it also may create administrative difficulties that inhibit efficient performance. Unilever not only has three organizations selling different product lines in each country it serves, but until recently it was run by two chairmen-CEOs, an artifact of a merger that took place decades ago. This cumbersome structure has held back Unilever’s efficiency and agility, making competition more difficult.²¹ To describe this type of problem, a new term has entered the business vocabulary: *diseconomies of scale*, or the costs of being too big. “Small is beautiful” has become a favorite phrase of entrepreneurial business managers.²²

Smaller companies can move fast, provide quality goods and services to targeted market niches, and inspire greater involvement from their people. Nimble, small firms frequently outmaneuver big bureaucracies. They introduce new and better products, and they steal market share. The premium now is on flexibility and responsiveness—the unique potential strengths of the small firm. An extreme example is Kobold Watch, staffed by founder Michael Kobold and three employees. The small company makes and sells premium mechanical wristwatches priced at thousands of dollars each. Kobold advertises online and through word-of-mouth generated by sales to celebrities, including former president Bill Clinton and actors Kiefer Sutherland and James Gandolfini. When sales surge, Kobold calls on two other watchmakers to help out as needed. He intentionally limits production to 2,500 watches a year—not just to keep his company lean but also to maintain the prestige of his brand.²³

economies of scope

Economies in which materials and processes employed in one product can be used to make other, related products.

 **The bottom line**
SPEED
Small size may improve speed.

To keep its flexibility as it grew, Dur-A-Flex became a learning organization. The company started out primarily installing commercial and industrial flooring, but it gradually expanded into manufacturing the flooring systems and related products. After a decade of rapid growth, the company’s structure had become rigid, divided into separate manufacturing systems operating on three shifts. Maintaining quality and speed across departments and shifts was sometimes awkward.

Under CEO Bob Smith, Dur-A-Flex embarked on a change program known as “lean,” an approach (described later in this chapter) that involves studying and improving every process. Going lean introduced a climate that fostered learning. Every employee is trained in the methods and philosophy behind the lean approach. The company set up its own program, called Dur-A-Flex University, which holds classes mainly during lunch breaks.

According to Bill Greider, who led the lean initiative, “Once our focus turned to learning, everything changed.” As employees began interacting in the classes, divisions among groups slipped away. Employees now are encouraged to learn about all aspects of Dur-A-Flex’s business, from financial matters to flooring installation methods. Employees also can teach or sign up for a variety of fun Dur-A-Flex University “electives” such as beer making. CEO Smith says the learning approach not only helps employees cut costs and boost sales but also builds their enthusiasm and empowers them.²⁴

Being Big and Small

Small *is* beautiful for unleashing energy and speed. But in buying and selling, size offers market power. The challenge, then, is to be both big and small to capitalize on the advantages of each.

When Intuit grew from a software start-up to an established company selling popular accounting software, the company brought in a CEO recruited from General

“When I got [to Intuit], . . . I changed only one word in the operating values: I changed ‘Think fast, move fast’ to ‘Think smart, move fast.’ Because doing dumb things faster doesn’t get you anywhere.”

—Steve Bennett, Intuit CEO²⁶

Electric, Steve Bennett, to mesh big-company skills with Intuit’s entrepreneurial energy. Managers had plenty of new ideas but needed to build their skill in choosing and implementing the

best ideas. Bennett helped the company reevaluate its strategy to find areas of new growth. Popular Intuit products like QuickBooks have already captured most of the market for accounting software, so the company needs to focus less on competitors for its existing products and more on areas of untapped opportunity, which is why Intuit has begun to develop new areas such as online banking and software for managing health care expenses.²⁵

From a different angle, companies such as Starbucks and Amazon are very large companies that work hard to act small and maintain a sense of intimacy with employees and customers. Both are considered among the best-managed companies in the world. To avoid problems of growth and size, they decentralize decision making and organize around small, adaptive, team-based work units.

Verizon Communications is one large company that collaborates with its smaller customers to spread word about the benefits of its services. The company recently made an offer that some of its small-business customers decided to accept. The big firm asked the small ones if they would like to be featured in upcoming advertising. Jill Gizzio, founder of DogToys.com, which sells pet products, agreed to participate. The story of her seven-employee firm—which happens to use Verizon’s broadband telecommunications technology—was featured along with two other small firms in a regional ad. Gizzio was pleased with the result, which gave her tiny company more exposure than it had ever had. “It was the easiest thing I’ve ever done,” says Gizzio.

Business experts believe that the joint effort benefits both sides. Small-business customers get a chance to reach a wider audience and Verizon is profiled for its commitment and attention to small-business owners. “The Verizon commercial is helping to brand my company,” says Gizzio. But it’s important for the relationship to make sense—by partnering with companies that have similar outlooks and objectives. Says one industry observer, “A small-business owner might avoid teaming up with a large firm that is having ethical problems or whose image doesn’t mesh with that of the small business.” Similarly, a large firm might wait until a small firm has an established track record before offering it the spotlight. But when the relationship between the two works, the result can be very powerful.²⁷

Downsizing As large companies attempt to regain the responsiveness of small companies, they often face the dilemma of downsizing. **Downsizing** is the planned elimination of positions or jobs. Common approaches to downsizing include eliminating functions, hierarchical levels, or even whole units.²⁸ Another growing trend has been to replace full-time employees with less-expensive part-time or temporary workers.

Recognizing that people will be unemployed, frightened, and perhaps unable to pay their bills, managers usually opt for downsizing only in response to some kind of pressure. Traditionally, companies have downsized when demand falls and seems unlikely to rebound in the short run. Laying off workers is a way to avoid paying people who aren't needed to produce and ship goods, as well as to lower costs so that the company remains profitable—or at least viable—until the next upturn in business. More recently, however, global competition forced companies to cut costs even when sales were strong, and technological advances made it possible to produce the same amount of work with fewer employees. As a result, in recent decades, many companies have used downsizing as a way to become more efficient. This trend changed the types of positions that were eliminated. Downsizing in response to a slowdown in demand has tended to have the most impact on operating-level jobs in manufacturing firms. Downsizing to improve efficiency has focused on eliminating layers of management and bureaucratic structures, so those layoffs target “white-collar” middle managers.

The recent recession has forced widespread downsizing across a variety of industries, not just manufacturing. For example, Microsoft faced a severe downturn in demand, driven in part by a rare decline in the number of personal computers sold. The company announced that, for the first time in its history, it would have to downsize, laying off about 5,000 employees (about 5 percent of its workforce). The company started with 1,400 job cuts, and several months later announced that another 3,000 workers would lose their jobs, bringing the company near the end of its downsizing plan. In a memo to employees, CEO Steve Ballmer acknowledged the risks of such an approach: “Our success at Microsoft has always been the direct result of the talent, hard work, and commitment of our people.”²⁹ In effect, downsizing runs the risk of eliminating the very source of a company's success.

Done appropriately, with inefficient layers eliminated and resources focused more on adding customer value than on wasteful internal processes, downsizing can indeed lead to a more agile, flexible, and responsive firm. In that case, downsizing can be called **rightsizing**—arrival at the size at which the company performs most effectively. But even under the best circumstances, downsizing can be traumatic for an organization and its employees. What can be done to manage downsizing effectively, to help make it more effective?

First, firms should avoid excessive (cyclical) hiring to help reduce the need to engage in major or multiple downsizings. But beyond that, firms must avoid common mistakes such as making slow, small, frequent layoffs; implementing voluntary early retirement programs that entice the best people to leave; and laying off so many people that the company's work can no longer be performed. Instead, firms can engage in a number of positive practices to ease the pain and increase the effectiveness of downsizing:³⁰

- Use downsizing only as a last resort, when other methods of improving performance by innovating or changing procedures have been exhausted.
- Choose positions to be eliminated by engaging in careful analysis and strategic thinking.
- Train people to cope with the new situation.
- Identify and protect talented people.
- Give special attention and help to those who have lost their jobs.

downsizing

The planned elimination of positions or jobs.

rightsizing

A successful effort to achieve an appropriate size at which the company performs most effectively.

Communicate constantly with people about the process, and invite ideas for alternative ways to operate more efficiently.

