

Continuous Change

This chapter describes interventions that enable organizations to change themselves continually. These change processes are relatively new to OD and are still being developed and refined. They are aimed at the growing number of organizations facing highly turbulent environments, such as firms in high-technology, entertainment, and biotechnology industries, where timing is critical, technological change is rapid, and competitive pressures are unrelenting and difficult to predict. In these situations, standard sources of competitive advantage—strategy, organization design, and core competencies—erode quickly and provide only temporary advantage. What is needed are *dynamic capabilities*¹ built into the organization that enable it to renew forms of competitive advantage constantly to adapt to a rapidly shifting environment.

Continuous change interventions extend transformational change into a nonstop process of strategy setting, organization designing, and implementing the change.² Rather than focus on creating and implementing a particular strategy and organization design, continuous change addresses the underlying structures, processes, and activities for generating new forms of competitive advantage. Thus, the focus is on learning, changing, and adapting—on how to produce a constant flow of new strategies

and designs and not just on how to transform existing ones.

Self-designing organizations have the capability to alter themselves fundamentally and continuously. Creating them is a highly participative process in which multiple stakeholders set strategic direction, design appropriate structures and processes, and implement them. This intervention includes considerable innovation and learning as organizations gain the capacity to design and implement significant changes continually.

Learning organizations are those with the ability to learn how to change and improve themselves constantly. Distinct from individual learning, this intervention helps organizations move beyond solving existing problems to gain the capability to improve constantly. It results in the development of a learning organization where empowered members take responsibility for changing the organization and learning how to do this better and better.

Built-to-change organizations include design elements and managerial practices that are all geared for change not just normal operations. This intervention provides design and implementation guidelines for building change capability into the structures, processes, and behaviors of the organization so that it can respond continually to a rapidly changing environment.

SELF-DESIGNING ORGANIZATIONS

A growing number of researchers and practitioners have called for self-designing organizations that have the built-in capacity to transform themselves continually to achieve high performance in today's competitive and changing environments.³ Mohrman and Cummings have developed a self-design change strategy that involves an ongoing series of designing and implementing activities carried out by managers and employees at all levels of the firm.⁴ The approach helps members translate corporate values and general prescriptions for change into specific structures, processes, and behaviors suited

to their situations. It enables them to tailor changes to fit the organization and helps them continually adapt the organization to changing conditions.

The Demands of Adaptive Change

Mohrman and Cummings developed the self-design strategy in response to a number of demands facing organizations having to adapt to turbulent environments. These demands strongly suggest the need for self-design, in contrast to more traditional approaches to organization change that emphasize ready-made programs and see change as a periodic event. Although organizations prefer the control and certainty inherent in traditional change, the five requirements for adaptive change reviewed below argue against this strategy:

1. Adaptive change generally involves altering most features of the organization and achieving a fit among them and with the firm's strategy. This suggests the need for a systemic change process that accounts for these multiple features and relationships.⁵
2. Adaptive change generally occurs in situations experiencing rapid change and uncertainty. This means that changing is never totally finished, as new structures and processes will continually have to be modified to fit changing conditions. Thus, the change process needs to be dynamic and iterative, with organizations continually changing themselves.⁶
3. Current knowledge about adaptive change provides only general prescriptions for change. Organizations need to learn how to translate that information into specific structures, processes, and behaviors appropriate to their situations. This generally requires considerable on-site innovation and learning as members learn by doing—trying out new structures and behaviors, assessing their effectiveness, and modifying them if necessary. Thus, adaptive change calls for constant organizational learning.⁷
4. Adaptive change invariably affects many organization stakeholders, including owners, managers, employees, and customers. These different stakeholders are likely to have different goals and interests related to the change process. Unless the differences are revealed and reconciled, enthusiastic support for change may be difficult to achieve. Consequently, the change process must attend to the interests of multiple stakeholders.⁸
5. Adaptive change needs to occur at multiple levels of the organization if new strategies are to result in changed behaviors throughout the firm. Top executives must formulate a corporate strategy and clarify a vision of what the organization needs to look like to support it. Middle and lower levels of the organization need to put those broad parameters into operation by creating structures, procedures, and behaviors to implement the strategy.⁹

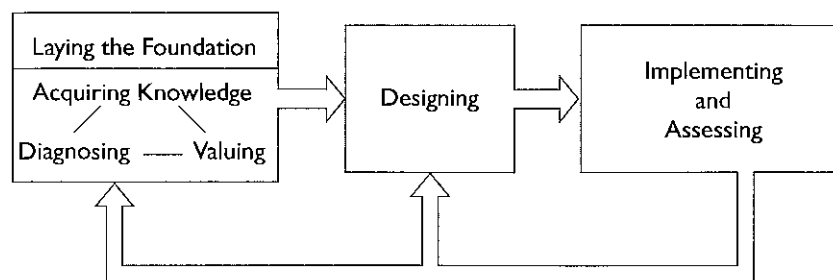
Application Stages

The self-design strategy accounts for these demands of adaptive change. It focuses on all features of the organization (for example, structure, human resources practices, and technology) and designs them to support the business strategy. It is a dynamic and an iterative process aimed at providing organizations with the built-in capacity to change and redesign themselves continually as the circumstances demand. The approach promotes organizational learning among multiple stakeholders at all levels of the firm, providing them with the knowledge and skills needed to transform the organization and continually improve it.

