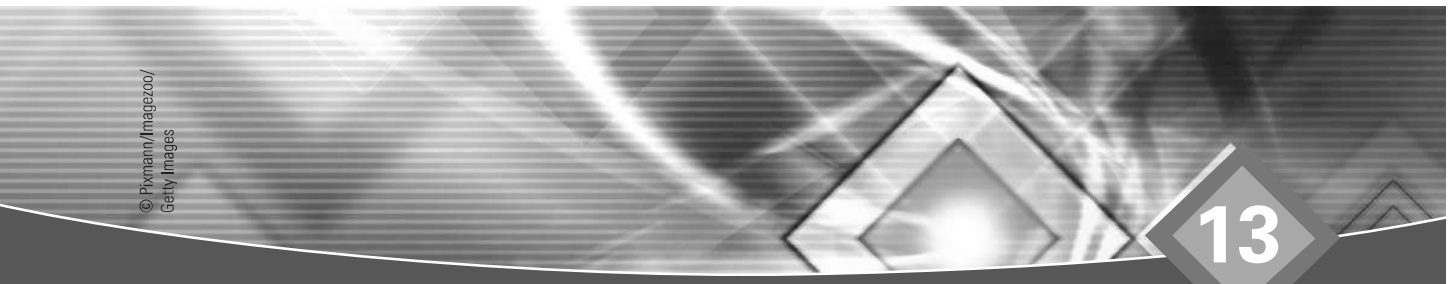




13

# Employee Involvement

## learning objectives

Define the principles of employee involvement and describe its relationship to performance.

Compare three employee involvement interventions: parallel structures, total quality management, and high-involvement organizations.

Faced with competitive demands for lower costs, higher performance, and greater flexibility, organizations are increasingly turning to employee involvement (EI) to enhance the participation, commitment, and productivity of their members. This chapter presents organization development (OD) interventions aimed at moving decision making downward in the organization, closer to where the actual work takes place. This increased employee involvement can lead to quicker, more responsive decisions, continuous performance improvements, and greater employee flexibility, commitment, and satisfaction.

Employee involvement is a broad term that has been variously referred to as "empowerment," "participative management," "engagement," "work design," "high involvement," "industrial democracy," and "quality of work life." It covers diverse approaches to gaining greater participation in relevant workplace decisions. Organizations such as General Mills, The Hartford, and Intel have enhanced worker involvement through enriched forms of work; others, such as Verizon, Deutsche Telekom, Wells Fargo, and Boeing, have increased participation by forming EI teams that develop suggestions for improving productivity and quality; Southwest Airlines, Shell Oil, and Nucor Steel have sought greater participation through union–management cooperation on performance and quality-of-work-life issues; and still others, such as Texas Instruments, Kimberly-Clark, 3M, the IRS, and Motorola, have improved employee involvement by emphasizing participation in quality-improvement approaches.

As described in Chapter 1, current EI approaches evolved from earlier quality-of-work-life efforts in Europe, Scandinavia, and the United States. The terms "employee involvement" and "empowerment" gradually have replaced the designation "quality of work life," particularly in the United States. A current definition of EI includes four elements that can promote meaningful involvement in workplace decisions: power, information, knowledge and skills, and rewards. These components of EI combine to exert powerful effects on productivity and employee well-being.

Major EI applications discussed in this chapter are parallel structures, including cooperative union–management projects and quality circles; total quality management; and high-involvement organizations. Two additional approaches that include elements of EI, work design and reward-system interventions, are discussed in Chapters 14 and 15, respectively.

# 13-1 Employee Involvement: What Is It?

Employee involvement is the current label used to describe a set of practices and philosophies that started with the quality-of-work-life movement in the late 1950s. The phrase "quality of work life" (QWL) was used to stress the prevailing poor quality of life at the workplace.[1] As described in Chapter 1, both the term "QWL" and the meaning attributed to it have undergone considerable change and development. More recently, the term "engagement" has been popular, and a great deal of effort has been invested in differentiating the term. "Engagement" refers to organization members' work experience. Engaged employees are motivated, committed, and interested in their work.[2] Engagement, then, is the outcome of EI interventions. In this section, we provide a working definition of EI, document the growth of EI practices in the United States and abroad, and clarify the important and often misunderstood relationship between EI and productivity.

## 13-1a A Working Definition of Employee Involvement

*Employee involvement* seeks to increase members' input into decisions that affect organization performance and employee well-being.[3] It can be described in terms of four key elements that promote worker involvement:[4]

1. **Power.** This element of EI includes providing people with enough authority to make work-related decisions covering various issues such as work methods, task assignments, performance outcomes, customer service, and employee selection. The amount of power afforded employees can vary enormously, from simply asking them for input into decisions that managers subsequently make, to managers and workers jointly making decisions, to employees making decisions themselves.
2. **Information.** Timely access to relevant information is vital to making effective decisions. Organizations can promote EI by ensuring that the necessary information flows freely to those with decision authority. This can include data about operating results, business plans, competitive conditions, new technologies and work methods, and ideas for organizational improvement.
3. **Knowledge and skills.** Employee involvement contributes to organizational effectiveness only to the extent that employees have the requisite skills and knowledge to make good decisions. Organizations can facilitate EI by providing training and development programs for improving members' knowledge and skills. Such learning can cover an array of expertise having to do with performing tasks, making decisions, solving problems, and understanding how the business operates.
4. **Rewards.** Because people generally do those things for which they are recognized, rewards can have a powerful effect on getting people involved in the organization. Meaningful opportunities for involvement can provide employees with internal rewards, such as feelings of self-worth and accomplishment. External rewards, such as pay and promotions, can reinforce EI when they are linked directly to performance outcomes that result from participation in decision making. (Reward systems are discussed more fully in Chapter 15.)

Those four elements—power, information, knowledge and skills, and rewards—contribute to EI success by determining how much employee participation in decision making is possible in organizations. To the extent that all four elements are made available throughout, and especially in the lower levels of, the organization, the greater the employee involvement. Furthermore, because the four elements of EI are interdependent, they must be changed together to obtain positive results. For example, if organization

members are given more power and authority to make decisions but do not have the information or knowledge and skill to make good decisions, then the value of involvement is likely to be negligible. Similarly, increasing employees' power, information, and knowledge and skills but not linking rewards to the performance consequences of these changes gives members little incentive to improve organizational performance. The EI methods that will be described in this chapter vary in how much involvement is afforded employees. Parallel structures, such as union–management cooperative efforts and quality circles, are limited in the degree that the four elements of EI are moved downward in the organization. Total quality management and high-involvement organizations provide far greater opportunities for involvement.

## 13-1b The Diffusion of Employee Involvement Practices

Employee involvement interventions are being used in organizations throughout the world. In addition to firms in the United States, organizations are applying EI in West European countries, including France, Germany, Denmark, Ireland, Sweden, Norway, Holland, Italy, and Great Britain.[5] EI efforts are among the tremendous changes currently taking place in countries such as Russia, Bulgaria, the Philippines, and the People's Republic of China.[6] Organizations in Canada, Mexico, India, Australia, New Zealand, Hong Kong, and Japan also are using EI. Internationally, EI may be considered a set of processes directed at changing the structure of the work situation within a particular economic and cultural environment and under the influence of particular values and philosophies. As a result, in some cases, EI has been promoted by unions; in others, by management; and in still others, by government. In some cases, it has been part of a pragmatic approach to increasing productivity; in other cases, it has been driven by socialist values.[7]

In a recent long-term study of EI applications, Lawler and his colleagues at the Center for Effective Organizations at the University of Southern California surveyed the *Fortune* 1000 and discovered positive trends in EI use among these firms, including both a growing number of firms applying EI and a greater percentage of the workforce included in such programs.[8] Despite these positive trends, however, this research revealed that the scope and depth of EI interventions were relatively modest. EI interventions that involved more than 20% of the workforce fell at the lower end of the EI scale, with low to moderate shifts in power, information, knowledge and skills, and rewards, such as might be found in suggestion systems and survey feedback. Interventions that included significant changes in these EI dimensions had more modest coverage, however, and were applied to fewer than 20% of the workforce in *Fortune* 1000 firms. Thus, although many large organizations are using EI practices, there is considerable room for their diffusion across organizations and throughout the workforce.

## 13-1c How Employee Involvement Affects Productivity

An assumption underlying much of the EI literature is that such interventions will lead to higher productivity. Although this premise was initially based on anecdotal evidence and a good deal of speculation, there is now a growing body of research findings to support that linkage.[9] Studies have found a consistent relationship between EI practices and such measures as productivity, financial performance, customer satisfaction, labor hours, and waste rates.