Identify how the organization will operate more effectively in the future, and emphasize this positive future and the remaining employees' new roles in attaining it.

The management practices of high-involvement organizations, described earlier in this chapter, also play a role. In general, the negative consequences of downsizing are greater at high-involvement organizations—but not as bad if the organization continues the high employee involvement after the layoffs.³¹

Interestingly, the people who lose their jobs because of downsizing are not the only ones deeply affected. Those who survive the process—who keep their jobs—tend to exhibit what has become known as **survivor's syndrome**.³² They struggle with heavier workloads; wonder who will be next to go; try to figure out how to survive; lose commitment to the company and faith in their bosses; and become narrow-minded, self-absorbed, and risk-averse. As a consequence, morale and productivity usually drop.

You will learn more about some of these ideas in later chapters on human resources management, leadership, motivation, communication, and managing change. You might also refer back to our discussion in Chapter 1 about some of the things you can do to successfully manage your own career in an era where downsizing is a normal occurrence.

survivor's syndrome

Loss of productivity and morale in employees who remain after a downsizing.

Customers and the Responsive Organization

LO 5



Today's customers demand excellent service and new high-quality, low-cost products—fast.

So far, we have discussed how an organization's agility, adaptability, and structure are influenced by its *strategy* and *size*. But in the end, the point of structuring a responsive, agile organization lies in enabling it to meet and exceed the expectations of its *customers*—the people it must attract to purchase a good or service and whose continued patronage and involvement with the organization constitute the fundamental driver of sustained, long-term competitiveness and success.

Recall from Chapter 2 that an organization's environment is composed of many different parts—government, suppliers, competitors, and the like. Perhaps no other aspect of the environment has had a more profound impact on organizing in recent years than a focus on customers. Dr. Kenichi Ohmae points out that any business unit must take into account three key players: the *company* itself, the *competition*, and the *customer*. These components form what Ohmae refers to as the *strategic triangle*, as shown in Figure 9.2. Managers need to balance the strategic triangle, and successful

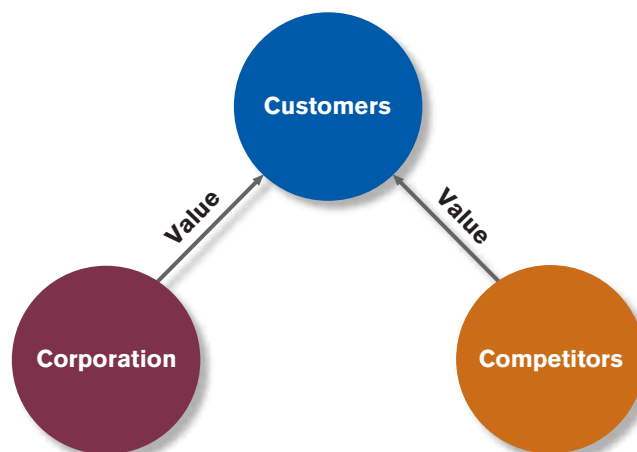


FIGURE 9.2
The Strategic Triangle

SOURCE: From K. Ohmae et al., *The Mind of the Strategist*, p. 92. © 1982 The McGraw-Hill Companies.

organizations use their strengths to create value by meeting customer requirements better than competitors do. In this section, we will discuss in some depth how organizations organize to maintain and extend a competitive advantage with their customers.

Customer Relationship Management

Customer relationship management (CRM) is a multifaceted process, typically mediated by a set of information technologies, that focuses on creating two-way exchanges with customers so that firms have an intimate knowledge of their needs, wants, and buying patterns. In this way, CRM helps companies understand, as well as anticipate, the needs of current and potential customers. And in that way, it is part of a business strategy for managing customers to maximize their long-term value to an enterprise.³³

customer relationship management (CRM)

A multifaceted process focusing on creating two-way exchanges with customers to foster intimate knowledge of their needs, wants, and buying patterns.

Bankers are using CRM software to collect and sift through data about their customers to learn more about them and the ways to give them everything they want—and still make a profit. Whereas the first generation of such software simply gathered the data, the new generation helps bankers anticipate needs and provide service—sometimes before customers even know what they want. “Delivering something that I expect is one thing, but when you . . . start solving problems that I don’t even know I’ve got yet, that’s where you feel well taken care of,” says Debbie Wood of industry research firm Jack Henry & Associates. David Sardilli of Oracle Corp. adds, “Meeting the . . . goals of both the members and the customers is paramount.” Effective CRM essentially provides a three-dimensional (3-D) view of the customer, the ability to see the customer from different viewpoints and needs.

Many banks find they are falling short of their customers’ expectations and genuinely want to correct that. At the consumer level, it could be something as simple as adding more tellers during busy hours like lunchtime and after work. At the commercial level, it could be offering certain financial products or services. “The CRM mindset has to permeate the organization,” advises Sardilli. “If there’s a customer relationship mindset, when someone makes a call to change their address, the system will know to prompt someone to change the address on their other accounts.”³⁴

As discussed throughout this book, customers want quality goods and services, low cost, innovative products, and speed. Traditional thinking considered these basic customer wants as a set of potential trade-offs. For instance, customers wanted high quality or low costs passed along in the form of low prices. But world-class companies today know that the “trade-off” mentality no longer applies. Customers want it *all*, and they are learning that an organization exists somewhere that will provide it all.

But if all companies seek to satisfy customers, how can a company realize a competitive advantage? World-class companies have learned that almost any advantage is temporary, because competitors will strive to catch up. Simply stated—although obviously not

The American Customer Satisfaction Index measures consumers’ ratings of the price, quality, and customer service associated with buying a variety of goods and services. During this period, the ACSI fell during the months just before a recession and then began to climb. Perhaps this means companies try harder when it’s harder to make a sale.³⁵



* The baseline index of 74.8 was measured in summer 1994.

“Our business is about technology, yes. But it’s also about operations and customer relationships.”

—Michael Dell

simply done—a company attains and retains competitive advantage by continuing to improve. This concept—*kaizen*, or continuous improvement—is an integral part

of Japanese operations strategy.

In the realm of customer relations, continuous improvement includes continually changing in order to connect with customers, even without waiting for customers to make the first move. Comcast Cable, Dell, and other companies have adopted Salesforce.com’s Service Cloud application, which lets companies find customers who take their questions and problems to Facebook, Twitter, or other social networking communities. Customer service agents can locate messages about their products and then offer to help, potentially saving a customer relationship. Chase Paymentech Solutions is using collaboration software called Greenhouse to invite customers into conversations about new-product ideas. Customers can critique and vote on ideas; their feedback not only helps Chase figure out which ideas have potential but also strengthens customer commitment.³⁶

As organizations focus on responding to customer needs, they soon find that the traditional meaning of a customer expands to include “internal customers.” The word *customer* now refers to the *next process*, or *wherever the work goes next*.³⁷ This highlights the idea of interdependence among related functions and means that all functions of the organization—not just marketing people—have to be concerned with customer satisfaction. Any recipient of a person’s work, whether coworker, boss, subordinate, or external party, should be viewed as the customer.