Figure 21.1 outlines the self-design approach. Although the process is described in three stages, in practice the stages merge and interact iteratively over time. Each stage is described below:

[Figure 21.1]

The Self-Design Strategy



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1. **Laying the Foundation.** This initial stage provides organization members with the basic knowledge and information needed to get started with adaptive change. It involves three kinds of activities. The first is acquiring knowledge about how organizations function, about organizing principles for achieving high performance, and about the self-design process. This information is generally gained through reading relevant material, attending in-house workshops, and visiting other organizations that successfully have adapted themselves. This learning typically starts with senior executives or with those managing the change process and cascades to lower organizational levels if a decision is made to proceed with self-design. The second activity in laying the foundation involves valuing—determining the corporate values that will guide the change process. These values represent those performance outcomes and organizational conditions that will be needed to implement the corporate strategy. They are typically written in a values statement that is discussed and negotiated among multiple stakeholders at all levels of the organization. The third activity is diagnosing the current organization to determine what needs to be changed to enact the corporate strategy and values. Organization members generally assess the different features of the organization, including its performance. They look for incongruities between its functioning and its valued performances and conditions. In the case of an entirely new organization, members diagnose constraints and contingencies in the situation that need to be taken into account in designing the organization.
2. **Designing.** In this second stage of self-design, organization designs and innovations are generated to support corporate strategy and values. Only the broad parameters of a new organization are specified; the details are left to be tailored to the levels and groupings within the organization. Referred to as “minimum specification design,” this process recognizes that designs need to be refined and modified as they are implemented throughout the firm.
3. **Implementing and Assessing.** This last stage involves implementing the designed organization changes. It includes an ongoing cycle of action learning: changing structures and behaviors, assessing progress, and making necessary modifications. Information about how well implementation is progressing and how well the new organizational design is working is collected and used to clarify design and implementation issues and to make necessary adjustments. This learning process continues not only during implementation but indefinitely as members periodically assess and improve the design and alter it to fit changing conditions. The feedback

loops shown in Figure 21.1 suggest that the implementing and assessing activities may lead back to affect subsequent activities of designing, diagnosing, valuing, and acquiring knowledge. This iterative sequence of activities provides organizations with the capacity to transform and improve themselves continually.

The self-design strategy is applicable to existing organizations needing to change themselves, as well as to new organizations. It is also applicable to changing the total organization or only some subunits. The way self-design is managed and unfolds can also differ. In some cases, it follows the existing organization structure, starting with the senior executive team and cascading downward across organizational levels. In other cases, the process is managed by special design teams that are sanctioned to set broad parameters for valuing and designing for the rest of the organization. The outputs of these teams are then implemented across departments and work units, with considerable local refinement and modification.

Application 21.1 describes the change process at American Healthways. The application describes how the structural change effort used the self-design approach on an overall basis and as the basis for each of the task forces as well.

LEARNING ORGANIZATIONS

The second continuous change intervention is aimed at helping organizations develop and use knowledge to change and improve themselves constantly. It includes two interrelated change processes: organization learning (OL), which enhances an organization's capability to acquire and develop new knowledge, and knowledge management (KM), which focuses on how that knowledge can be organized and used to improve performance. Both OL and KM are crucial in today's complex, rapidly changing environments. They can be a source of strategic renewal, and they can enable organizations to acquire and apply knowledge more quickly and effectively than competitors, thus establishing a sustained competitive advantage.¹⁰ Moreover, when knowledge is translated into new products and services, it can become a key source of wealth creation for organizations.¹¹ OL and KM are among the most widespread and fastest-growing interventions in OD. They are the focus of an expanding body of research and practice, and have been applied in such diverse firms as McKinsey, J. J. Bean, the Canadian Broadcasting Corporation, Allegheny-Ludlum Steel, Boeing, Microsoft, and the U.S. Army.

Conceptual Framework

Like many new interventions in OD, there is some ambiguity about the concepts underlying OL and KM.¹² Sometimes the terms "organization learning" and "knowledge management" are used interchangeably to apply to the broad set of activities through which organizations learn and organize knowledge; other times, they are used separately to emphasize different aspects of learning and managing knowledge. This confusion derives in part from the different disciplines and applications traditionally associated with OL and KM.¹³

OL interventions emphasize the organizational structures and social processes that enable employees and teams to learn and to share knowledge. They draw heavily on the social sciences for conceptual grounding and on OD interventions, such as team building, structural design, and employee involvement, for practical guidance. In organizations, OL change processes typically are associated with the human resources function and may be assigned to a special leadership role, such as chief learning officer.

KM interventions, on the other hand, focus on the tools and techniques that enable organizations to collect, organize, and translate information into useful knowledge. They are rooted conceptually in the information and computer sciences and, in

Self-Design at American Healthways Corporation

The senior leaders at American Healthways (AHMC) clearly sensed a need to look at the organization's design in the context of the expected rapid growth of its health plan business. AHMC had identified an important and growing niche (proactive disease management) in the growing health care industry. They had crafted an impressive strategy but recognized that the current structure was insufficient to the task.

A university-based OD practitioner initially recommended a task force and a series of workshops to choose an appropriate organization design for the company. The task force and workshop idea was guided by a self-design philosophy. The organization knew its structure was inadequate and that it needed a new way of operating, but it did not have a broad range of skills or experience in operating a large organization. This led the OD practitioner to believe that the self-design model would be the best approach. As the organization considered what structure to implement, it also needed to learn and build the capacity to change itself.

To date, there have been three organization design and development (ODD) task forces, and each one has been guided by the self-design strategy. The first ODD task force was dedicated to laying the foundation; their output was the recommendation to pursue a process-based structure. The second ODD task force was responsible for designing; they were charged with putting "meat on the bones" of the approved structure. The third ODD task force began implementing the new design as well as developing more sophisticated long-term implementation templates.