Attempts to explain this positive linkage traditionally have followed the idea that giving people more involvement in work decisions raises their job satisfaction and, in turn, their

productivity. There is growing evidence that this satisfaction-causes-productivity premise is too simplistic and sometimes wrong.

A more realistic explanation for how EI interventions can affect productivity is shown in Figure 13.1. EI practices, such as participation in workplace decisions, can improve productivity in at least three ways.[10] First, they can improve communication and coordination among employees and organizational departments, and help integrate the different jobs or departments that contribute to an overall task.

Second, EI interventions can improve employee motivation, particularly when they satisfy important personal needs. Motivation is translated into improved performance when people have the necessary skills and knowledge to perform well and when the technology and work situation allow people to affect productivity. For example, some jobs are so rigidly controlled and specified that individual motivation can have little impact on productivity.

Third, EI practices can improve the capabilities of employees, thus enabling them to perform better. For example, attempts to increase employee participation in decision making generally include skill training in group problem solving and communication.

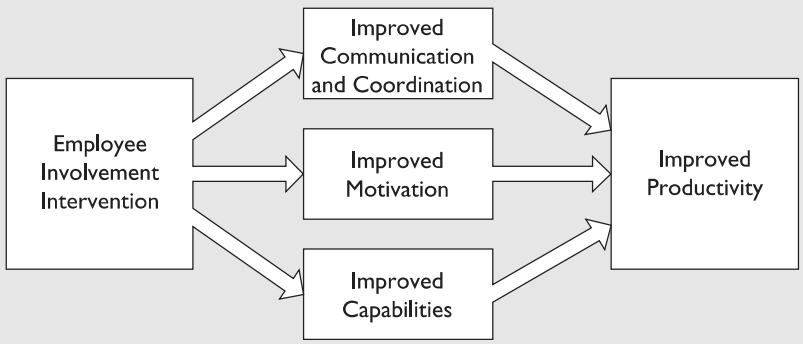
Figure 13.2 shows the secondary effects of EI. These practices increase employee well-being and satisfaction by providing a better work environment and a more fulfilling job. Improved productivity also can increase satisfaction, particularly when it leads to greater rewards. Increased employee satisfaction, deriving from EI interventions and increased productivity, ultimately can have a still greater impact on productivity by attracting talented employees to join and remain with the organization.

Recent research has identified an additional path for the performance effects of EI interventions—organizational citizenship behavior (OCB).[11] OCB involves a broad set of discretionary work behaviors that sustain and enhance the functioning of the organization, such as helping coworkers, sharing tacit task knowledge, and going beyond the call of duty to help customers. These behaviors are not prescribed by the organization but occur voluntarily at employees' discretion. There is growing evidence that EI practices promote OCB, and in turn, OB increases organization performance.

In sum, EI interventions can increase productivity by improving communication and coordination, employee motivation, and individual capabilities. They also can

**FIGURE 13.1**

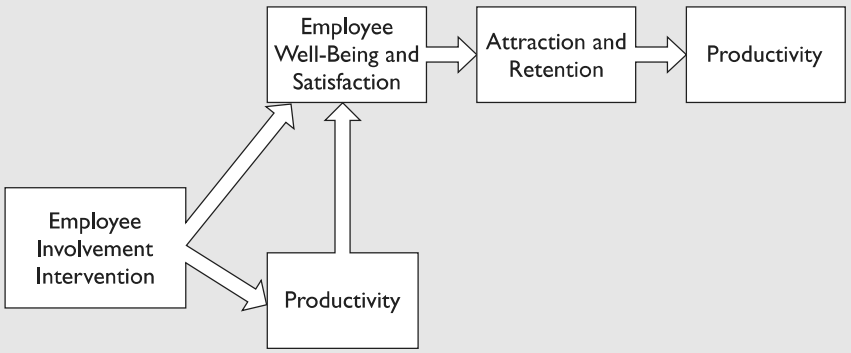
**How Employee Involvement Affects Productivity**




**SOURCE:** Lawler & Ledford, "Productivity and QWL," *National Productivity Review* 1, 1 (Winter 1981–82). © 1982 by Executive Enterprises, Inc. Reprinted by permission of John Wiley & Sons, Inc.

**FIGURE 13.2**

**Secondary Effects on Productivity**




**SOURCE:** Lawler & Ledford, "Productivity and QWL," *National Productivity Review* 1, 1 (Winter 1981–82). © 1982 by Executive Enterprises, Inc. Reprinted by permission of John Wiley & Sons, Inc.

influence productivity by means of the secondary effects of increased employee well-being and satisfaction, and through employees' organizational citizenship behavior. Although a growing body of EI and engagement research supports these relationships, there is considerable debate over the strength of the association between EI and productivity.[12] Recent data support the conclusion that relatively modest levels of EI produce moderate improvements in performance and satisfaction, and that higher levels of EI produce correspondingly higher levels of performance.[13]

## 13-2 Employee Involvement Interventions

Described below are three major EI interventions that vary in the amounts of power, information, knowledge and skills, and rewards that are moved downward through the organization (from least to most involvement): parallel structures, including cooperative union–management projects and quality circles; total quality management; and high-involvement organizations.

### 13-2a Parallel Structures

*Parallel structures* involve employees in resolving ill-defined, complex problems and build adaptability into bureaucratic organizations.[14] Also known as "collateral structures," "dualistic structures," or "shadow structures,"[15] parallel structures operate in conjunction with the formal organization. They provide members with an alternative setting in which to address problems and to propose innovative solutions free from the existing, formal organization structure and culture. For example, members may attend periodic off-site meetings to explore new ways to improve quality in their work area or they may be temporarily assigned to a special project or facility to devise new products or solutions to organizational problems. Parallel structures facilitate problem solving and change by providing time and resources for members to think, talk, and act in completely new ways. Consequently, norms and procedures for working in parallel

structures tend to be different from those of the formal organization. This section describes the application steps associated with the two most common parallel structures, cooperative union–management projects and quality circles, and reviews the research on their effectiveness.

**Application Stages** Cooperative union–management projects and quality circle interventions fall at the lower end of the EI scale. Member participation and influence typically are restricted to making proposals and to offering suggestions for change because subsequent decisions about implementing the proposals are reserved for management. Membership in parallel structures also tends to be limited, primarily to volunteers and to numbers of employees for which there are adequate resources. Management heavily influences the conditions under which parallel structures operate. It controls the amount of authority that members have in making recommendations, the amount of information that is shared with them, the amount of training they receive to increase their knowledge and skills, and the amount of monetary rewards for participation. Because parallel structures offer limited amounts of EI, they are most appropriate for organizations with little or no history of employee participation, top-down management styles, and bureaucratic cultures.

Cooperative union–management and quality circle programs typically are implemented in the following steps:[16]

1. **Define the purpose and scope.** This first step involves defining the purpose for the parallel structure and initial expectations about how it will function. Organizational diagnosis can help clarify which specific problems and issues to address, such as productivity, absenteeism, or service quality. In addition, management training in the use of parallel structures can include discussions about the commitment and resources necessary to implement them; the openness needed to examine organizational practices, operations, and policies; and the willingness to experiment and learn.
2. **Form a steering committee.** Parallel structures typically use a steering committee composed of acknowledged leaders of the various functions and constituencies within the formal organization. For example, in cooperative union–management projects, the steering committee would include key representatives from management, such as a president or chief operating officer, and each of the unions and employee groups involved in the project, such as local union presidents. This committee performs the following tasks:
   - Refining the scope and purpose of the parallel structure
   - Developing a vision for the effort
   - Guiding the creation and implementation of the structure
   - Establishing the linkage mechanisms between the parallel structure and the formal organization
   - Creating problem-solving groups and activities
   - Ensuring senior management support.

   OD practitioners can play an important role in forming the steering committee. First, they can help to establish the team and to select appropriate members. Second, they can assist in developing and maintaining group norms of learning and innovation. These norms set the tone for problem solving throughout the parallel structure. Third, they can help the committee create a vision statement that refines the structure's purpose and promotes ownership of it. Fourth, they can help committee members develop and specify objectives and strategies, organizational expectations and required resources, and potential rewards for participation in the parallel structure.