A deeper way to understand how organizations can add customer value to their products has been provided by Michael Porter, who popularized the concept of the value chain. A **value chain** is the sequence of activities that flow from raw materials to the delivery of a good or service, with additional value created at each step. You can see a generic value chain illustrated in Figure 9.3. Each step in the chain adds value to the product or service:

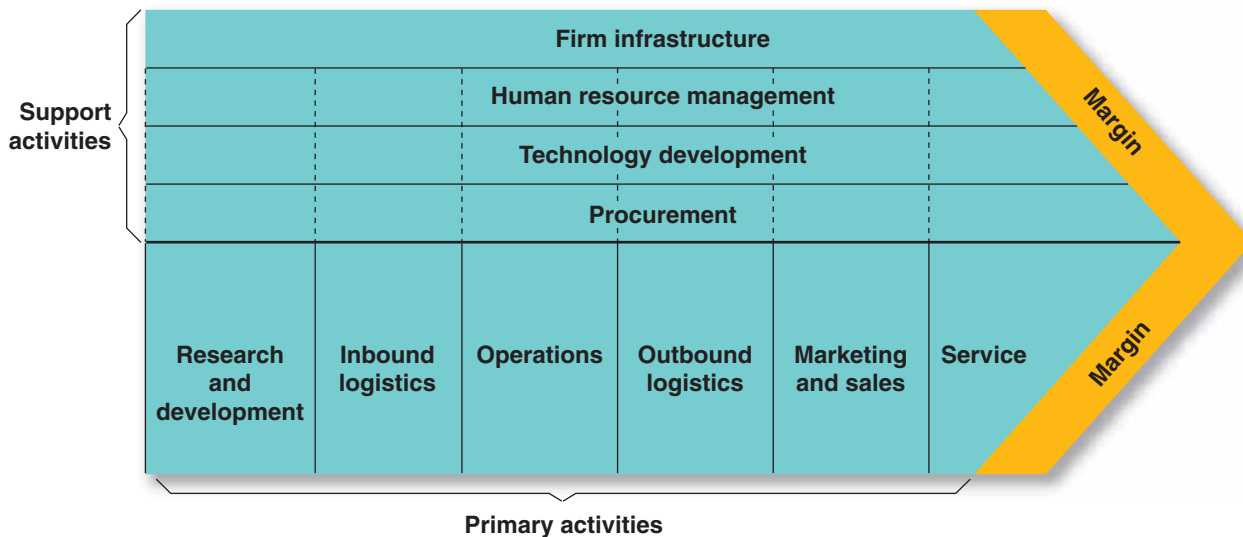
- Research and development* focus on innovation and new products.
- Inbound logistics* receive and store raw materials and distribute them to operations.
- Operations* transform the raw materials into final product.
- Outbound logistics* warehouse the product and handle its distribution.

value chain

The sequence of activities that flow from raw materials to the delivery of a good or service, with additional value created at each step.

FIGURE 9.3

Generic Value Chain



SOURCE: Michael Porter, *Competitive Advantage: Creating and Sustaining Superior Performance* (New York: Free Press, 1985).

Marketing and sales identify customer requirements and get customers to purchase the product.

Service offers customer support, such as repair, after the item has been bought.

When the total value created—that is, *what customers are willing to pay*—exceeds the cost of providing the good or service, the result is the organization's profit *margin*.³⁸

Managers can add customer value and build competitive advantage by paying close attention to their organization's value chain—not only each step in it, but the way each step interacts with the others. For example, they can achieve economies of scale, as Walmart has, so that their materials and operations costs are lowered, or they can develop innovative distribution channels, as Amazon has done, and add customer value that way. They can also create structures and systems that link the elements of the value chain in innovative ways.

One of the most effective ways to leverage an organization's value chain is to bring together elements of the chain to collaborate to add customer value and build competitive advantage. For example, long-term relationships can be established with suppliers to encourage investment in new technologies and practices that speed product development and turnaround. Nike chooses its suppliers—what it calls its “strategic partners”—to that end and shares its business plans and strategies with them to reinforce close collaboration. Sales staff can communicate with operations staff, before the manufacturing process even starts, to develop products jointly that customers will value highly. Service managers can constantly report back to operations about defects and work with operations and suppliers to reduce and eliminate them. When managers create that type of collaboration, their organization's agility and responsiveness increase significantly.

Total Quality Management

Total quality management (TQM) is a way of managing in which everyone is committed to continuous improvement of his or her part of the operation. In business, success depends on having high-quality products. As described in Chapter 1 and throughout the book, TQM is a comprehensive approach to improving product quality and thereby customer satisfaction. It is characterized by a strong orientation toward customers (external and internal) and has become an umbrella theme for organizing work. TQM re-orientates managers toward involving people across departments in improving all aspects of the business. Continuous improvement requires integrative mechanisms that facilitate group problem solving, information sharing, and cooperation across business functions. As a consequence, the walls that separate stages and functions of work tend to come down, and the organization operates more in a team-oriented manner.³⁹

One of the founders of the quality management movement was W. Edwards Deming. When he started, his work was largely ignored by American companies, but it was adopted eagerly by Japanese firms that wanted to shed their products of their post-World War II reputation for shoddiness. The quality emphasis of Japanese car manufacturing was one direct result of Deming's work, which has since been adopted by many American and other companies worldwide. Deming's “14 points” of quality emphasized a holistic approach to management that demands intimate understanding of the process—the delicate interaction of materials, machines, and people that determines productivity, quality, and competitive advantage:

1. Create constancy of purpose—strive for long-term improvement rather than short-term profit.
2. Adopt the new philosophy—don't tolerate delays and mistakes.
3. Cease dependence on mass inspection—build quality into the process on the front end.
4. End the practice of awarding business on price tag alone—build long-term relationships.

total quality management (TQM)

An integrative approach to management that supports the attainment of customer satisfaction through a wide variety of tools and techniques that result in high-quality goods and services.



The bottom line

Quality

High quality requires organizationwide commitment.

5. Improve constantly and forever the system of production and service—at each stage.
6. Institute training and retraining—continually update methods and thinking.
7. Institute leadership—provide the resources needed for effectiveness.
8. Drive out fear—people must believe it is safe to report problems or ask for help.
9. Break down barriers among departments—promote teamwork.
10. Eliminate slogans, exhortations, and arbitrary targets—supply methods, not buzzwords.
11. Eliminate numerical quotas—they are contrary to the idea of continuous improvement.
12. Remove barriers to pride in workmanship—allow autonomy and spontaneity.
13. Institute a vigorous program of education and retraining—people are assets, not commodities.
14. Take action to accomplish the transformation—provide a structure that enables quality.

One of the most important contributors to total quality management has been the introduction of statistical tools to analyze the causes of product defects, in an approach called *Six Sigma Quality*. Sigma is the Greek letter used to designate the estimated standard deviation or variation in a process. (The higher the “sigma level,” the lower the amount of variation.) The product defects analyzed may include anything that results in customer dissatisfaction—for example, late delivery, wrong shipment, or poor customer service, as well as problems with the product itself. When the defect has been identified, managers then engage the organization in a determined, comprehensive effort to eliminate its causes and reduce it to the lowest practicable level. At Six Sigma, a product or process is defect-free 99.99966 percent of the time—less than 3.4 defects or mistakes per million. Reaching that goal almost always requires managers to restructure their internal processes and relationships with suppliers and customers in fundamental ways. For example, managers may have to create teams from all parts of the organization to implement the process improvements that will prevent defects from arising. Motorola, where Six Sigma was developed, and General Electric, whose success with Six Sigma helped to make the technique popular, credit the method with helping them improve efficiency and quality. Of course, a technique for measuring and improving processes cannot guarantee business success. A study by QualPro, which markets its own process management method, found that among companies using Six Sigma, the stock prices of some, including Caterpillar, Target, and Whirlpool, beat the overall stock market, while others, including Ford and Xerox, fell short.⁴⁰ Thus, any quality improvement method is just one item in the manager’s tool kit. We will discuss Six Sigma in more detail in Chapter 16.

The Bama Companies, a family-owned manufacturer of frozen foods, has won the Malcolm Baldrige National Quality Award.



Commitment to total quality requires a thorough, extensive, integrated approach to organizing. To encourage American companies to make that commitment and achieve excellence, the Malcolm Baldrige National Quality Award was established in 1987. Named after a former U.S. Secretary of Commerce, the award is given every year to companies and nonprofit organizations that have met specified criteria in seven areas: (1) leadership; (2) strategic planning; (3) customer and market focus; (4) measurement, analysis, and

knowledge management; (5) workforce focus; (6) process management; and (7) business results. Recent winners include MESA Products, a small manufacturer of systems that protect metal from corrosion, which has dramatically cut cycle time and improved productivity while boosting customer service, and the North Mississippi Medical Center, which has reduced errors and streamlined processes by connecting all the caregivers in its system to electronic medical records.⁴¹

ISO 9001

The influence of TQM on the organizing process has become even more acute with the emergence of ISO 9000 standards. **ISO 9001** is a series of voluntary quality standards developed by a committee working under the International Organization for Standardization (known as ISO), a network of national standards institutions in more than 150 countries. In contrast to most ISO standards, which describe a particular material, product, or process, the ISO 9001 standards apply in a general way to management systems at any organization. These standards aim to improve total quality in all businesses for the benefit of producers and consumers alike. To do this, ISO 9001 sets standards of management that address eight principles:⁴²

1. *Customer focus*—learning and addressing customer needs and expectations.
2. *Leadership*—establishing a vision and goals, establishing trust, and providing employees with the resources and inspiration to meet goals.
3. *Involvement of people*—establishing an environment in which employees understand their contribution, engage in problem solving, and acquire and share knowledge.
4. *Process approach*—defining the tasks needed to successfully carry out each process and assigning responsibility for them.
5. *System approach to management*—putting processes together into efficient systems that work together effectively.
6. *Continual improvement*—teaching people how to identify areas for improvement and rewarding them for making improvements.
7. *Factual approach to decision making*—gathering accurate performance data, sharing the data with employees, and using the data to make decisions.
8. *Mutually beneficial supplier relationships*—working in a cooperative way with suppliers.