The first ODD task force's activities were dominated by laying the foundation activities. Members of the task force, representing most of the organization's key functional areas, read extensively on organization design, interviewed other organizations who had adopted different structures, and studied alternative change processes. As a result of the knowledge acquired through this process, the task force became aware that the organization lacked a clear vision and "big hairy audacious goal" (BHAG) that most change management frameworks listed as a key success factor. This

insight led the task force to instigate a vision and strategy effort to clarify the organization's purpose, to forecast revenues, and to understand the organization's strategic intent. Within the context of a clearer strategy, the task force was able to examine the pros and cons of alternative structures and to ground their recommendation in business terms. The first ODD task force also engaged in diagnostic activities. This process allowed the group to better understand the current organization's strengths and weaknesses, to test the initial draft of the BHAG, to alert the organization to the task force's activities, and to ensure that the new organization aligned with the organization's culture. Finally, the task force spent a considerable amount of time discussing and debating the values that would guide the new organization. A culture initiative was proceeding concomitantly with the ODD task force and the outputs of their work were an important input to these discussions.

The first ODD task force used the knowledge and information generated in the laying-the-foundation phase to design three alternative structures that they believed would meet the needs of the future organization. Each of the alternative structures was formalized with high-level charts, pros and cons, and a business case rationale. The group discussed the structures and debated their relative strengths and weaknesses in the context of the diagnostic information, values, and strategy of the organization. The design phase concluded with a recommendation to senior management to adopt the process-based structure. The recommendation of the first ODD task force was debated and approved by members of AMHC's senior management team, several of whom had been on the task force. The senior team recommended that another task force be created to expand on the recommended structure.

The second ODD task force's activities were predominantly focused on the design phase of the self-design strategy. In addition to a few original task force members, the second task force consisted of organization members representing a broader range of functions and levels in the organization. This ensured that knowledge and understanding of the process-based structure generated in the first

task force would be passed along to a larger set of managers in the organization. More importantly, the second task force was expected to model the type of cross-functional team that would be the centerpiece of the new structure. As a result, the laying-the-foundation phase of the second task force included acquiring knowledge about cross-functional and self-managed teams and continuous improvement processes. The rationale for the process-based structure was reviewed and the values guiding the structural choice were discussed by the team. However, the primary work of the second ODD task force was to add detail to each of the core processes, conceptualize and define the corporate office organization, create design principles to aid managers in understanding why functions and processes were assigned in certain ways, create financial statements reflecting expected operating expenses in the new design, and create additional timelines and implementation templates to guide execution of the new structure. The second task force ended with a presentation of roles, reporting relationships, metrics, and control and reward mechanisms to the senior management team.

As the organization debated how to implement the structure, learnings from the first two task forces were applied. That is, both groups had developed important insights about the operation of a process-based organization and recommended that the next group to manage the change process had to be the senior management team itself. As a result, the COO appointed the senior management team to be the third ODD task force. The primary focus of this group would be implementation, the third phase of the self-design strategy. Despite several senior managers' participation on the first two task

forces, the entire senior management team was not intimately familiar with the logic and operation of the process-based organization, nor had this group operated as a cross-functional team. By having the COO's direct reports operate as a cross-functional team, ownership for the new structure would be placed squarely on the shoulders of those who would guide its implementation and an important symbol of the new organization structure would be established. Early in the life of the third task force, and based on its recommendation, the COO and CEO renamed and replaced the old senior management team with the executive leadership group structure that would be responsible for operating the new organization. In addition, several key process owners were named to begin the implementation. The third ODD task force also developed more detailed implementation guidelines, including a variety of measures to monitor the success of the structure's implementation and methods to keep the organization's focus on meeting customer needs during the transition.

The design and implementation of the process-based structure at AMHC has been driven by the philosophy and logic of the self-design strategy. It has produced important insights and changes in the way managers at the organization viewed its strategy, culture, and operations. Most importantly, the process itself has built capacity and knowledge into the system. A variety of managers in different functions and levels of the organization have a deeper understanding of the structure's rationale and important experiences working on cross-functional teams. This knowledge and experience will serve the organization well as it implements the process-based structure.

practice, emphasize electronic forms of knowledge storage and transmission such as intranets, data warehousing, and knowledge repositories. Organizationally, KM applications often are located in the information systems function and may be under the direction of a chief information or technology officer.

There is also confusion about the concept of organization learning itself, about whether it is an individual- or organization-level process. Some researchers and practitioners describe OL as individual learning that occurs within an organization context; thus, it is the aggregate of individual learning processes occurring within an organization.¹⁴ Others characterize it in terms of organization processes and structures; they

emphasize how learning is embedded in routines, policies, and organization cultures.¹⁵ Snyder has proposed an integration of the two perspectives that treats organization learning as a relative concept.¹⁶ Individuals do learn in organizations but that learning may or may not contribute to OL. Learning is organizational to the extent that

- It is done to achieve organization purposes.
- It is shared or distributed among members of the organization.
- Learning outcomes are embedded in the organization's systems, structures, and culture.