3. **Communicate with organization members.** The effectiveness of a parallel structure depends on a high level of participation from organization members. Communicating the purpose, procedures, and rewards of participation can promote that involvement. Moreover, employee participation in developing a structure's vision and purpose can increase ownership and visibly demonstrate the "new way" of working. Continued communication concerning parallel structure activities can ensure member awareness.
4. **Create forums for employee problem solving.** These forums are the primary means of accomplishing the purpose of the parallel learning structure. The most common forum is the employee problem-solving group. Its formation involves selecting and training group members, identifying problems for the group to work on, and providing appropriate facilitation. Selecting group members is important because success often is a function of group membership.[17] Members need to represent the appropriate hierarchical levels, expertise, functions, and constituencies that are relevant to the problems at hand. This allows the parallel structure to identify and communicate with the formal structure. It also provides the necessary resources to solve the problems. Ad hoc committees or task forces may also be formed, as when workers and managers initiate action to address an issue of interest to the parallel organization. Ad hoc teams are typically charged with a particular task and have a limited lifetime.

   Once formed, members of a problem-solving group need appropriate training. This may include discussions about the vision of the parallel structure, the specific problems to be addressed, and the way those problems will be solved. As in the steering committee, group norms promoting openness, creativity, and coordination need to be established.

   Another increasingly common forum is the large group intervention described in Chapter 11. Search conferences and appreciative inquiry (AI) summits can be used to generate a variety of ideas for change, innovation, and problem solving. Application 13.1 describes one example of such a process.[18] Roadway Express found the AI summit to be an effective way of engaging union members in solving organizational problems.

   Another key resource for parallel structures is facilitation support. Although this can be expensive, it can yield important benefits in problem-solving efficiency and quality. Small groups are asked to form quickly and to solve problems by cutting through traditional hierarchical and functional boundaries. Facilitation support can help charter and build the team as well as pay special attention to processes that encourage problem solving. They can help members identify and resolve issues within groups. Similarly, large group interventions require time, resources, and knowledge. They must be designed and facilitated well if they are to produce relevant results.
5. **Address the problems and issues.** Parallel structures solve problems by using an action research process. They diagnose specific problems, plan appropriate solutions, and, if empowered to do so, implement and evaluate them. Problem solving can be facilitated when the groups and the steering committee relate effectively to each other. This permits the steering committee to direct problem-solving efforts in an appropriate manner, to acquire the necessary resources and support, and to approve action plans. It also helps ensure that the solutions and changes are linked appropriately to the formal organization. In this manner, early attempts at change will have a better chance of succeeding.
6. **Implement and evaluate the changes.** This step involves implementing appropriate organizational changes and assessing the results. Change proposals need the support of the steering committee and the formal authority structure. As changes are implemented, the organization needs information about their effects. This lets members know how successful the changes have been and if they need to be modified. In addition, feedback on changes helps the organization learn to adapt and innovate.

application 13.1

## USING THE AI SUMMIT TO BUILD UNION–MANAGEMENT RELATIONS AT ROADWAY EXPRESS

Roadway Express was the largest subsidiary of $2.9 billion (2001 revenues) Roadway Corp., based in Akron, Ohio (Roadway has since been acquired by Yellow Transit Co.). In the first three quarters of 2002, Roadway Express's operating income fell 14% to $130 million and revenue dropped 7% to $1.8 billion. In September 2002, Roadway's biggest competitor, Consolidated Freightways, filed for bankruptcy and 15,000 Teamsters lost their jobs. Nonunionized carriers like CNF Freight Services were gaining market share with lower costs and a more flexible workforce.

Roadway Express is a "less-than-truckload carrier," which means that its trucks deliver a variety of packages and freight to multiple locations for more than one customer at a time. This places tremendous pressure on the organization, its managers, and employees to effectively plan the delivery routes and loads in order to make a profit. Complicating the task, Roadway Express is heavily unionized: 20,000 of its 27,000 employees belong to the Teamsters or other unions. They are paid, on average and including benefits, 5% above nonunionized competitors.

To compete in an industry in which net profit margins are less than 5% in a good year—let alone in a year when business is contracting—every one of its 27,000 employees must be a leader. "Almost two-thirds of every revenue dollar is consumed by wages and benefits," says Roadway president and COO James Staley. In comparison, Conway Transportation, a division of nonunionized CNF, only pays out 53 cents of every dollar of revenue. "There's not a lot of new technology that's going to make us more efficient. So future opportunities are going to come from our people being more involved in the business."

Persuading the Teamsters and other union members to be more efficient and breaking down a long history of hostility between workers and management were no small tasks. Many of the programs Staley had seen had a way of producing a short-term glow and not much lasting change. Union bosses are naturally wary of such programs and assume that efficiency is just a fancy way of saying that some workers will be laid off and the rest made to work harder. The cooperative union–management program Staley adopted paired classroom efforts to educate union members on how the organization works with a series of Appreciative Inquiry (AI) summits to generate ideas and organize change efforts.

Part of the program involved teaching workers about the industry's economics, competition, and financial status, including Roadway's income statement and operating ratios. The classes encouraged employees to think and act like owners and emphasized the importance of cutting costs. The experience of one 36-year-old dockworker, a 13-year veteran and union representative, demonstrated how difficult change was going to be. The dockworker had been accused of instigating worker slowdowns and engaging in screaming matches with supervisors. At one of the business education seminars, a graph illustrating how unionized trucking companies' market share had slipped from 75% to 50% since 1990 made a powerful argument for change. "Suddenly my ability to support my wife and two children depended on the security of the company," he said. In response, he wrote a plan to improve service in his Greenville, South Carolina, facility that included teaching dockworkers to use computers to communicate with customer-service reps and keep them up-to-date on the status of freight. However, the plan and its implementation also resulted in many of his coworkers labeling him as a management "suck up."

The second part of the union–management program involved the use of AI summits. The first AI summit process began at the Akron terminal and then was extended to the Winston-Salem facility in North Carolina. A steering committee of workers from across the facility was created to plan an off-site meeting aimed at setting a course for the future. Its first task was to decide who among the terminal's employees would be invited to attend. The goal was to

create a microcosm of the company, with workers from all departments and all functions and with varying degrees of empathy for Roadway's corporate objectives. A few weeks later, about 100 employees gathered at a local Holiday Inn for the three-day off-site summit. Using a collaborative process, the trucking firm began to engage its heavily unionized workforce in ways that hardly seemed possible just five years ago.

At the start of the AI summit, representatives from all parts of the system, workers from all functions who barely knew one another, participated. Having the whole system in the room allowed everyone to see each other, face-to-face, and increased the chances of building trust and of participants seeing their collective purpose. On the AI summit's first day, participants explored their organization's "positive change core." The opening question in a round of interviews among all the participants was, "Talk about a time when you felt the most alive, the most engaged, in your job at Roadway." The wording was intentional, a signal that this wasn't going to be the usual management–labor gripe session. The second question fed off the first: "Imagine that you've woken up after being asleep for five years. What would you want Roadway to look like?" When participants paired off to discuss their responses, they made a powerful discovery. "It didn't matter what your job was," said one worker who had been a Roadway driver for 24 years, "everyone wanted the same things"—things such as sustained growth, happy customers, and job security. In short, everyone wanted a successful company.

Over the next two days, the AI summit participants moved from mission to plan. On day two, participants broke into small groups and envisioned their organization's potential for positive influence and impact: What will the company look like in 2010? What will be happening in the world outside it? What is the best outcome we can imagine? The groups then reported back to the large group, and participants began to focus on creating an organization that incorporated the positive change core into every strategy, process, and system. The result was a set of action-oriented statements of how the organization would function. On the final day, participants distilled their organizational design into a list of "inspired actions." They drew an "opportunity map" of needs and priorities and voted on which ones were most urgent. Then they organized into seven action teams. One group addressed the trust gap between management and the union. Another devised strategies to turn drivers—the Roadway employees who have the most contact with the company's customers—into de facto sales reps. Other teams addressed employee communications, performance measurement and monitoring, and education. One team's efforts resulted in the distribution center saving $118,000 a year because the workers determined that trucks carrying more fuel than necessary were getting lower miles/gallon. If successful, these groups would sustain themselves long after the summit ended.

At another session in North Carolina, workers were asked to recall ideal work experience, a time when they were treated with respect, and when trucks were loaded to capacity or arrived on time. Assembled into nine groups, they were then encouraged to devise money-saving ideas. A team of short-haul drivers came up with 12 cost-cutting and revenue-generating ideas. Here is one of the most ambitious: Have each of the 32 drivers in Winston-Salem deliver just one more customer order each hour. Using management data, the drivers calculated the 288 additional daily shipments, at an average revenue of $212 each and with a 6% margin, would generate just about $1 million a year of operating profit.