U.S. companies first became interested in ISO 9001 because overseas customers, particularly those in the European Union, embraced it. Companies that comply with the quality guidelines of ISO 9001 can apply for official certification; some countries and companies demand certification as an acknowledgment of compliance before they will do business. Now some U.S. customers as well are making the same demand. Consequently, the number of companies receiving ISO 9001 certification continues to grow; hundreds of thousands of companies in manufacturing and services industries around the world are ISO-certified. For example, UniFirst Corporation, a Massachusetts-based provider of workplace uniforms and protective work clothing, obtained ISO certification for its two Mexican plants through a process that included documenting all the facilities' processes and training employees in quality control. UniFirst's general manager Jose Del Angel expects that the effort will give the company an advantage, because none of its major competitors are certified so far. And in Cedar Rapids, Iowa, Physicians' Clinic of Iowa (PCI) received certification after two and a half years of preparation that included writing a quality policy, defining objectives, and standardizing medical records. PCI, whose members include 50 physicians and 200 staff employees, found that it had to define quality measures and establish methods for tracking quality.⁴³

Certification is not the end of the quality effort but a beginning step. Rather than defining how to operate perfectly, ISO 9001 standards establish practices that enable the organization to keep improving—assuming that it continues to follow those practices.

ISO 9001

A series of quality standards developed by a committee working under the International Organization for Standardization to improve total quality in all businesses for the benefit of producers and consumers.

Reengineering

Extending from TQM and a focus on organizing around customer needs, organizations also have embraced the notion of reengineering (introduced in Chapter 1). The principal idea of reengineering is to revolutionize key organizational systems and processes to answer the question: “If you were the customer, how would you like us to operate?” The answer to this question forms a vision for how the organization should run, and then decisions are made and actions are taken to make the organization operate like the vision. Processes such as product development, order fulfillment, customer service, inventory management, billing, and production are redesigned from scratch as if the organization were brand new and just starting out.

For example, Procter & Gamble used reengineering to make its products more competitive. The company learned that the average family buying its products rather than private-label or lower-price brands paid an extra \$725 per year. That figure, P&G realized, was far too high and warned that the company’s high prices could drive the company to extinction. Other data also signaled the need for P&G to change. Market shares of famous brands such as Comet, Mr. Clean, and Ivory had been dropping for 25 years. P&G was making 55 price changes *daily* on about 80 brands, and inaccurate billings were common. Its plants were inefficient, and the company had the highest overhead in the business. It clearly had to cut prices, and to do that, it had to cut costs.

In response, P&G reengineered. The company tore down and rebuilt nearly every activity that contributed to its high costs. It redesigned the way it develops, manufactures, distributes, prices, markets, and sells products. The reengineering was difficult, time-consuming, and expensive. But after the changes, price changes became rare, factories became far more efficient, inventory levels fell, and sales and profits rose. P&G was able to price its brands nearer to the prices of store brands. P&G might have reinvented itself as a leader in the industry once again and created for itself a long-term competitive advantage that others have scrambled to match.⁴⁴

The kind of reengineering that P&G undertook requires much more than a management directive from the top, a change in the formal organization structure, the introduction of new technology, or even a well-communicated change in strategy. Rather, to be fully effective and successful, reengineering often requires a fundamental change in the way the parts of the organization work together. They need to see each other as partners in a common effort rather than as members of a particular department or unit. Teams made up of all levels of the organization may be involved in the reengineering effort, and information on problems and possible solutions needs to be fully shared between them. Customers and other stakeholders may be interviewed to get their contribution. Often several teams will be working simultaneously. In this way, all the information that is available within and outside the organization can be brought to bear on a problem—and the solution developed will have wider acceptance and can be implemented faster.

As you can see, reengineering is not about making minor organizational changes here and there. It is about completely overhauling the operation, in revolutionary ways, to achieve the greatest possible benefits to the customer and to the organization.

\$ The bottom line

COST

Effective reengineering can cut costs significantly.

Technology and Organizational Agility

LO 6

technology

The systematic application of scientific knowledge to a new product, process, or service.

We have discussed the strategic, size, and customer influences on organizational design and agility. We now turn to one more critical factor affecting an organization’s structure and responsiveness: its *technology*.

Broadly speaking, **technology** can be viewed as the methods, processes, systems, and skills used to transform resources (inputs) into products (outputs). Although we will discuss technology—and innovation—more fully in Chapter 17, in this chapter we

want to highlight some of the important influences technology has on organizational design.

“Information technology and business are becoming inextricably interwoven. I don’t think anyone can talk meaningfully about one without talking about the other.”

—Bill Gates

Types of Technology Configurations

Research by Joan Woodward laid the foundation for understanding technology and structure. According to Woodward, three basic technologies characterize how work is done: small batch, large batch, and continuous process technologies. These three classifications are equally useful for describing either service or manufacturing technologies. Each differs in terms of volume produced and variety of goods/services offered. Each also has a different influence on how managers organize and structure the work of their organizations.⁴⁵

Small Batch Technologies When goods or services are provided in very low volume or **small batches**, a company that does such work is called a *job shop*. A fairly typical example of a job shop is PMF Industries, a small custom metalworking company in Williamsport, Pennsylvania, that produces stainless steel assemblies for medical and other uses. Less formally, in the service industry, restaurants or doctors’ offices are examples of job shops, because they provide a high variety of low-volume, customized services.

In a small batch organization, structure tends to be very organic. There tend not to be a lot of rules and formal procedures, and decision making tends to be decentralized. The emphasis is on mutual adjustment among people.

Large Batch Technologies As volume increases, product variety usually decreases. Companies with higher volumes and lower varieties than a job shop tend to be characterized as **large batch**, or mass production technologies. Examples of large batch technologies include the auto assembly operations of General Motors, Ford, and Chrysler. In the service sector, McDonald’s and Burger King are good examples. Their production runs tend to be more standardized, and all customers receive similar (if not identical) products. Machines tend to replace people in the physical execution of work. People run the machines.

With a large batch technology, structure tends to be more mechanistic. There tend to be more rules and formal procedures, and decision making tends to be centralized with higher spans of control. Communication tends to be more formal in companies where hierarchical authority is more prominent.

Continuous Process Technologies At the very-high-volume end of the scale are companies that use **continuous process** technologies, technologies that do not stop and start. Domino Sugar and Shell Chemical, for example, use continuous process technologies where a very limited number of products are produced. People are completely removed from the work itself. It is done entirely by machines and/or computers. In some cases, people run the computers that run the machines.

Ironically, with continuous process technology, structure can return to a more organic form because less monitoring and supervision are needed. Communication tends to be more informal in companies where fewer rules and regulations are established.

Organizing for Flexible Manufacturing

Although issues of volume and variety often have been seen as trade-offs in a technological sense, today

small batch

Technologies that produce goods and services in low volume.

large batch

Technologies that produce goods and services in high volume.

continuous process

A process that is highly automated and has a continuous production flow.

Dell has revolutionized the concept of mass customization. The production process from order to delivery is managed electronically, which allows Dell to build servers very efficiently and their customers to know where their server is during each step of the process.



mass customization

The production of varied, individually customized products at the low cost of standardized, mass-produced products.

organizations are trying to produce both high-volume and high-variety products at the same time. This is referred to as **mass customization**.⁴⁶ Automobiles, clothes, computers, and other products are increasingly being manufactured to match each customer's taste, specifications, and budget. While this seemed only a fantasy a few years ago, mass customization is quickly becoming more prevalent among leading firms. You can now buy clothes cut to your proportions, supplements with the exact blend of the vitamins and minerals you like, CDs with the music tracks you choose, and textbooks whose chapters are picked out by your professor.