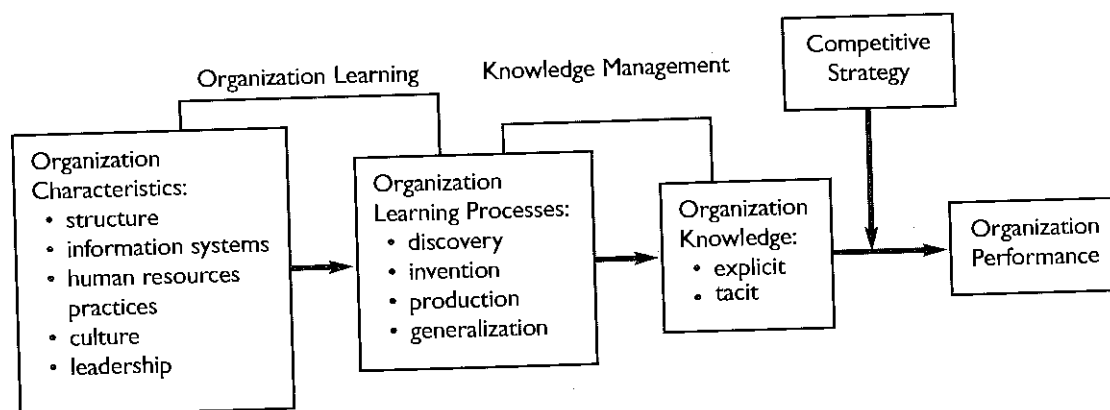
To the extent that these criteria are met, organization learning is distinct from individual learning. Thus, it is possible for individual members to learn while the organization does not. For example, a member may learn to serve the customer better without ever sharing such learning with other members. Conversely, it is possible for the organization to learn without individual members learning. Improvements in equipment design or work procedures, for example, reflect OL, even if these changes are not understood by individual members. Moreover, because OL serves the organization's purposes and is embedded in its structures, it stays with the organization, even if members change.

A key premise underlying much of the literature on OL and KM is that such interventions will lead to higher organization performance. Although their positive linkage to performance is assumed, the mechanisms through which OL and KM translate into performance improvements are rarely identified or explained. Understanding those mechanisms, however, is essential for applying these change processes in organizations.

Based on existing research and practice, Figure 21.2 provides an integrative framework for understanding OL and KM interventions,¹⁷ summarizing the elements of these change processes and showing how they combine to affect organization performance. This framework suggests that specific characteristics, such as structure and human resources systems, influence how well organization learning processes are carried out. These learning processes affect the amount and kind of knowledge that an organization possesses; that knowledge, in turn, directly influences performance outcomes, such as product quality and customer service. As depicted in Figure 21.2, the linkage between organization knowledge and performance depends on the organization's competitive strategy. Organization knowledge will lead to high performance to the extent that it

[Figure 21.2]

How Organization Learning Affects Organization Performance



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is both relevant and applied effectively to the strategy. For example, customer-driven organizations require timely and relevant information about customer needs. Their success relies heavily on members having that knowledge and applying it effectively in their work with customers.

Figure 21.2 also shows how OL and KM are interrelated. OL interventions address how organizations can be designed to promote effective learning processes, and how those learning processes themselves can be improved. KM interventions focus on the outcomes of learning processes, on how strategically relevant knowledge can be effectively organized and used throughout the organization. Each of the key elements of OL and KM—organization characteristics, organization learning processes, and organization knowledge—are described below along with the interventions typically associated with them.

Organization Learning Interventions

As shown in Figure 21.2, there are several organization features that can promote effective learning processes, including structure, information systems, human resources practices, culture, and leadership. Consequently, many of the interventions described in this book can help organizations develop more effective learning capabilities. Human resources management interventions—performance appraisal, reward systems, and career planning and development—can reinforce members' motivation to gain new skills and knowledge. Technostructural interventions, such as process-based and network structures, self-managing work teams, and reengineering, can provide the kinds of lateral linkages and teamwork needed to process, develop, and share diverse information and knowledge. Human process changes, including team building, search conferences, and intergroup relations interventions, can help members develop the kinds of healthy interpersonal relationships that underlie effective OL. Strategic interventions, such as integrated strategic change and alliances, can help organizations gain knowledge about their environments and develop values and norms that promote OL.

Characteristics of a Learning Organization OL practitioners have combined many of these interventions into the design and implementation of what is commonly referred to as the "learning organization." It is an organization "skilled at creating, acquiring, interpreting, transferring, and retaining knowledge, and at purposefully modifying its behavior to reflect new knowledge and insights."¹⁸ Much of the literature on the learning organization is prescriptive and proposes how organizations should be designed and managed to promote effective learning. Although there is relatively little systematic research to support these premises, there is growing consensus among researchers and practitioners about specific organizational features that characterize the learning organization.¹⁹ These qualities are mutually reinforcing and fall into five interrelated categories:

- **Structure**—Organization structures emphasize teamwork, lesser number of layers, strong lateral relations, and networking across organizational boundaries both internal and external to the firm. These features promote information sharing, involvement in decision making, systems thinking, and empowerment.
- **Information systems**—Organization learning involves gathering and processing information, and consequently, the information systems of learning organizations provide an infrastructure for OL. These systems facilitate rapid acquisition, processing, and sharing of rich, complex information and enable people to manage knowledge for competitive advantage.
- **Human resources practices**—Human resources, including appraisal, rewards, and training, are designed to account for long-term performance and knowledge development; they reinforce the acquisition and sharing of new skills and knowledge.

- **Organization culture**—Learning organizations have strong cultures that promote openness, creativity, and experimentation among members. These values and norms provide the underlying social support needed for successful learning. They encourage members to acquire, process, and share information; they nurture innovation and provide the freedom to try new things, to risk failure, and to learn from mistakes.
- **Leadership**—Like most interventions aimed at continuous change, OL and KM depend heavily on effective leadership throughout the organization. The leaders of learning organizations actively model the openness, risk taking, and reflection necessary for learning. They also communicate a compelling vision of the learning organization and provide the empathy, support, and personal advocacy needed to lead others in that direction.