The workers understood that their efforts to transform Roadway were just the beginning. As one local Teamsters boss put it, "Times have changed, if we don't work together, and smarter, we won't survive." AI summits held at Roadway over the next three years focused on designing structures, creating faster throughput, and recasting the roles of supervisors and leadership at every level. Each involved from 200 to 400 people, and Roadway planned five more AI Summits, convening dockworkers, truck drivers, Teamsters, senior leaders, customers, suppliers, and partners to do strategic planning at terminals throughout the country.

Roadway Corporation reported increased revenues for the fourth quarter of 2002, up 25.7% over that of the same period the year before. More importantly, operating ratios improved significantly and the union–management programs designed to create a more efficient delivery process had produced an estimated $35 million dollars in improvements for the quarter. Of the top terminals leading the bottom-line improvements, all were sites that had held AI Summits.

**Results of Parallel Structure Approaches** A large body of literature exists on the implementation and impact of parallel structure approaches to EI. The business and popular press generally report about the benefits of union–management cooperative projects, quality circles, and other parallel structure interventions. For many people, especially lower-level employees, this opportunity to influence the formal organization leads to increased work satisfaction and task effectiveness.[19] Several classic case studies support these conclusions: General Motors' central foundry division; the Harman plant in Bolivar, Tennessee; the Rockwell International plant in Battle Creek, Michigan (a joint UAW–GM effort); and the Rushton Mines in Pennsylvania.[20]

Early large-sample evaluations of parallel structures typically reported mixed results.[21] Over a period of at least three years, the University of Michigan's Institute for Social Research (ISR) studied eight major projects implemented during the 1970s. Although the projects showed some improvements in employee attitudes, only two projects showed improvements in productivity. The ISR researchers explained the meager productivity results in terms of the projects' mistakes. All of the projects were pioneering efforts and hardly could be expected to avoid mistakes during implementation.[22] Similarly, Ledford, Lawler, and Mohrman concluded that the existing research showed no clear positive or negative trend in the productivity effects of quality circles.[23] Although the evidence of attitudinal effects was more extensive than that of productivity effects, the studies reviewed still showed mixed results for attitudinal changes.

Data that are more recent suggest stronger relationships between employee participation and direct performance outcomes, such as productivity, customer satisfaction, quality, and speed; profitability; and employee satisfaction.[24] A study by the Commission on the Future of Worker–Management Relations supported that conclusion. It found that systematically implemented programs often improve productivity and almost always increase investment in employee skills and knowledge.[25] "The newer projects tend to be much better linked to the management and union hierarchies, receive better assistance from a widening circle of experienced consultants, have more realistic goals, and use more sharply focused organizational change strategies."[26]

Finally, court rulings in the early 1990s challenged the legality of some EI approaches under provisions of the National Labor Relations Act (NLRA). This law, passed by Congress in 1935, gives employees the right to form labor unions and decrees that employers must bargain in good faith with representatives of those organizations. In protecting employees' rights to collective bargaining, the NLRA precludes certain employer unfair labor practices, one of which is aimed at employer domination of a labor organization. Under the law, a committee or team of workers that meets to address issues related to wages, hours, or conditions of work can be considered a "labor organization." If management creates the team, provides it with resources, or influences it in any way, then management may be found to dominate this so-called labor organization. In two legal cases involving Electromation, Inc. and DuPont, the court ruled that in setting up employee teams or committees to address such issues as communication, cost cutting, and safety, the companies had created labor organizations and had dominated them unfairly. Although the NLRA does not outlaw EI teams per se, such interventions may be legally questionable in situations where teams address issues traditionally reserved for bargaining and where management influences or controls the teams. In response to these rulings, Congress passed legislation in 1996 to amend the NLRA. The Teamwork for Employees and Management Act of 1995 preserves legitimate EI programs without infringing on the rights of employees to bargain collectively.

## 13-2b Total Quality Management

Total quality management (TQM) is a more comprehensive approach to employee involvement than parallel structures. Also known as "business excellence," "continuous process improvement," "continuous quality," "lean," and "Six Sigma," TQM grew out of a manufacturing emphasis on quality control and represents a long-term effort to orient all of an organization's activities around the concept of quality. Quality is achieved when organizational processes reliably produce products and services that meet or exceed customer expectations. Although it is possible to implement TQM without employee involvement, member participation in the change process increases the likelihood of sustaining the results. Quality-improvement processes were popular in the 1990s, and many organizations, including Morton Salt, Weyerhaeuser, Xerox, Boeing's Airlift and Tanker Programs, Motorola, and Analog Devices, incorporated TQM interventions. Today, a capability for continuous quality improvement is essential for global competitiveness.

TQM increases workers' knowledge and skills through extensive training, provides relevant information to employees, pushes decision-making power downward in the organization, and ties rewards to performance. When implemented successfully, TQM also is aligned closely with a firm's overall strategy and attempts to direct the entire organization toward continuous quality improvement.[27]

The principles underlying TQM can be understood by examining the careers of W. Edwards Deming and Joseph M. Juran, the fathers of the modern quality movement. They initially applied statistical techniques to improve product quality at defense plants in the United States during World War II, but in an odd twist of fate, they found their ideas taking hold more in Japan than in the United States.[28] When the war ended, U.S. businesses turned to mass-production techniques and emphasized quantity over quality to satisfy postwar demand. Deming, known for his statistical and sampling expertise, was asked by General Douglas MacArthur to conduct a census of the Japanese population. During his discussions with Japanese officials and managers, he advocated a disciplined approach of "plan–do–check–adjust" to identify and improve manufacturing processes that affected product quality. With such an approach, the Japanese could produce world-class-quality products and restore their country economically. Deming's ideas eventually were codified into the "Fourteen Points" and the "Seven Deadly Sins" of quality summarized in Table 13.1. In honor of the ideas that helped to rejuvenate the Japanese economy, the Union of Japanese Scientists and Engineers created the Deming Prize to distinguish annually the best in quality manufacturing.

At about the same time, Juran's publication of the *Quality Control Handbook* in 1951 identified two sources of quality problems: avoidable and unavoidable costs. Avoidable costs included hours spent reworking defective products, processing complaints, and scrapping otherwise useful material. Unavoidable costs included work associated with inspection and other preventive measures. He suggested that when organizations focused on unavoidable costs to maintain quality, an important opportunity was being missed, and he advocated that an organization focus on avoidable costs that could be found in any process or activity, not just in manufacturing.

The popularity of TQM in the United States can be traced to a 1980 NBC television documentary titled, "If Japan Can … Why Can't We?" The documentary chronicled Deming's work with the Japanese and his concern that U.S. companies would not listen to him after the war. The documentary had a powerful impact on firms facing severe competition, particularly from the Japanese, and many companies, including Ford Motor Company, General Motors, Dow Chemical, and Hughes Aircraft, quickly sought Deming's advice. Another important influence on the TQM movement in the United

**TABLE 13.1**

**Deming's Quality Guidelines**

| The Fourteen Points | The Seven Deadly Sins |
|---|---|
| 1. Create a constancy of purpose | 1. Lack of constancy of purpose |
| 2. Adopt a new philosophy | 2. Emphasizing short-term profits and immediate dividends |
| 3. End the practice of purchasing at lowest prices | 3. Evaluation of performance, merit rating, or annual review |
| 4. Institute leadership | 4. Mobility of top management |
| 5. Eliminate empty slogans | 5. Running a company only on visible figures |
| 6. Eliminate numerical quotas | 6. Excessive medical costs |
| 7. Institute on-the-job training | 7. Excessive costs of warranty |
| 8. Drive out fear | |
| 9. Break down barriers between departments | |
| 10. Take action to accomplish the transformation | |
| 11. Improve constantly and forever the process of production and service | |
| 12. Cease dependence on mass inspection | |
| 13. Remove barriers to pride in workmanship | |
| 14. Retrain vigorously | |



States was Philip Crosby's book *Quality Is Free*.[29] He showed that improved quality can lower overall costs, dispelling the popular belief that high quality means higher total costs for the organization. With fewer parts reworked, less material wasted, and less time spent inspecting finished goods, the organization's total costs actually can decline.

In 1987, Congress established the Malcolm Baldrige National Quality Award (www.nist.gov/baldrige). It recognizes large and small organizations in business, education, and health care for quality achievement along seven dimensions: leadership; strategic planning; customer and market focus; measurement, analysis, and knowledge management; human resources focus; process management; and business results. The 2012 award winners were Lockheed Martin Missiles and Fire Control, in manufacturing; MESA Products, in small business; Northern Mississippi Medical Center, in health care; and the City of Irving, Texas, in nonprofit. Competition for the award has grown enormously. Some large organizations spend large sums to prepare for the contest; others apply just to receive the extensive feedback from the board of examiners on how to improve quality; and still others feel compelled to apply because customers insist that they show progress in process improvement.