How do companies organize to pull off this type of customization at such low cost? As shown in Table 9.2, they organize around a dynamic network of relatively independent operating units.⁴⁷ Each unit performs a specific process or task—called a *module*—such as making a component, performing a credit check, or performing a particular welding method. Some modules may be performed by outside suppliers or vendors.

Different modules join forces to make the good or provide a service. How and when the various modules interact with one another are dictated by the unique requests of each customer. The manager's responsibility is to make it easier and less costly for modules to come together, complete their tasks, and then recombine to meet the next

TABLE 9.2
Key Features in Mass Customization

Products	High variety and customization
Product design	Collaborative design; significant input from customers Short product development cycles Constant innovation
Operations and processes	Flexible processes Business process reengineering (BPR) Use of modules Continuous improvement (CI) Reduced setup and changeover times Reduced lead times JIT delivery and processing of materials and components Production to order Shorter cycle times Use of information technology (IT)
Quality management	Quality measured in customer delight Defects treated as capability failures
Organizational structure	Dynamic network of relatively autonomous operating units Learning relationships Integration of the value chain Team-based structure
Workforce management	Empowerment of employees High value on knowledge, information, and diversity of employee capabilities New product teams Broad job descriptions
Emphasis	Low-cost production of high-quality, customized products

SOURCE: Reprinted with permission of APICS—The Educational Society for Resource Management, *Production and Inventory Management* 41, no. 1, 2000, pp. 56–65.

customer demand. The ultimate goal of mass customization is a never-ending campaign to expand the number of ways a company can satisfy customers. The Internet has also made it easy for customers to choose their product preferences online and for companies to take an order straight to the manufacturing floor.

Computer-Integrated Manufacturing One technological advance that has helped make mass customization possible is **computer-integrated manufacturing (CIM)**, which encompasses a host of computerized production efforts linked together. Two examples are computer-aided design and computer-aided manufacturing, which offer the ultimate in computerized process technologies. The magazine-printing industry has adopted CIM, with editorial and advertising content on publishers' computers linked directly with printing and binding networks at printing plants, producing customized versions of the same magazine for different subscribers.

These systems can produce high-variety and high-volume products at the same time.⁴⁸ They may also offer greater control and predictability of production processes, reduced waste, faster throughput times, and higher quality. But managers cannot “buy” their way out of competitive trouble simply by investing in superior technology alone. They must also ensure that their organization has the necessary strategic and people strengths and a well-designed plan for integrating the new technology within the organization.

Flexible Factories As the name implies, **flexible factories** provide more production options and a greater variety of products. They differ from traditional factories in three primary ways: lot size, flow patterns, and scheduling.⁴⁹

First, the traditional factory has long production runs, generating high volumes of a standardized product. Flexible factories have much shorter production runs, with many different products. Second, traditional factories move parts down the line from one location in the production sequence to the next. Flexible factories are organized around products, in work cells or teams, so that people work closely together and parts move shorter distances with shorter or no delays. Third, traditional factories use centralized scheduling, which is time-consuming, inaccurate, and slow to adapt to changes. Flexible factories use local or decentralized scheduling, in which decisions are made on the shop floor by the people doing the work.

Lean Manufacturing Another organizing approach is **lean manufacturing**, based on a commitment to making an operation both efficient and effective; it strives to achieve the highest possible productivity and total quality, cost effectively, by eliminating unnecessary steps in the production process and continually striving for improvement. Rejects are unacceptable, and staff, overhead, and inventory are considered wasteful. In a lean operation, the emphasis is on quality, speed, and flexibility more than on cost, efficiency, and hierarchy. If an employee spots a problem, the employee is authorized to halt the operation and signal for help to correct the problem at its source so that processes can be improved and future problems avoided. With a well-managed lean production process, a company can develop, produce, and distribute products with half or less of the human effort, space, tools, time, and overall cost.⁵⁰

Toyota receives much of the credit for modeling and teaching a commitment to “think lean.” Many manufacturing companies have tried to adopt a similar lean approach, but Toyota and others have also applied lean methods to nonmanufacturing processes. Toyota's product development, for example, also uses lean principles. The process begins with identifying what customers define as valuable, so that employees don't waste time and money on things that customers don't care about. Early in the design process, teams bring together experts from various functions to identify potential problems and identify as many solutions as they can, to avoid the need to make design changes later in the process. Managers use their experience with past product development efforts to predict staffing requirements, and employees and technicians working

The bottom line

COST

Today's technologies offer customization at low cost.

computer-integrated manufacturing (CIM)

The use of computer-aided design and computer-aided manufacturing to sequence and optimize a number of production processes.

flexible factories

Manufacturing plants that have short production runs, are organized around products, and use decentralized scheduling.

lean manufacturing

An operation that strives to achieve the highest possible productivity and total quality, cost effectively, by eliminating unnecessary steps in the production process and continually striving for improvement.



Lean manufacturing strives for high quality, speed, and low cost.



Some hospitals have been using lean principles to reduce costs and patient waiting times while improving safety.

for suppliers are assigned to projects only as they are needed. Further adding to efficiency and quality, the company uses standard parts, procedures, and skill sets wherever possible; detailed checklists help engineers ensure they are using best practices. With methods such as these, Toyota has been able to develop top-quality products faster and more consistently than its competitors. Similar approaches have also been used to improve services, such as operations at hospitals. For instance, St. Agnes Hospital in Baltimore has used lean principles to reduce costs and patient waiting times while improving safety, and the ThedaCare health system in Wisconsin saved more than \$3 million in one year of using lean methods.⁵¹

For the lean approach to result in more effective operations, the following conditions must be met:⁵²

People are broadly trained rather than specialized.
Communication is informal and horizontal among line workers.

Equipment is general purpose.

Work is organized in teams, or cells, that produce a group of similar products.

Supplier relationships are long-term and cooperative.

Product development is concurrent, not sequential, and is done by cross-functional teams.

In recent years, many companies have tried to become leaner by cutting overhead costs, laying off operative-level workers, eliminating layers of management, and utilizing capital equipment more efficiently. But if the move to lean manufacturing is simply a harsh, haphazard cost-cutting approach, the result will be chaos, overworked people, and low morale.

Getting lean makes each employee more valuable to the organization, because in lean processes, each employee's activities are essential. With waste already eliminated, companies have little to cut if demand falls. In the latest recession, manufacturers did lay off workers, but not as many as an equally severe downturn would have caused in the past, when companies weren't so streamlined.

An example is Parker Hannifin Corporation's factory in Spartanburg, South Carolina, where workers produce a variety of plastic parts. Lean operations and high-tech manufacturing systems enable the company to operate with a few skilled workers. For example, to make seals for aerosol cans, just five workers operate high-speed machinery, each handling a different step of the process. If demand slows, work can be divided so that two workers start the production on one day and the other three finish on a second day, or everyone can work only part of the week. Laying off any of the five workers would be difficult, because someone would have to be trained to run that person's machine. Similarly, only two workers are needed to run each shift that produces plastic tubes for blasting caps, down from eight a decade ago. If the company doesn't have enough demand to run two shifts, fewer jobs are at risk.

Parker Hannifin's production levels also are more closely tied to order volume, so fewer goods sit around in inventory. That means staffing is more closely matched to demand as well.⁵³

Organizing for Speed: Time-Based Competition

Companies worldwide have devoted so much energy to improving product quality that high quality is now the standard attained by all top competitors. Competition has

driven quality to such heights that quality products no longer are enough to distinguish one company from another. *Time* has emerged as the key competitive advantage that can separate market leaders from also-rans.⁵⁴

Companies today must learn what the customer needs and meet those needs as quickly as possible. **Time-based competition (TBC)** refers to strategies aimed at reducing the total time needed to deliver the good or service. TBC has several key organizational elements: logistics, just-in-time (JIT), and simultaneous engineering. JIT production systems reduce the time to manufacture products. Logistics speeds the delivery of products to customers. Both are essential steps toward bringing products to customers in the shortest time possible. In today's world, speed is essential.