Organization Learning Processes The organization characteristics described above affect how well members carry out organization learning processes. As shown in Figure 21.2, these processes consist of four interrelated activities: discovery, invention, production, and generalization.²⁰ Learning starts with discovery when errors or gaps between desired and actual conditions are detected. For example, sales managers may discover that sales are falling below projected levels and set out to solve the problem. Invention is aimed at devising solutions to close the gap between desired and current conditions; it includes diagnosing the causes of the gap and creating appropriate solutions to reduce it. The sales managers may learn that poor advertising is contributing to the sales problem and may devise a new sales campaign to improve sales. Production processes involve implementing solutions, and generalization includes drawing conclusions about the effects of the solutions and extending that knowledge to other relevant situations. For instance, the new advertising program would be implemented, and if successful, the managers might use variations of it with other product lines. Thus, these four learning processes enable members to generate the knowledge necessary to change and improve the organization.

Organizations can apply the learning processes described above to three types of learning.²¹ First, *single-loop learning* or *adaptive learning* is focused on improving the status quo. This is the most prevalent form of learning in organizations and enables members to reduce errors or gaps between desired and existing conditions. It can produce incremental change in how organizations function. The sales managers described above engaged in single-loop learning when they looked for ways to reduce the difference between current and desired levels of sales.

Second, *double-loop learning* or *generative learning* is aimed at changing the status quo. It operates at a more abstract level than does single-loop learning because members learn how to change the existing assumptions and conditions within which single-loop learning operates. This level of learning can lead to transformational change, where the status quo itself is radically altered. For example, the sales managers may learn that sales projections are based on faulty assumptions and models about future market conditions. This knowledge may result in an entirely new conception of future markets, with corresponding changes in sales projections and product development plans. It may lead the managers to drop some products that had previously appeared promising, develop new ones that were not considered before, and alter advertising and promotional campaigns to fit the new conditions.

The third type of learning is called *deuterolearning*, which involves learning how to learn. Here learning is directed at the learning process itself and seeks to improve how organizations perform single- and double-loop learning. For example, the sales managers might periodically examine how well they perform the processes of discovery, invention, production, and generalization. This could lead to improvements and efficiencies in how learning is conducted throughout the organization.

Practitioners have developed change strategies designed specifically for organization learning processes. Although these interventions are relatively new in OD and do not

follow a common change process, they tend to focus on cognitive aspects of learning and how members can become more effective learners. In describing these change strategies, we draw heavily on the work of Argyris and Schon and of Senge and his colleagues because it is the most developed and articulated work in OL practice.²²

From this perspective, organization learning is not concerned with the organization as a static entity but as an active process of sense making and organizing. Based on the interpretive model of change (Chapter 2), members socially construct the organization as they continually act and interact with each other and learn from those actions how to organize themselves for productive achievement. This active learning process enables members to develop, test, and modify mental models or maps of organizational reality. Called *theories in use*, these cognitive maps inform member behavior and organizing.²³ They guide how members make decisions, perform work, and organize themselves. Unfortunately, members' theories in use can be faulty, resulting in ineffective behaviors and organizing efforts. They can be too narrow and fail to account for important aspects of the environment; they can include erroneous assumptions that lead to unexpected negative consequences. Effective OL can resolve these problems by enabling members to learn from their actions how to detect and correct errors in their mental maps, and thus it can promote more effective organizing efforts.

The predominant mode of learning in most organizations is ineffective, however, and may even intensify errors. Referred to as *Model I learning*, it includes values and norms that emphasize unilateral control of environments and tasks, and protection of oneself and others from information that may be hurtful.²⁴ These norms result in a variety of defensive routines that inhibit learning, such as withholding information and feelings, competition and rivalry, and little public testing of theories in use and the assumptions underlying them. Model I is limited to single-loop learning, where existing theories in use are reinforced.

A more effective approach to learning, called *Model II learning*, is based on values promoting valid information, free and informed choice, internal commitment to the choice, and continuous assessment of its implementation.²⁵ This results in minimal defensiveness, with greater openness to information and feedback, personal mastery and collaboration with others, and public testing of theories in use. Model II applies to double-loop learning, where theories in use are changed, and to deuterolearning, where the learning process itself is examined and improved.

Application Stages OL interventions are aimed at helping organization members learn how to change from Model I to Model II learning. Like all learning, this change strategy includes the learning processes of discovery, invention, production, and generalization. Although the phases are described linearly below, in practice they form a recurrent cycle of overlapping learning activities.

1. **Discover Theories in Use and Their Consequences.** This first step involves uncovering members' mental models or theories in use and the consequences that follow from behaving and organizing according to them. Depending on the size of the client system, this may directly involve all members, such as a senior executive team, or it may include representatives of the system, such as a cross section of members from different levels and areas.