Another quality award is the Shingo Prize (www.shingoprize.org) for business and government organizations that achieve highly efficient production methods. The 2012 award in operational excellence went to Ethicon, Inc.'s plant in Juarez, Mexico. Numerous states have initiated their own quality awards. At the national level, the Carey Award is given to federal agencies and the Hammer Awards are given as part of the National Performance Review for innovation and quality improvement in the federal government.

TQM is a growing industry itself, with consulting firms, university courses, training programs, and professional associations related to quality improvement diffusing rapidly across industrialized nations. The quality approach is supported by at least three major associations: the American Society for Quality (ASQ; www.asq.org), the American Productivity and Quality Center (APQC; www.apqc.org), and the International Society of Six Sigma Professionals (ISSSP; www.isssp.com). These associations actively support TQM by sponsoring quality training workshops and conferences and serving as clearinghouses for important information on TQM programs. The International Organization for Standardization (ISO) also supports TQM. Its ISO 9000 standard applies to quality systems, and certification requires firms to document key goals and processes, to demonstrate compliance, and to create processes for improvement.

**Application Stages** TQM typically is implemented in five major steps. With the exception of gaining senior management commitment, most of the steps can occur somewhat concurrently.

1. **Gain long-term senior management commitment.** This stage involves helping senior executives understand the importance of long-term commitment to TQM. Without a solid understanding of TQM and the key success factors for implementation, managers often believe that workers are solely responsible for quality. Yet only senior executives have the authority and larger perspective to address the organization-wide, cross-functional issues that hold the greatest promise for TQM's success.

   Senior managers' role in TQM implementation includes giving direction and support throughout the change process. For example, establishing organization-wide TQM generally takes three or more years, although technical improvements to the workflow can be as quick as six to eight months. Senior managers need to clarify and communicate throughout the organization a totally new orientation to producing and delivering products and services.

   The longer-term and more difficult parts of implementation, however, involve changes in the organization's support systems, such as customer service, finance, sales, and human resources. Often these systems are frozen in place by old policies and norms that can interfere with the new approach. Senior managers have to confront those practices and create new ones that support TQM and the organization's strategic orientation.

   Top executives also must be willing to allocate significant resources to TQM implementation, particularly to make large investments in training. For example, as part of its Baldrige Award preparation, Motorola developed Motorola University, a training organization that teaches in 27 languages. Departments at Motorola allocate at least 1.5% of their budgets to education, and every employee must take a minimum of 40 hours of training a year. This effort supports Motorola's goal of six sigma process quality (a statistical measure of product quality that implies 99.9997% perfection) and of having a workforce that is able to read, write, solve problems, and do math at the seventh-grade level or above. When several business units within Motorola achieved the six sigma target, the company demonstrated its commitment to continuously improving quality with a new target of tenfold improvement in key goals.
2. **Train members in quality methods.** TQM implementation requires extensive training in the principles and tools of quality improvement. Depending on the organization's size and complexity, such training can be conducted in a few weeks to more than two years. Members typically learn problem-solving skills and simple statistical process control (SPC) techniques, usually referred to as the seven tools of quality.

At Cedar-Sinai Hospital in Los Angeles, all employees took a three-day course on the applicability of brainstorming, histograms, flowcharts, scatter diagrams, Pareto charts, cause-and-effect diagrams, control charts, and other problem-solving procedures. This training was the beginning of a long-term process in continuous improvement. The knowledge gained is used to understand variations in organizational processes, to identify sources of avoidable costs, to select and prioritize quality improvement projects, and to monitor the effects of changes on product and service quality. By learning to analyze the sources of variation systematically, members can improve the reliability of product manufacturing or service delivery. For example, HCA's West Paces Ferry Hospital used TQM methods to reduce direct costs attributable to antibiotic waste.[30] It used flowcharts, fishbone diagrams, and Pareto charts to determine the major causes of unused intravenous preparations. Changes in the antibiotic delivery process resulted in reduced costs of antibiotics to the hospital of 44.5% and to patients of 45%.

The recent interest in Six Sigma programs has produced an additional training issue. Many of the quality-improvement projects (described below) require considerable facilitation and support. To enable those projects, many organizations have committed to the development of "green belt" and "black belt" roles. These are internal consultants with specialized knowledge, skill, and experience in TQM methods that guide project team members through a specific program of process improvement.

3. **Start quality-improvement projects.** In this phase of TQM implementation, individuals and work groups apply the quality methods to identify the few projects that hold promise for the largest improvements in organizational processes. They identify output variations, intervene to minimize deviations from quality standards, monitor improvements, and repeat this quality-improvement cycle indefinitely. Identifying output variations is a key aspect of TQM. Such deviations from quality standards typically are measured by the percentage of defective products or, in the case of customer satisfaction, by on-time delivery percentages or customer survey ratings. For example, VF Corporation, a leading retail apparel firm, found that retailers were out of stock on 30% of their items 100% of the time. In response, VF revamped its systems to fill orders within 24 hours 95% of the time.

   TQM is concerned not only with variations in the quality of finished products and services but also with variations in the steps of a process that produce a product or service and the levels of internal customer satisfaction. For example, Eastman Chemical Company established a patent process improvement team to enhance the relationship between scientists and lawyers in applying for patent approvals. The team, made up of inventors, lab managers, and attorneys, doubled the number of patent attorneys and relocated their offices near the labs. Attorneys now meet with scientists during the experimental phase of research to discuss ways to increase the chances of yielding a patentable product or process. Patent submissions have increased by 60%, and the number of patents issued to the company has doubled.[31]

   Based on the measurement of output variations, each individual or work group systematically analyzes the cause of variations using SPC techniques. For example, product yields in a semiconductor manufacturing plant can go down for many reasons, including a high concentration of dust particles, small vibrations in the equipment, poor machine adjustments, and human error. Quality-improvement projects often must determine which of the possible causes is most responsible, and, using

that information, run experiments and pilot programs to determine which adjustments will cause output variations to drop and quality to improve. Those adjustments that do reduce variations are implemented across the board. Members continue to monitor the quality process to verify improvement and then begin the problem-solving process again for continuous improvement.

4. **Measure progress.** This stage of TQM implementation involves measuring organizational processes against quality standards. Knowing and analyzing the competition's performance are essential for any TQM effort because it sets minimum standards of quality, cost, and service and ensures the organization's position in the industry over the short run. For the longer term, such analytical efforts concentrate on identifying world-class performance, regardless of industry, and creating stretch targets, also known as *benchmarks*. Benchmarks represent the best in organizational achievements and practices for different processes and generally are accepted as "world class." For example, Nordstrom is considered the benchmark of customer service in the retail industry, while Disney's customer-service orientation is considered a world-class benchmark.

   The implied goal in most TQM efforts is to meet or exceed a competitor's benchmark. Alcoa's former chairman Paul H. O'Neill charged all of the company's business units with closing the gap between Alcoa and its competitor's benchmarks by 80% within two years.[32] In aluminum sheet for beverage cans, for example, Japan's Kobe Steel, Ltd., was the benchmark, and Wall Street estimated that achieving O'Neill's goal would increase Alcoa's earnings by one dollar per share. The greatest leverage for change often is found in companies from unrelated industries, however. For example, Alcoa might look to Nordstrom or Disney to get innovative ideas about customer service. Understanding benchmarks from other industries challenges an organization's thinking about what is possible and promotes what is referred to as "out-of-the-box thinking."

5. **Rewarding accomplishment.** In this final stage of TQM implementation, the organization links rewards to improvements in quality. TQM does not monitor and reward outcomes that are normally tracked by traditional reward systems, such as the number of units produced. Such measures do not necessarily reflect product quality and can be difficult to replace because they are ingrained in the organization's traditional way of doing business. Rather, TQM rewards members for "process-oriented" improvements, such as increased on-time delivery, gains in customers' perceived satisfaction with product performance, and reductions in cycle time—the time it takes a product or service to be conceived, developed, produced, and sold. Rewards usually are designed initially to promote finding solutions to the organization's key problems. The linkage between rewards and process-oriented improvements reinforces the belief that continuous improvements, even small ones, are an important part of the new organizational culture associated with TQM. According to a survey of 500 firms in four countries, conducted by Ernst and Young and the American Quality Foundation, more than half of the U.S. companies studied linked executive pay to improving quality and achieving benchmarks.[33]

TQM has continued to evolve in most industrialized countries. It is increasingly associated with lean manufacturing and Six Sigma programs. Lean manufacturing derives from the Toyota Production System (TPS) and seeks to identify and eliminate wastes and inefficiencies from production process. Six Sigma programs, although based on the principles of TQM, attempt to drive out important sources of variation and achieve near

perfection in the execution of critical processes in such large organizations as Samsung, SGL Carbon, Motorola, Starwood Hotels, Ford, and Xerox.