Logistics The movement of resources into the organization (inbound) and products from the organization to its customers (outbound) is called **logistics**. Like the supply chain, which we discussed in Chapter 2, an organization's logistics is often a critical element in its responsiveness and competitive advantage.

The world of logistics includes the great mass of parts, materials, and products moving via trucks, trains, planes, and ships from and to every region of the globe. Depending on the product, duplication and inefficiency in distribution can cost far more than making the product itself, and slowdowns can cause products to go out of stock so that consumers choose alternatives. One technological advance that is helping some companies improve logistics efficiency and speed is the use of radio-frequency identification (RFID) tags. When manufacturers label their products with RFID tags, automated readers can easily track where each product is in the distribution system, including which particular items are selling in each store. Best Buy has had great success with RFID tagging; stores using the system are seeing sales increases as employees more efficiently keep track of which products need to be restocked and where they are located in the backroom. Walmart, in contrast, is trying to keep its well-known leadership role in distribution by asking suppliers to use RFID, but many of them are finding they cannot afford to institute the new system at this stage of its development while also meeting Walmart's demands to keep prices at a minimum.⁵⁵

In some industries, speedy logistics are essential because products are perishable. For example, Flora-Holland, a flower auctioneer based in the Netherlands, acquires flowers from 8,000 suppliers and stores them in a massive warehouse for auction and distribution to buyers. Using RFID tagging on each cart of flowers, the company can process more than 60,000 transactions within hours. Whenever a pallet of flowers is sorted or moved, the RFID chip transmits the information about its place in the distribution system, along with data about its freshness.⁵⁶

Just-in-Time Operations An additional element of TBC involves **just-in-time (JIT)** operations. JIT calls for subassemblies and components to be manufactured in very small lots and delivered to the next stage in the process precisely at the time needed, or "just in time." A customer order triggers a factory order and the production process. The supplying work centers do not produce the next lot of product until the consuming work center requires it. Even external suppliers deliver to the company just in time.

Just-in-time is a companywide philosophy oriented toward eliminating waste throughout all operations and improving materials throughout. In this way, excess inventory is eliminated and costs are reduced. The ultimate goal of JIT is to serve the customer better by providing higher levels of quality and service. An example of an effective just-in-time operation is provided by Dell, which does not begin production of a computer customized to a consumer's specifications until after the customer's order has been received. Contrast this approach with traditional production methods, which require extremely costly warehousing of inventory

time-based competition (TBC)

Strategies aimed at reducing the total time needed to deliver a good or service.

logistics

The movement of the right goods in the right amount to the right place at the right time.

just-in-time (JIT)

A system that calls for subassemblies and components to be manufactured in very small lots and delivered to the next stage of the production process just as they are needed.

"Big will not beat small any more. It will be the fast beating the slow."
—Rupert Murdoch



Saturn has earned a reputation for superior customer satisfaction. Some of that reputation is due to Saturn's world-class distribution system. Why is it important that companies have a seamless logistics system in place?

simultaneous engineering

A design approach in which all relevant functions cooperate jointly and continually in a maximum effort aimed at producing high-quality products that meet customers' needs.

and parts, uncertain production runs, considerable waste, no customizing capability, and lengthy delivery times.

JIT represents a number of key production and organizational concepts, including the following:

Elimination of waste. Eliminate all waste from the production process, including waste of time, people, machinery, space, and materials.

Perfect quality. Produce perfect parts even when lot sizes are reduced, and produce the product exactly when it is needed in the exact quantities that are needed.

Reduced cycle times. Accomplish the entire manufacturing process more rapidly. Reduce setup times for equipment, move parts only short distances (machinery is placed in closer proximity), and eliminate all delays. The goal is to reduce action to the time spent working on the parts. For most manufacturers today, the percentage of time parts are worked on is about 5 percent of the total production time. JIT seeks to eliminate the other 95 percent, that is, to reduce to zero the time spent not working on the parts.

Employee involvement. In JIT, employee involvement is central to success. The workers are responsible for production decisions. Managers and supervisors are coaches. Top management pledges that there will never be layoffs due to improved productivity.

Value-added manufacturing. Do only those things (actions, work, etc.) that add value to the finished product. If it doesn't add value, don't do it. For example, inspection does not add value to the finished product, so make the product correctly the first time and inspection will not be necessary.

Discovery of problems and prevention of recurrence. Foolproofing, or fail-safing, is a key component of JIT. To prevent problems from arising, their cause(s) must be known and acted on. Thus, in JIT operations, people try to find the "weak link in the chain" by forcing problem areas to the surface so that preventive measures may be determined and implemented.

Many believe that only a fraction of JIT's potential has been realized and that its impact will grow as it is applied to other processes, such as service, distribution, and new-product development.⁵⁷ Many stores, for example, are using variations of JIT to minimize the expense of storing products in back rooms. One specialty clothing retailer aims to have shipments move from receiving to the selling floor on the same day. A chain of 30 stores selling furniture and home accessories arranged to have daily deliveries of furniture, so that it could convert storage space to selling space; when a furniture item sells, the store arranges to have the piece replaced the same day.⁵⁸ However, it's important to keep in mind that JIT offers efficiency only when the costs of storing items are greater than the costs of frequent delivery.⁵⁹

Simultaneous Engineering JIT is a vital component of TBC, but JIT concentrates on reducing time in only one function: manufacturing. TBC attempts to deliver speed in *all* functions—product development, manufacturing, logistics, and customer service. Customers will not be impressed if you manufacture quickly but it takes weeks for them to receive their products or get a problem solved.

Many companies are turning to simultaneous engineering as the cornerstone of their TBC strategy. **Simultaneous engineering**—also an important component of total quality management—is a major departure from the old development process in which tasks were assigned to various functions in sequence. When R&D completed its part of the project, the work was "passed over the wall" to engineering, which

completed its task and passed it over the wall to manufacturing, and so on. This process was highly inefficient, and errors took a long time to correct.

In contrast, simultaneous engineering incorporates the issues and perspectives of all the functions—and customers and suppliers—from the beginning of the process. This team-based approach results in a higher-quality product that is designed for efficient manufacturing *and* customer needs.⁶⁰ In the automobile industry, tools such as computer-aided design and computer-aided manufacturing support simultaneous engineering by letting various engineers submit elements and showing how these submissions affect the overall design and the manufacturing process. With a modern CAD system, automobile engineers can enter performance requirements into a spreadsheet, and the system will identify a design that meets cost and manufacturing requirements. This technology has helped automakers reduce product development time dramatically.⁶¹ In the realm of computing, some organizations have taken this idea much further, making the programming code for their products available to the public so that anyone at any time can develop new ideas to use with their product, and the organization can decide to license any ideas that seem to have market potential. For some examples, see the “From the Pages of *BusinessWeek*” feature.



The bottom line

SPEED

Time-based competition brings speed to all organization processes.

Opening Up to Collaboration

FROM THE PAGES OF

BusinessWeek

As president of SAP’s Product & Technology Group, Shai Agassi runs product development for the world’s largest applications-software company. Ask him to name the most important development in the software industry of the last decade, and he won’t say Linux, Web 2.0, or industry consolidation. He will tell you it’s the Amazon.com cloud. Officially called Amazon Elastic Cloud Compute (EC2), it’s the equivalent of a 21st-century utility. Users pay 10 cents an hour to harness its nearly unlimited computing capacity, allowing anyone to leverage the size and reach of the world’s greatest e-commerce engine.

Amazon’s EC2 is one of many new low-cost collaborative infrastructures—such as free Internet telephony, open-source software, and global outsourcing—that allow individuals and small producers to harness world-class capabilities, access markets, and serve customers in ways that only large corporations could in the past.

Unlike the previous generations, today’s entrepreneurs can buy, off the shelf, practically any function they need to run a company. With storage, computing services, and other digital utilities on tap, business infrastructures that used to be expensive and complicated are increasingly cheap and easy to use. Tantek Celik, chief technologist for Technorati, says such services have “made it much easier and a whole lot cheaper to get up and running.”