OL practitioners have developed a variety of techniques to help members identify their theories in use. Because these theories generally are taken for granted and rarely examined, members need to generate and analyze data to infer the theories' underlying assumptions. One approach is called *dialogue*, a variant of the human process interventions described in Chapter 12.²⁶ It involves members in genuine exchange about how they currently address problems, make decisions, and interact with each other and relevant others, such as suppliers, customers, and competitors. Participants are encouraged to be open and frank with each other, to

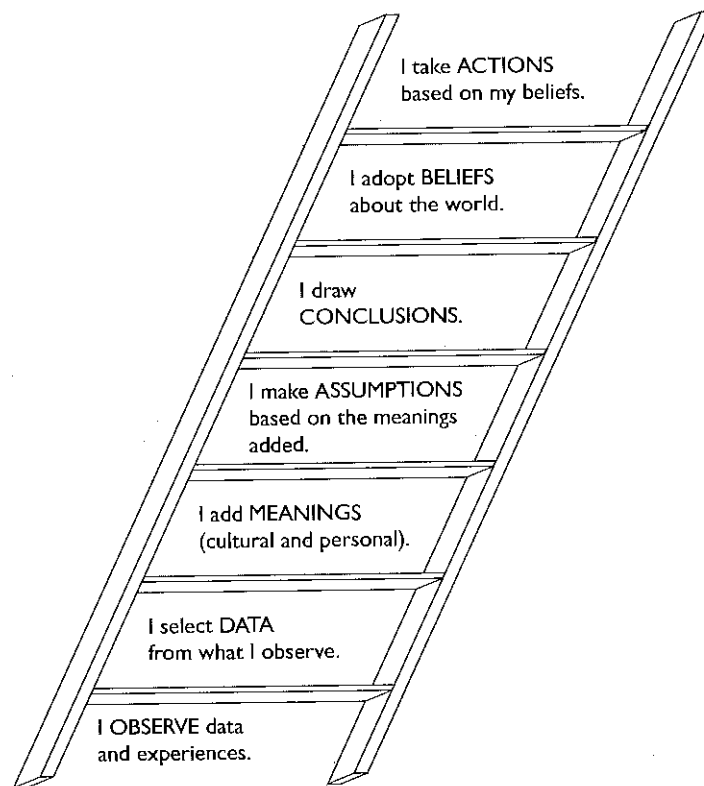
behave as colleagues, and to suspend individual assumptions as much as possible. OL practitioners facilitate dialogue sessions using many of the human process tools described in Chapter 12, such as process consultation and third-party intervention. As a result, group members are encouraged to inquire into their own and others' ways of thinking, to advocate for certain beliefs, and to reflect on the assumptions that lead to those beliefs. Dialogue can result in clearer understanding of existing theories in use and their behavioral consequences and enable members to uncover faulty assumptions that lead to ineffective behaviors and organizing efforts.

A second method of identifying theories in use involves constructing an *action map* of members' theories and their behavioral consequences.²⁷ OL practitioners typically interview members about recurrent problems in the organization, why they are occurring, actions that are taken to resolve them, and outcomes of those behaviors. Based on this information, an action map is constructed showing interrelationships among the values underlying theories in use, the action strategies that follow from them, and the results of those actions. Such information is fed back to members so that they can test the validity of the map, assess the effectiveness of their theories in use, and identify factors that contribute to functional and dysfunctional learning in the organization.

A third technique for identifying theories in use and revealing assumptions is called the *left-hand, right-hand column*.²⁸ It starts with each member selecting a specific example of a situation where he or she was interacting with others in a way that produced ineffective results. The example is described in the form of a script and is written on the right side of a page. For instance, it might include statements such as, "I told Larry that I thought his idea was good." "Joyce said to me that she did not want to take the assignment because her workload was too heavy." On the left-hand side of the page, the member writes what he or she was thinking but not saying at each phase of the exchange. For example, "When I told Larry that I thought his idea was good, what I was really thinking is that I have serious reservations about the idea, but Larry has a fragile ego and would be hurt by negative feedback." "Joyce said she didn't want to take the assignment because her workload is too heavy, but I know it's because she doesn't want to work with Larry." This simple yet powerful exercise reveals hidden assumptions that guide behavior and can make members aware of how erroneous or untested assumptions can undermine work relationships.

A fourth method that helps members identify how mental models are created and perpetuated is called the *ladder of inference*, as shown in Figure 21.3.²⁹ It demonstrates how far removed from concrete experience and selected data are the assumptions and beliefs that guide our behavior. The ladder shows vividly how members' theories in use can be faulty and lead to ineffective actions. People may draw invalid conclusions from limited experience; their cultural and personal biases may distort meaning attributed to selected data. The ladder of inference can help members understand why their theories in use may be invalid and why their behaviors and organizing efforts are ineffective. Members can start with descriptions of actions that are not producing intended results and then back down the ladder to discover the reasons underlying those ineffective behaviors. For example, a service technician might withhold from management valuable yet negative customer feedback about product quality, resulting in eventual loss of business. Backing down the ladder, the technician could discover an untested belief that upper management does not react favorably to negative information and may even "shoot the messenger." This belief may have resulted from assumptions and conclusions that the technician drew from observing periodic layoffs and from hearing widespread rumors that the company is out to get troublemakers and people who speak up too much. The ladder of inference can help members understand the underlying reasons for their behaviors and help them confront the possibility that erroneous assumptions are contributing to ineffective actions.

[Figure 21.3]
The Ladder of Inference



2. ***Invent and Produce More Effective Theories in Use.*** Based on what is discovered in the first phase of this change process, members invent and produce theories in use that lead to more effective actions and that are more closely aligned with Model II learning. This involves double-loop learning as members try to create and enact new theories. In essence, members learn by doing; they learn from their invention and production actions how to invent and produce more effective theories in use. As might be expected, learning how to change theories in use can be extremely difficult. There is a strong tendency for members to revert to habitual behaviors and modes of learning. They may have trouble breaking out of existing mindsets and seeing new realities and possibilities. OL practitioners have developed both behavioral and conceptual interventions to help members overcome these problems.

Behaviorally, practitioners help members apply the values underlying Model II learning—valid information, free choice, and internal commitment—to question their experience of trying to behave more consistently with Model II.³⁰ They encourage members to confront and talk openly about how habitual actions and learning methods prevent them from creating and enacting more effective theories. Once these barriers to change are discussed openly, members typically discover that they are changeable. This shared insight often leads to the invention of more effective theories for behaving, organizing, and learning. Subsequent experimentation with trying to enact those theories in the workplace is likely to produce more effective change because the errors that invariably occur when trying new things now can be discussed and hence corrected.