**Results of Total Quality Management** TQM's emergence globally and the variations in how it is applied across organizations have made rigorous evaluation of results difficult. A 1999 survey of the *Fortune* 1000 companies showed that about 75% have implemented some form of TQM.[34] Furthermore, 87% of the companies rated their TQM experience as either positive or very positive, up from 76% in 1993. The research also found that TQM is often associated with the implementation of other EI interventions. Finally, the study revealed that TQM was positively associated with performance outcomes, such as productivity, customer service, product/service quality, and profitability, as well as with human outcomes, such as employee satisfaction and quality of work life. Other TQM studies have shown that as organizations enact process improvements, they may need to make supporting changes in reward systems and work design.[35]

The U.S. Commerce Department's National Institute of Standards and Technology routinely tracks the stock performance of Baldrige Award winners compared to the Standard & Poor's 500 index. On the one hand, the Baldrige winners outperformed the S&P 500 significantly between 1994 and 1999.[36] More recently, however, of the 16 award recipients between 1994 and 2003, only one has outperformed the S&P 500. Another study of hospitals provided empirical support for the Baldrige framework.[37] Significant relationships were identified between hospitals' adherence to the Baldrige Criteria and their performance in the areas of patient and customer satisfaction, staff and work systems, and organization-specific results. However, the relationships between hospital quality systems and financial/market performance or health care outcomes were not significant. The authors recommend more longitudinal research because of the likely time lags between implementation and manifestation of financial or health outcomes.

One of the most rigorous longitudinal studies of the long-term outcomes of TQM found that in contrast to a matched control group, the 600 North American firms that had first won a prominent quality award between 1983 and 1993 scored significantly higher on operating income measures as well as on long-term stock performance.[38] A replication and extension of this study with over 700 European quality award winners found similar long-term TQM effects.[39] A study of Swedish quality award winners found that they consistently outperformed their competitors on measures of sales and profitability.[40]

A balanced picture of TQM effects is provided by a study of 54 firms of different sizes, both adopters and nonadopters of TQM. It found that TQM firms significantly outperformed non-TQM firms. The source of the performance advantage was not the tools and techniques of TQM, however, but the culture, empowerment, and commitment that came from successful implementation. The study concluded that "these tacit resources, and not TQM tools and techniques, drive TQM success," and that "organizations that acquire them can outperform competitors with or without the accompanying TQM ideology."[41] A good example is Boeing's Airlift and Tanker program, which won the Baldrige Award in 1998. Boeing's experience with TQM has suggested that the biggest organizational gains have come through the integration of TQM concepts with other business and strategic initiatives. TQM has helped Boeing be a better all-around company.

Application 13.2 describes how TQM is applied at the Ritz-Carlton Hotel Company.[42] It shows how the company's culture, senior leadership, and empowered work practices contribute to TQM success.

application 13.2

## TQM AT THE RITZ-CARLTON

The Ritz-Carlton Hotel Company, the premier flagship of Marriott International, operates 81 luxury hotels in 27 countries. Employing about 38,000 staff, the firm has a venerable record of excellent service that is considered the benchmark by many in the hospitality industry. Ritz-Carlton has been involved in TQM for over 30 years and was the first hotel chain to win the coveted Malcolm Baldrige National Quality Award in 1992. Needless to say, Ritz-Carlton is passionate about quality guest care, from the president and chief operating officer, Herve Humler, to the maintenance, front desk, and housekeeping staff.

Ritz-Carlton's unique approach to TQM is embedded in its strong corporate culture, which is spelled out clearly in its "Gold Standards." These standards are the backbone of the company and include the values and philosophy that guide how it operates, including processes for solving problems and criteria for grooming, housekeeping, safety, and efficiency. The Gold Standards include Ritz-Carlton's credo, motto, three steps to service, service values, and other proprietary statements. All employees know the Gold Standards by heart and are well-trained in what they mean for daily work behavior. For example, Ritz-Carlton's motto, "We are Ladies and Gentlemen serving Ladies and Gentlemen," is closely tied to how guests are welcomed, with "a warm and sincere greeting," and depart with a "fond farewell."

Ritz-Carlton's TQM program begins at the top with senior executives who spend about a quarter of their time on quality issues. Because the company's service culture is built on trust, these leaders hold themselves accountable for behaving according to the values that they require of the organization. The senior executives comprise the corporate steering committee for TQM as well as the senior quality-management team. Each week the steering committee reviews various measures of service quality and performance. It engages in detailed planning by setting objectives, devising action plans, and assessing results.

This planning process is essential to Ritz-Carlton's TQM program. It extends to each level of the firm where teams in the individual work areas set objectives and create action plans that are reviewed by the corporate steering committee. This cross-level planning process helps to assure that quality goals and action plans are consistent across organizational levels and integrated with the firm's overall plan. In addition, each hotel has a designated quality leader, who serves as a resource and advocate as teams develop and implement their quality plans.

Teams play a key role in providing quality service. Each work area in a hotel includes teams responsible for problem solving, strategic planning, and setting quality-certification standards for each position. Employees meet as teams to spot problem patterns, prioritize problems, and develop measures to prevent their recurrence. These cross-functional teams require sufficient time and resources to learn how to function effectively. Managers are still responsible for objectives and solutions but rely on input and involvement from team members. A unique team tradition at Ritz-Carlton is the "lineup," drawn from early French restaurants where the chef got his whole team, including the waiters and waitresses, together at the same time each evening to communicate what they are going to be serving. At the Ritz-Carlton, teams on every shift use the lineup for about 15 minutes every day. This includes sharing up-to-the-minute information as well as talking about great things employees have done to deliver exceptional service.

An integral part of Ritz-Carlton's TQM program is empowering employees to solve guests' problems as quickly as possible. Employees are responsible for acting at first notice, regardless of the type of problem or guest complaint. They are expected to stop their normal routine and to take immediate positive action to discover what went wrong and resolve it. They are empowered to handle any customer complaint on the spot and can demand the immediate assistance of other employees and spend up to $2,000 if necessary. Employees can apply this rapid response

not just to solve problems but to do something that creates an absolutely wonderful stay for a guest, such as surprising guests with champagne and cake in their room on their birthdays. Ritz-Carlton also works hard to avoid guest problems before they occur. Employees who detect a potential problem in service delivery are immediately expected to bring it to management's attention and a solution is found. Eliminating internal employee complaints can avoid external complaints that might come from guests.

A key to Ritz-Carlton's TQM success is the continuous collection and analysis of data on service quality and its comparison to predetermined customer expectations. Assisted by the latest information technology, the company gathers information on such quality measures as percentage of check-ins with no queuing, time spent to achieve industry-best clean-room appearance, time to service an occupied guest room, and guest room preventive-maintenance cycles. Data submitted from each of a hotel's 720 work areas provide daily quality production reports, which enable rapid identification of problems in achieving quality and customer-satisfaction goals.

Ritz-Carlton's human resource practices are tied closely to TQM. Selection, training, and performance appraisal are geared to talent acquisition, development, and retention. Only about 2% of the people who apply for jobs are hired. A key criterion is how well the applicant is likely to fit the company's culture including being a team member. Once on board, new employees are versed on the corporate culture through a two-day orientation, followed by extensive on-the-job training, then job certification. To obtain certification, employees are assessed on their mastery of skills associated with their particular job. They also are tested on how well they know the company's TQM philosophy and credo, which can qualify them as "quality engineers." Ritz-Carlton expects 100% compliance with skills testing, so that everyone is certified to do a particular job and is a quality engineer as well. The company's performance appraisal system is based on the Gold Standards and employees are held responsible only for those things under their control.

Ritz-Carlton also has extended TQM to its suppliers. To assure that suppliers can meet the firm's quantity and quality needs, it has developed a supplier certification process, which measures how often suppliers meet specifications on time and how well they improve their cycle time from order to delivery. The certification process also includes an internal audit of suppliers' capabilities and a quality survey of those who use their products and services, including purchasing agents, accounting personnel, sales persons, and hotel guests. Ritz-Carlton ranks suppliers based these data with the objective of getting them certified to become a fully integrated partner.