The potential of these modern-day platforms goes way beyond providing digital utilities. They can be a force for growth and competitiveness. As long as you’re smart about how and when to take advantage of them, you can use open platforms as a foundation on which to build a successful business ecosystem.

A growing number of companies are leveraging such platforms to create on-the-fly partnerships with large communities of programmers who use the common infrastructure and toolset to innovate and create value.

Open platforms enable the small to become mighty—something today’s generation of Web entrepreneurs learned from the open-source software community. Start-ups like flickr, 43 Things, Del.icio.us, and Technorati, for example, opened up their software services and databases via application programming interfaces (APIs)—bits of code that allow third-party applications to work with a company’s core software—as a way to crank out new features, attract users, and scale up their business quickly. Using the popular flickr API, for example, users have added applications for plotting on a map the locations where photos were taken and displaying flickr pictures through your TiVo.

“It comes down to a question of limited time and, frankly, limited creativity,” says Technorati’s Celik. “No matter how smart you are and no matter how hard you work,

three or four people in a start-up—or even small companies with 30 people—can only come up with so many great ideas.”

By opening up their APIs, companies create an environment for low-risk experimentation in which anybody who wants to develop on top of their platforms can do so. “No need to send you a formal request,” says Celik. “They can just take those APIs and innovate. Then, if someone builds a great new service or capability, we will work out a commercial licensing agreement so that everyone makes money.”

Even relatively mature companies are getting involved. For example, Microsoft is turning its Xbox 360 home entertainment console into a platform for amateur game developers. The company recently released a free game development kit, called the XNA Game Studio, to encourage avid game consumers to become game developers and market their own titles through the Xbox Live marketplace.

The strategy addresses a number of challenges facing the company, including a shortage of top programming and design talent, escalating development costs, and a paucity of games for its new console.

The plummeting costs of collaboration and the advantages of harnessing a larger talent pool are causing many to rethink their assumptions about innovation. “Do you take your core assets and processes and keep them to yourself,” asks SAP’s Agassi, “or do you expose them to every software company on the planet and entice them to come in and help develop those assets?” For Agassi, it comes down to a basic principle of our networked world: There are always more smart people outside your enterprise boundaries than there are inside.

SOURCE: Excerpted from Don Tapscott and Anthony D. Williams, “Opening Up to Collaboration,” *BusinessWeek*, March 9, 2007, downloaded from Business & Company Resource Center, <http://galenet.galegroup.com>.

Some managers resist the idea of simultaneous engineering. Why should marketing, product planning and design, and R&D “allow” manufacturing to get involved in “their” work? The answer is because the decisions made during the early, product-concept stage determine most of the manufacturing cost and quality. Furthermore, manufacturing can offer ideas about the product because of its experience with the prior generation of the product and with direct customer feedback. Also, the other functions must know early on what manufacturing can and cannot do. Finally, when manufacturing is in from the start, it is a full and true partner and will be more committed to decisions it helped make.

Final Thoughts on Organizational Agility

As we pointed out in the previous chapter, *any* approach to organizing has its strengths and limitations. The advantages of even the innovative, leading-edge structures and systems we have discussed in this chapter are likely to be short-lived if they become fixed rather than remain flexible. Smart managers and smart competitors soon catch up. Today’s advantages are tomorrow’s “table stakes,” the minimum requirements that need to be met if an organization expects to be a major player.

To retain, or gain, a competitive edge, managers may want to keep in mind the principle with which we opened this chapter: Successful organizations—and that includes the successful managers within them—do not sit still. They do not follow rigid models but maintain structures, systems, organizational designs, and relationships that are adaptive—always sensitive to changes in their environment and able to respond quickly, efficiently, and effectively to them. Their managers focus constantly on exceeding customer expectations and on continuous quality improvement, designing their systems and structures to help them do just that.

The emphasis on agility, quality, flexibility, learning, and leanness to which you have been exposed in this chapter is likely to be a constant in your managerial

career—ideally in your own organization, but perhaps as well in the competition you confront. When Jack Welch was chairman of GE, he saw his goal as the creation of the *boundaryless organization*, one in which there were no meaningful barriers between the organization and its environment. In such an organization, structures, technologies, and systems are perfectly aligned with the external challenges and opportunities it confronts. Many forward-thinking managers have embraced this goal.⁶²

Management Close-Up

ASSESSING OUTCOMES AND SEIZING OPPORTUNITIES

Today, Wendell Weeks and Corning face another crisis. A global economic downturn that began in 2008 caused the market for LCD glass to drop precipitously. Consumers are buying fewer big-ticket items like flat-screen TVs and computers. What's more, industry observers say consumers who are spending money on TVs are buying smaller-screen models, so TV manufacturers don't need as much Corning glass.

Although Corning initially predicted a big year for 2008, with double-digit increases over 2007, the recession blunted sales and production. With production down, revenues are down. Corning was forced to pull back, and industry observers predicted even tougher times ahead. Facing declining demand and uncertainty, Corning was forced to cut 3,500 jobs in 2009.

Meanwhile, Weeks is focusing on Corning's materials engineering expertise to identify new customer needs and satisfy them. Corning devotes 10 percent of its revenues to research and development. Weeks reduces the risk his company faces

in such heavy investment of cutting-edge products by spreading sales between consumer and industrial markets and among different regions of the world. Looking at a number of high-potential businesses, such as diesel filters and scientific instruments for pharmaceutical firms, Corning is betting on new projects that currently show promise. The company is also developing a "green" laser that will enable cell-phone users to use their phone like a projector. Another project, the mercury filter, can remove the poisonous metal from the emissions of coal-fired power plants. Made from the same ceramic as a catalytic converter, the filters offer a more cost-effective way to rid the air of toxic mercury. As more companies and nations become concerned about the environment, mercury abatement is expected to become an important business.⁶³

- How did Corning's core strengths help Wendell Weeks turn the company around after the telecom industry fell apart and the fiber-optics business stopped?
- What has Weeks done to ensure that Corning stays profitable during an economic downturn? What else could he do?

KEY TERMS

Computer-integrated manufacturing (CIM), p. 327

Continuous process, p. 325

Customer relationship management, (CRM), p. 319

Downsizing, p. 317

Economies of scope, p. 315

Flexible factories, p. 327

High-involvement organization, p. 313

ISO 9001, p. 323

Just-in-time (JIT), p. 329

Large batch, p. 325

Lean manufacturing, p. 327

Learning organization, p. 312

Logistics, p. 329

Mass customization, p. 326

Mechanistic organization, p. 308

Organic structure, p. 308

Rightsizing, p. 317

Simultaneous engineering, p. 330

Small batch, p. 325

Strategic alliance, p. 311

Survivor's syndrome, p. 318

Technology, p. 324

Time-based competition (TBC), p. 329

Total quality management, (TQM), p. 321

Value chain, p. 320

SUMMARY OF LEARNING OBJECTIVES

Now that you have studied Chapter 9, you should be able to:

LO 1 Discuss why it is critical for organizations to be responsive.

Organizations have a formal structure to help control what goes on within them. But to survive today, firms need more than control—they need responsiveness. They must act quickly and adapt to fast-changing demands.

LO 2 Describe the qualities of an organic organization structure.

The organic form emphasizes flexibility. Organic organizations are decentralized, informal, and dependent on the judgment and expertise of people with broad responsibilities. The organic form is not a single formal structure but a concept that underlies all the new forms discussed in this chapter.

LO 3 Identify strategies and dynamic organizational concepts that can improve an organization's responsiveness.

New and emerging organizational concepts and forms include core competencies, strategic alliances, learning organizations, and high-involvement organizations.

LO 4 Explain how a firm can be both big and small.

Historically, large organizations have had important advantages over small organizations. Today, small size has advantages, including the ability to act quickly, respond to customer demands, and serve small niches. The ideal firm today combines the advantages of both. It creates many small, flexible units, while the corporate levels add value by taking advantage of its size and power.

LO 5 Summarize how firms organize to meet customer requirements.

Firms have embraced principles of continuous improvement and total quality management to respond to customer needs.

Baldrige criteria and ISO 9001 standards help firms organize to meet better quality specifications. Extending these, reengineering efforts are directed at completely overhauling processes to provide world-class customer service.

LO 6 Identify ways that firms organize around different types of technology.