Conceptually, OL practitioners teach members *systems thinking* to help them invent more effective theories in use.³¹ It provides concepts and tools for detecting subtle but powerful structures that underlie complex situations. Learning to see such structures can help members understand previously unknown forces operating in the organization. This information is essential for developing effective theories for organizing, particularly in today's complex, changing world.

Systems thinking generally requires a radical shift in how members view the world: from seeing parts to seeing wholes; from seeing linear cause-effect chains to seeing interrelationships; from seeing static entities to seeing processes of change. Practitioners have developed a variety of exercises and tools to help members make this conceptual shift. These include systems diagrams for displaying circles of influence among system elements; system archetypes describing recurrent structures that affect organizations; computerized microworlds where new strategies can be tried out under conditions that permit experimentation and learning; and games and experiential exercises demonstrating systems principles.³²

3. **Continuously Monitor and Improve the Learning Process.** This final stage involves deuterolearning—learning how to learn. As described earlier, learning is directed at the learning process itself and at how well Model II learning characteristics are reflected in it. This includes assessing OL strategies and the organizational structures and processes that contribute to them. Members assess periodically how well these elements facilitate single- and double-loop learning. They generalize positive findings to new or changing situations and make appropriate modifications to improve OL. Because these activities reflect the highest and most difficult level of OL, they depend heavily on members' capability to do Model II learning. Members must be willing to question openly their theories in use about OL; they must be willing to test publicly the effectiveness of both their learning strategies and those of the wider organization.

Knowledge Management Interventions

The key outcome of organization learning processes is organization knowledge. It includes what members know about organizational processes, products, customers, and competitive environments. Such knowledge may be explicit and exist in codified forms such as documents, manuals, and databases; or it may be tacit and reside mainly in members' skills, memories, and intuitions.³³ Fueled by innovations in information technology, KM interventions have focused heavily on codifying organization knowledge so it can be readily accessed and applied to organizational tasks. Because tacit knowledge is difficult if not impossible to codify, attention has also been directed at how such knowledge can be shared informally across members and organizational units.

Knowledge and Performance Organization knowledge contributes to organization performance to the extent that it is relevant and applied effectively to the organization's competitive strategy, as shown in Figure 21.2. Moreover, organization knowledge is particularly valuable when it is unique and cannot easily be obtained by competitors.³⁴ Thus, organizations seek to develop or acquire knowledge that distinctly adds value for customers and that can be leveraged across products, functions, business units, or geographical regions. For example, Wal-Mart excels at managing its unique distribution system across a wide variety of regional stores. Honda is particularly successful at leveraging its competence in producing motors across a number of product lines, including automobiles, motorcycles, generators, outboard motors, and lawn mowers.³⁵

Because organization knowledge plays a crucial role in linking organization learning processes to organization performance, increasing attention is being directed at how firms can acquire and use it effectively. Studies have demonstrated how many Japanese companies and such American firms as Hewlett-Packard and Motorola achieve competitive

advantage through building and managing knowledge effectively.³⁶ These knowledge capabilities have been described as "core competencies,"³⁷ "invisible assets,"³⁸ and "intellectual capital,"³⁹ thus suggesting their contribution to organization performance. Mohrman and her colleagues have looked at organizations through a knowledge lens.⁴⁰ They have shown how firms can fine tune their organization designs so that each design element, such as structure, rewards, work design, and managerial processes, contributes to creating and leveraging knowledge for competitive advantage.

There is growing emphasis both in the accounting profession and in many industries on developing measures that capture knowledge capital.⁴¹ For many organizations, the value of intellectual assets far exceeds the value of physical and financial assets; intellectual assets are usually worth three- to four-times tangible book value.⁴² Moreover, the key components of cost in many of today's organizations are research and development, intellectual assets, and services, rather than materials and labor, which are the focus of traditional cost accounting. Dow Chemical, for example, has developed a process for measuring and managing intellectual capital.⁴³ The method first defines the role of knowledge in the firm's business strategy, then assesses current knowledge assets and deficiencies, and finally assembles a knowledge portfolio. This process enables Dow to manage knowledge almost as rigorously as it manages its tangible assets.

Application Stages KM interventions are growing rapidly in OD and include a range of change strategies and methods. Although there is no universal approach to KM, these change processes address the essential steps for generating, organizing, and distributing knowledge within organizations:

1. **Generating Knowledge.** This stage involves identifying the kinds of knowledge that will create the most value for the organization and then creating mechanisms for increasing that stock of knowledge. It starts with examination of the organization's competitive strategy—how it seeks to create customer value to achieve profitable results. Strategy provides the focus for KM; it identifies those areas where knowledge is likely to have the biggest payoff. For example, competitive strategies that emphasize customer service, such as those found at McKinsey and Nordstrom, place a premium on knowledge about customer needs, preferences, and behavior. Strategies favoring product development, like those at Microsoft and Hoffman-LaRoche, benefit from knowledge about technology and research and development. Strategies focusing on operational excellence, such as those at Motorola and Chevron, value knowledge about manufacturing and quality improvement processes.