The fundamental aim of Ritz-Carlton's TQM process is not simply to meet the expectations of guests but to provide them with a visit that is unique, memorable, and personal. According to independent surveys, 92% to 97% of the guests leave with that impression. Ritz-Carlton's experience and success with TQM has spread worldwide to organizations in a variety of industries and regions. Started in 2000, its Leadership Center provides knowledge, information and benchmarking to organizations interested in learning many of the business practices that led to Ritz-Carlton becoming a two-time recipient of the Malcolm Baldrige National Quality Award.

### 13-2c High-Involvement Organizations

Over the past two decades, an increasing number of employee involvement projects have been aimed at using high-involvement work practices to create high-involvement organizations (HIOs). These interventions create organizational conditions that support high levels of employee participation. What makes HIOs unique is the comprehensive nature of their design process. Unlike parallel structures that do not alter the formal organization or TQM interventions that tend to focus on particular processes, HIOs address

almost all features of an organization's design. Structure, work design, management processes, physical layout, personnel policies, and reward systems are designed jointly by management and workers to promote high levels of involvement and performance.

**Features of High-Involvement Organizations** High-involvement organizations are designed with features congruent with one another. For example, in HIOs employees have considerable influence over decisions. To support such a decentralized philosophy, members receive extensive training in problem-solving techniques, plant operation, and organizational policies. In addition, both operational and issue-oriented information is shared widely and is obtained easily by employees. Finally, rewards are tied closely to unit performance, as well as to knowledge and skill levels. These different aspects of the organization are mutually reinforcing and form a coherent pattern that contributes to employee involvement. Table 13.2 presents a list of compatible design elements characterizing HIOs,[43] and most such organizations include several if not all of the following features:

- **Flat, lean organization structures** contribute to involvement by pushing the scheduling, planning, and controlling functions typically performed by management and staff groups toward the shop floor. Similarly, mini-enterprise, team-based structures that are oriented to a common purpose or outcome help focus employee participation on a shared objective. Participative structures, such as work councils and union–management committees, create conditions in which workers can influence the direction and policies of the organization.
- **Job designs** that provide employees with high levels of discretion, task variety, and meaningful feedback can enhance involvement. They enable workers to influence day-to-day workplace decisions and to receive intrinsic satisfaction by performing work under enriched conditions. Self-managed teams encourage employee responsibility by providing cross-training and job rotation, which give people a chance to learn about the different functions contributing to organizational performance.
- **Open information systems** that are tied to jobs or work teams provide the necessary information for employees to participate meaningfully in decision making. Goals and standards of performance that are set participatively can provide employees with a sense of commitment and motivation for achieving those objectives.
- **Career systems** that provide different tracks for advancement and counseling to help people choose appropriate paths can help employees plan and prepare for long-term development in the organization. Open job posting, for example, makes employees aware of jobs that can further their development.
- **Selection** of employees for HIOs can be improved through a realistic job preview providing information about what it will be like to work in such situations. Team member involvement in a selection process oriented to potential and social skills of recruits can facilitate a participative climate.
- **Training** employees for the necessary knowledge and skills to participate effectively in decision making is a heavy commitment in HIOs. This effort includes education on the economic side of the enterprise, as well as interpersonal skill development. Peer training is emphasized as a valuable adjunct to formal, expert training.
- **Reward systems** can contribute to EI when information about them is open and the rewards are based on acquiring new skills, as well as on sharing gains from improved performance. Similarly, participation is enhanced when people can choose among different fringe benefits and when reward distinctions among people from different hierarchical levels are minimized.
- **Personnel policies** that are participatively set and encourage stability of employment provide employees with a strong sense of commitment to the organization. People

feel that the policies are reasonable and that the firm is committed to their long-term development.

- **Physical layouts** of organizations also can enhance EI. Physical designs that support team structures and reduce status differences among employees can reinforce the egalitarian climate needed for employee participation. Safe and pleasant working conditions provide a physical environment conducive to participation.

**TABLE 13.2**

**Design Features for a Participation System**

| ORGANIZATIONAL STRUCTURE | TRAINING |
|---|---|
| 1. Flat<br>2. Lean<br>3. Mini-enterprise-oriented<br>4. Team-based<br>5. Participative council or structure | 1. Heavy commitment<br>2. Peer training<br>3. Economic education<br>4. Interpersonal skills |
| **JOB DESIGN** | **REWARD SYSTEM** |
| 1. Individually enriched<br>2. Self-managing teams | 1. Open<br>2. Skill-based<br>3. Gain sharing or ownership<br>4. Flexible benefits<br>5. All salaried workforce<br>6. Egalitarian perquisites |
| **INFORMATION SYSTEM** | **PERSONNEL POLICIES** |
| 1. Open<br>2. Inclusive<br>3. Tied to jobs<br>4. Decentralized; team-based<br>5. Participatively set goals and standards | 1. Stability of employment<br>2. Participatively established through representative group |
| **CAREER SYSTEM** | **PHYSICAL LAYOUT** |
| 1. Tracks and counseling available<br>2. Open job posting | 1. Around organizational structure<br>2. Egalitarian<br>3. Safe and pleasant |
| **SELECTION** | |
| 1. Realistic job preview<br>2. Team-based<br>3. Potential and process-skill oriented | |

**SOURCE:** Reproduced by permission of the publisher from Edward E. Lawler III, "Increasing Worker Involvement to Enhance Organizational Effectiveness: Design Features for a Participation System," in *Change in Organizations*, eds. P. S. Goodman and associates (San Francisco: Jossey-Bass, 1982), pp. 298–99.

These HIO design features are mutually reinforcing. "They all send a message to people in the organization that says they are important, respected, valued, capable of growing, and trusted and that their understanding of and involvement in the total organization is desirable and expected."[44] Moreover, these design components tend to motivate and focus organizational behavior in a strategic direction, and thus can lead to superior effectiveness and competitive advantage, particularly in contrast to more traditionally designed organizations.[45]

**Application Factors** At present, there is no universally accepted approach to implementing the high-involvement features described here. The actual implementation process often is specific to the situation, and little systematic research has been devoted to understanding the change process itself.[46] Nevertheless, at least two distinct factors seem to characterize how HIOs are implemented. First, implementation generally is guided by an explicit statement of values that members want the new organization to support. Typically, such values as teamwork, equity, quality, and empowerment guide the choice of specific design features. Values that are strongly held and widely shared by organization members can provide the energy, commitment, and direction needed to create HIOs. A second feature of the implementation process is its participative nature. Managers and employees take active roles in choosing and implementing the design features. They may be helped by OD practitioners, but the locus of control for the change process resides clearly within the organization. This participative change process is congruent with the high-involvement design being created. In essence, high-involvement design processes promote high-involvement organizations.

**Results of High-Involvement Organizations** Extensive research has been done on the HIO intervention and the results generally support its positive effects. An early study surveyed 98 HIOs and showed that about 75% of them perceived their performance relative to competitors as better than average on quality of work life, customer service, productivity, quality, and grievance rates.[47] Analyses of company records revealed that voluntary turnover was 2%, substantially below the national average; return on investment was almost four times greater than industry averages; and return on sales was more than five times greater. Recent studies have confirmed a positive relationship between applications of high-involvement practices and various measures of organizational effectiveness, including return on investment, turnover, job performance, and work stress.[48] Research also has identified conditions that can influence HIO outcomes. For example, in a study of 132 manufacturing firms, the strength of the relationship between high-involvement practices and labor productivity varied depending on the industry's capital intensity, R&D intensity, and growth.[49] Improving high-involvement practices by one standard deviation in a high-capital-intensive industry increased sales per employee by 1%, a nontrivial amount. In a study involving 17 industries in New Zealand, increased use of high-involvement practices was associated with enhanced employee well-being, as measured by job satisfaction, fatigue, and job stress.[50] The researchers warned, however, that these positive human effects might not be realized if HIO interventions lead to work intensification with greater pressures to work harder and longer.

Application 13.3 describes the implementation of a high-involvement organization at Air Chemicals and Products.[51] The case provides a good example of the broad approach to EI. Over time, power, information, knowledge and skill, and rewards were all addressed in an effective organization development process.

application 13.3

# BUILDING A HIGH-INVOLVEMENT ORGANIZATION AT AIR PRODUCTS AND CHEMICALS, INC.

Chris Loyd, the vice president and general manager of the Process Systems Group Operations (OPS) division of Air Products and Chemicals, Inc. (APCI), a *Fortune* 200 company, believed there was too much variability in key performance metrics, such as quality, safety, and productivity, across the plants in his division. Despite communication and implementation of several quality-related initiatives, a subset of plants consistently outperformed all others. In response, Chris commissioned a diagnostic process to uncover the sources of exemplary performance in those high-performing facilities.