Organizations tend to move from organic structures to mechanistic structures and back to organic structures as they transition from small batch to large batch and continuous process technologies. To organize for flexible manufacturing, organizations pursue mass customization via computer-integrated manufacturing and lean manufacturing. To organize for time-based competition, firms emphasize their logistics operations, just-in-time operations, and simultaneous engineering.

DISCUSSION QUESTIONS

1. Discuss evidence you have seen of the imperatives for change, flexibility, and responsiveness faced by today's firms.
2. Describe large, bureaucratic organizations with which you have had contact that have not responded flexibly to customer demands. Also describe examples of satisfactory responsiveness. What do you think accounts for the differences between the responsive and nonresponsive organizations?
3. Considering the potential advantages of large and small size, would you describe the "feel" of your college or university as big, small, or small within big? Why? What might make it feel different?
4. What is a core competence? What would you say are the core competencies of Toyota, Walmart, and Apple? Brainstorm some creative new products and markets to which these competencies could be applied.
5. If you were going into business for yourself, what would be your core competencies? What competencies do you have now, and what competencies are you going to develop? Describe what your role would be in a network organization, and the competencies and roles of other firms you would want in your network.
6. Using an Internet search engine, search for "strategic alliance," and identify three recently formed alliances. For each alliance, identify whether the companies' other products are generally competitors or complementary products. What are the goals of each alliance? What brought them together? Discuss whether you think a strategic alliance is an effective way for these organizations to meet their goals.
7. What skills will you need to work effectively in (a) a learning organization and (b) a high-involvement organization? Be specific, generating long lists. Would you enjoy working in these environments? Why or why not? What can you do to prepare yourself for these eventualities?

CONCLUDING CASE

Rocky Mountain Leaders

Beth Cronin is a licensed mountain guide. She also has a degree in management. About five years ago, she started her own consulting firm called Rocky Mountain Leaders in a suburb near Denver, Colorado. She arranges training sessions for executives and managers at small to medium-sized firms, teaching them interpersonal and leadership skills. Cronin uses the great outdoors as her classroom and arranges hiking, camping, and occasional backpacking or rock climbing trips for her clients, creating scripted challenges for participants designed to help them build their management skills. She also finds that the time preparing dinner over a small camp stove, setting up a tent, and packing gear for a hike can be great team training exercises. Currently, Cronin has two assistants—

part-time employees with backgrounds similar to hers. One is in the process of earning an MBA, while the other majored in psychology. Both employees are skilled outdoorspeople, and both will need full-time jobs in the near future. Cronin wants Rocky Mountain Leaders to grow.

Cronin wants to begin offering workshops and seminars designed to help client organizations become responsive organizations in a fast-paced, competitive business environment. She wants to be able to help them organize around their core competencies, create strategic alliances, develop superior customer relationship management, and evaluate their organizational agility. To accomplish this, she needs to evaluate her own

company, making sure it emphasizes its own core competencies as it grows. She knows she will have to turn her two part-time positions into full-time, and potentially hire more employees. She will have to create alliances with other companies—possibly training firms, campgrounds, climbing instructors, transportation companies, GPS satellite device providers, and the like. She will have to focus on her own customer relationship management as she enters new markets. In short, Cronin knows that the next phase for Rocky Mountain Leaders will be challenging—but no more difficult than climbing a mountain.

QUESTIONS

1. Describe Rocky Mountain Leaders' core competencies.
2. What steps can Beth Cronin take to make sure Rocky Mountain Leaders is a responsive organization as it grows? Is Rocky Mountain Leaders better off as a big company or a small one? Why?
3. Create an exercise or challenge that Rocky Mountain Leaders could use to help a client firm become a high-involvement organization.

EXPERIENTIAL EXERCISES

9.1 Mechanistic and Organic Structures

OBJECTIVES

1. To think about your own preferences when it comes to working in a particular organizational structure.
2. To examine aspects of organizations by using as an example this class you are a member of.

INSTRUCTIONS

1. Complete the Mechanistic and Organic Worksheet below.
2. Meet in groups of four to six persons. Share your data from the worksheet. Discuss the reasons for your responses, and analyze the factors that probably encouraged your instructor to choose the type of structure that now exists.

Mechanistic and Organic Worksheet

1. Indicate your general preference for working in one of these two organizational structures by circling the appropriate response:

Mechanistic 1 2 3 4 5 6 7 8 9 10 **Organic**

2. Indicate your perception of the form of organization that is used in this class by circling the appropriate response for each item:

A. Task-role definition

Rigid 1 2 3 4 5 6 7 8 9 10 **Flexible**

B. Communication

Vertical 1 2 3 4 5 6 7 8 9 10 **Multidirectional**

C. Decision making

Centralized 1 2 3 4 5 6 7 8 9 10 **Decentralized**

D. Sensitivity to the environment

Closed 1 2 3 4 5 6 7 8 9 10 **Open**

SOURCE: Keith Davis and John W. Newstrom, *Human Behavior at Work*, 9th ed., p. 358. © 1993 The McGraw-Hill Companies.

9.2 The Woody Manufacturing Company

OBJECTIVE

To apply the concepts learned about structure and agility at the individual, group, and organizational levels in designing the Woody Manufacturing Company.

- c. Write down your thoughts on alternative management structures, pay systems, and allocation of work to individuals and groups.

TASK 1 (INDIVIDUAL ASSIGNMENT)

- a. Read the following case study of the Woody Manufacturing Company.
- b. Review the chapter carefully, and choose the organizational design orientation that you feel can best guide you in developing the design for Mr. Woody.

TASK 2 (TEAM ASSIGNMENT)

- a. Get together with your team and develop a proposal for Mr. Woody that, if followed, would help him fulfill his vision.
- b. Prepare a five-minute presentation. Your typewritten team proposal is due prior to your team presentation in Mr. Woody's conference room.

Designing a New Furniture Company

Mr. Woody, the owner/operator of a small furniture company specializing in the manufacture of high-quality bar stools, has experienced a tremendous growth in demand for his products. He has standing orders for \$750,000. Consequently, Mr. Woody has decided to expand his organization and attack the market aggressively. His stated mission is “to manufacture world-class products that are competitive in the world market in quality, reliability, performance, and profitability.” He would like to create a culture where “pride, ownership, employment security, and trust” are a way of life. He just finished a set of interviews, and he has hired 32 new workers with the following skills:

Four skilled craftspeople.

Ten people with some woodworking experience.

Twelve people with no previous woodworking experience or other skills.

One nurse.

One schoolteacher.

One bookkeeper.

Three people with some managerial experience in nonmanufacturing settings.

Mr. Woody (with your help) must now decide how to design his new organization. This design will include the management structure, pay system, and the allocation of work to individuals and groups. The bar stool-making process has 15 steps:

1. Wood is selected.
2. Wood is cut to size.
3. Defects are removed.
4. Wood is planed to exact specifications.
5. Joints are cut.
6. Tops are glued and assembled.
7. Legs/bases are prepared.
8. Legs/bases are attached to tops.
9. Bar stools are sanded.
10. Stain is applied.
11. Varnish is applied.
12. Bar stools are sanded.
13. Varnish is reapplied.
14. Bar stools are packaged.
15. Bar stools are delivered to the customer.

Mr. Woody currently manufactures three kinds of bar stools (pedestal, four-legged corner, and four-legged recessed). There is no difference in the difficulty of making the three types of bar stools. Major cost variations have been associated with defective wood, imprecise cuts, and late deliveries to customers. Mr. Woody must decide how to organize his company to maintain high quality and profits.

He has thought about several options. He could have some individuals perform the first step for all types of bar stools; he could have an individual perform several steps for one type of bar stool; or he could have a team perform some combination of steps for one or more bar stools. He wonders whether how he organized would affect quality or costs. He's also aware that while the demand for all types of bar stools has been roughly equal over the long run, there were short periods where one type of bar stool was in greater demand than the others. Because Mr. Woody wants to use his people effectively, he has committed an expert in work design to help him set up an optimal organization.

SOURCE: A. B. (Rami) Shani and James B. Lau, *Behavior in Organizations: An Experimental Approach* (New York: McGraw-Hill/Irwin, 2005), p. 370. © 2005 The McGraw-Hill Companies.