The OPS division was responsible for ensuring the manufacture and delivery of high-volume industrial gas products directly to customer facilities. The division provided oxygen, nitrogen, hydrogen, helium, argon, and specialty gas products in various states (e.g., liquid, gaseous) and purities to large industrial customers representing a variety of markets, including electronics, refining, pharmaceutical, steel-making, food, aerospace and many others.

The diagnosis identified four factors resulting in exceptional plant performance: employee involvement, information access, technical capability, and incentives. These four factors consistently differentiated between the high performing and comparison plants. In particular, the single greatest source of variance was the level of employee involvement—or the extent to which organization members at all levels participated in decision making—in a facility. With this learning, and working with Jim Byron, an internal OD consultant, a high-involvement strategy was established to broadcast and advance involvement across the entire division. Loyd was convinced that elevating his 900-person division's business effectiveness required pervasive employee involvement in plant management and operations.

## HIGH-INVOLVEMENT STRATEGY

The high-involvement (HI) strategy was developed to influence each of the four factors contributing to exceptional plant performance. To address the employee involvement factor, the organization adopted the "working with others" (WWO) training process (described below) to model and educate organization members on how to solve problems in a group setting. In addition, and in an effort to symbolize shared decision making across the division, Loyd created an HI Advisory Team. The team's mandate was to carry forward the work of promoting employee involvement. Members of the advisory team represented all workforce levels, from hourly employees through top management. The WWO training also addressed the technical capability factor by improving and reinforcing the workforce's skills and knowledge related to quality-improvement processes.

The information-access factor was addressed by increasing the organization's capability to share information. The existing intranet was enhanced to provide all workers with access to business and division information (within any constraints imposed by legal or financial regulations).

Finally, the incentive factor was addressed by adjusting the reward system of the division. A gain-sharing system was designed and implemented to reward team performance at the local level and included incentives for plants that were serving similar customers and geographies to share information and best practices with one another.

## THE ROLE OF TRAINING IN HIGH INVOLVEMENT

A central component of the HI strategy interventions was the WWO training sessions. Each session addressed the knowledge and skills needed to elevate involvement in the organization and used them immediately to engage employees in making improvements to the business. The WWO sessions not only provided information about employee involvement and the skills and knowledge required to be effective at it, the sessions immediately applied those competencies by engaging participants in an assessment of the current state of involvement in the workplace, and in identifying and resolving a quality-improvement challenge in the participants' respective plants. Action teams were spawned from these

sessions to follow through on making changes that were not achievable within the WWO session itself.

Beginning with Loyd's team, Byron led the WWO training sessions during the first two years of the initiative and reached every member of the organization. Division and plant leadership demonstrated its commitment to the goal by participating in WWO sessions. As part of that work, a video was produced that displayed leaders' use of the WWO skills and explored their own personal insights into the benefits involvement offered employees and the business.

As the WWO sessions progressed, participants who had interest in becoming WWO trainers and coaches were identified. They who would train their plants in using teamed approaches to solving local problems and to uncovering and realizing business opportunities. Within two years, every member of OPS received training in these core skills and processes and participated in making quality improvements to their business. More than 100 trainer-coaches were developed to support teaming within local organizations.

These trainer-coaches had responsibility for implementing the second phase of the HI effort, which was to conduct a regular assessment of each plant's authority and power-sharing levels against goals, roles, relationships, and procedure dimensions. The assessments identified areas for improvement, and the trainer-coaches were expected to initiate changeover plans with the assistance of a team development tool kit and additional training that was specifically designed to lead them and their teams through an improvement process. The trainer-coaches documented best practices on a regular basis and broadcast these lessons electronically to all employees through the enhanced intranet and to the HI Advisory Team, as well as distributing hard copy to local plants. They also met regionally to promote best practices and to determine additional ways to increase the level of involvement and power sharing as a means of delegating more management of plant operations lower down the organization.

As the WWO and problem-solving processes unfolded, Loyd began communicating the results to the organization. For example, he included feedback on progress and accomplishment is his weekly telephone conferences with his North American subordinates and in all his other presentations to employees (e.g., face-to-face, in-house TV). Two other mechanisms were used to recycle the measured results: (1) a yearly planning function in which managers reviewed the status of employee involvement within their units and developed personal targets and plans for achieving them and (2) a similar planning session focusing on the organization as a whole completed by the HI Advisory Team. To stress the importance of HI progress, the results of measurement helped to determine the performance appraisal each leader received. Each manager's appraisal plan required yearly progress in increasing employee involvement within his or her plant. This strengthened the significance of the yearly management planning session, which included a half-day session in which managers worked together to analyze the results from their plant's HI assessment, uncover the causes of the results, target next year's improvement level, and generate actions they personally would take to realize their individual improvement targets.

## SUSTAINING HIGH INVOLVEMENT

Subsequent to the rollout phase, the HI Advisory Team used the results of the HI assessments to uncover new activities that would further implementation of HI. One such activity was sponsorship of an HI Idea Book that brought together the best innovations employee involvement produced in each area of business function. The book was distributed in print and electronically. It was updated and used to transfer expertise and increase the business benefits each improvement generated.

WWO sessions continued for training new hires. In addition, WWO sessions were used to refresh OPS member skills, while involving participants in solving workplace problems, generating quality improvements, and uncovering and executing ways to accomplish yearly business drivers (e.g., safety improvements, cost reduction, improved customer satisfaction, reduced service interruptions). This sustained use of WWO sessions strengthened the commitment to good communications and simultaneously accomplished ever-broader use of employee involvement.

One highly significant special use of the sessions was to facilitate the integration of an entire new organization into OPS. This integration occurred fours years into the HI initiative. It required incorporating into OPS an organization that was larger (1,100 employees), performed very different work, and had a culture that was fully top-down in character.

## EVALUATION

Over the course of its implementation, several evaluations were made of OPS's HI initiative. In particular, the organization tracked the movement of HI scores across plants in the division and performed a study of the return on the investment in the HI effort. Progress was calibrated by yearly measurement of involvement using an EI scale shown in the table below. Measurement was made in each OPS plant.

HI progress was assessed by plotting the year-to-year changes in the prevalence of employee involvement throughout the workplace. A chart depicted the percentage of plants and other operating groups that achieved HI scores of Level 3 or higher. For example, during the last four years, the percentage of units with aggregate HI scores of 3 or higher increased from 15% to over 85%. In addition, an evaluation of the benefits and costs of the program found that for every dollar invested, the organization received 9.7 dollars of benefit. Most of the benefits flowed from improved worker productivity and other workplace improvements that were generated by the WWO sessions.

When Chris Loyd retired, he commented, "When I think about the most significant changes over the last 20 years, I think HI was the most important change we made. The technology changes were not as critical and the organizational restructurings often had little effect, but the HI changes will stay with us forever. In fact, the HI training and its acceptance has been a foundation that has allowed us to make all other changes."

**Levels of High Involvement**

| LEVEL OF HI ADOPTION | DESCRIPTION |
|---|---|
| I | Managers use a top-down approach and emphasize direction of the workforce. They are either unaware of the HI strategy or doubt its value. The employee's involvement is limited to doing assigned work, and workers see themselves as "hired hands." Employees have limited access to information. |
| II | Managers use a top-down approach, but employees are asked to provide input concerning business issues that are outside their immediate assignments. Managers are aware of HI and are willing to experiment with its use in accomplishing business objectives. Employees see themselves as having some say over the content of their work and workplace. They have some access to some organizational information as well as data that are relevant to their work. |
| III | Managers use a participative approach that engages employees in thinking through options, recommending actions, and assessing accomplishment. Management still makes the final decisions but is convinced of the importance of involving employees in addressing business issues. Employees see themselves as advising on the business through their participation in problem-solving teams and special task forces. The employee's knowledge about the workplace is expanded to provide an informed basis for team problem solving. |
| IV | Management delegates decision-making authority to work teams that are empowered to manage their assigned goals and are involved in every aspect of business management and operations. Management is convinced of the importance of HI for accomplishing business objectives and has begun to redefine its role as to enable personnel rather than to direct them. Employees feel they have a direct stake in the organization's success. Each employee has access to all information about the workplace so that they can participate fully in defining and accomplishing its objectives. |
| V | Management defines itself as partners with employees on one team dedicated to defining and achieving business goals. Managers position themselves to enable the free and collaborative enterprise of the team. Employees experience ownership for the business and a personal commitment to ensuring its success. Work unit personnel operate as a self-led team, configuring themselves as needed to define and achieve corporate purposes and to coordinate with other work teams. Each employee has access to all information about the workplace except that information restricted by law. |