Once the knowledge required for competitive strategy is identified, organizations need to devise mechanisms for acquiring or creating that knowledge. Externally, organizations can acquire other companies that possess the needed knowledge, or they can rent it from knowledge sources such as consultants and university researchers.⁴⁴ Internally, organizations can facilitate *communities of practice*—informal networks among employees performing similar work to share expertise and solve problems together.⁴⁵ They can also create more formal groups for knowledge generation, such as R&D departments, corporate universities, and centers of excellence. Organizations can bring together people with different skills, ideas, and values to generate new products or services. Called *creative abrasion*, this process breaks traditional frames of thinking by having diverse perspectives rub creatively against each other to develop innovative solutions.⁴⁶

2. **Organizing Knowledge.** This phase includes putting valued knowledge into a form that organizational members can use readily. It may also involve refining knowledge to increase its value to users. KM practitioners have developed tools and methods for organizing knowledge that form two broad strategies: codification and personalization.⁴⁷

Codification approaches rely heavily on information technology. They categorize and store knowledge in databases where it can be accessed and used by appropriate members. This strategy works best for explicit forms of knowledge that can be extracted from people, reports, and other data sources, and then organized into meaningful categories called "knowledge objects" that can be reused for various purposes. The economic rationale underlying this strategy is to invest once in a knowledge asset and then to reuse it many times. Management consulting firms such as McKinsey and Bain extract key knowledge objects from consulting reports, benchmark data, and market segmentation analyses, and then place them in an electronic repository for people to use. This enables them to apply knowledge assets across various projects and clients, thus achieving scale in knowledge reuse to grow their business.

Personalization strategies for organizing knowledge focus on the people who develop knowledge and on how they can share it person-to-person. This approach emphasizes tacit knowledge, which cannot be codified and stored effectively in computerized information systems. Such knowledge is typically accessed through personal conversations, direct contact, and ongoing dialogue with the people who possess it. Thus, KM practitioners have developed a variety of methods for facilitating personal exchanges between those with tacit knowledge and those seeking it. For example, Bain and Company fosters networking among its employees through transferring people across offices, encouraging the prompt return of phone calls from colleagues, brainstorming sessions, and cross-functional project teams. Hughes, Microsoft, and Time-Life have created "knowledge maps" that identify valued competencies, skills, and knowledge and show people where to go and whom to contact to access them.⁴⁸

3. **Distributing Knowledge.** This final stage of KM creates mechanisms for members to gain access to needed knowledge. It overlaps with the previous phase of KM and involves making knowledge easy for people to find and encouraging its use and reuse. KM practitioners have developed a variety of methods for distributing knowledge, generally grouped as three approaches: self-directed distribution, knowledge services and networks, and facilitated transfer.⁴⁹

Self-directed distribution methods rely heavily on member control and initiative for knowledge dissemination. They typically include databases for storing knowledge and locator systems for helping members find what they want. Databases can include diverse information such as articles, analytical reports, customer data, and best practices. Locator systems can range from simple phone directories to elaborate search engines. Self-directed knowledge transfer can involve either "pull" or "push" systems.⁵⁰ The former lets members pull down information they need, when they need it; the latter makes knowledge available to members by sending it out to them. Fluor Corporation, for example, placed job requirements and career ladder information on its intranet and let employees access the information on an "as needed" basis.

Knowledge services and networks promote knowledge transfer by providing specific assistance and organized channels for leveraging knowledge throughout the organization. KM services include a variety of support for knowledge distribution, such as help desks, information systems, and knowledge packages. They may also involve special units and roles that scan the flow of knowledge and organize it into more useful forms, such as "knowledge departments," "knowledge managers," or "knowledge integrators."⁵¹ Knowledge networks create linkages among organizational members for sharing knowledge and learning from one another. These connections can be electronic, such as those occurring in chat rooms, intranets, and discussion databases, or they may be personal, such as those taking place in talk rooms, knowledge fairs, and communities of practice.

Facilitated transfer of organization knowledge involves specific people who assist and encourage knowledge distribution. These people are trained to help members

find and transmit knowledge as well as gain access to databases and other knowledge services. They may also act as change agents helping members implement knowledge to improve organization processes and structures. For example, BP's "Shared Learning Program" includes dedicated practitioners, called "quality/progress professionals," who coach employees in best practices and how to use them.⁵²

Application 21.2 describes how Motorola created a KM system at its manufacturing facility in Penang, Malaysia. It shows how KM evolves in practice and the benefits of integrating it with the organization's culture.⁵³

Outcomes of OL and KM

Given the popularity of OL and KM interventions, research about their effects in organizations is growing. The Society for Organizational Learning (SoL: <http://www.solonline.org>) at MIT is engaged in a variety of research efforts that focus on capacity building, dialogue, and other aspects of OL processes. For example, Volvo and IKEA applied learning processes in their implementation of environmentally sustainable organization designs. Other organizations claim considerable success with the ladder of inference, the left-hand/right-hand column tool, and systems thinking. The Canadian Broadcasting Corporation, for example, used the left-hand/right-hand column to increase collaboration between the English and French radio and TV organizations and to create a new vocabulary for sharing resources. Shani and Docherty reported how OD interventions aimed at designing and implementing organization learning mechanisms contributed to positive performance outcomes in firms in Israel, Sweden, the UK, and the United States.⁵⁴ Studies of transfer of best practices and KM by the American Productivity & Quality Center reveal a number of performance improvements in such companies as Bockman Laboratories, Texas Instruments, CIGNA Property & Casualty, and Chevron.⁵⁵ Among the reported outcomes were increases in new product sales, manufacturing capacity, and corporate profits, as well as reductions in costs, service delivery time, and start-up time for new ventures. A study of 40 firms in Europe, Japan, and the United States found that in contrast to poorer performing companies, higher performing firms were better at creating, distributing, and applying knowledge.⁵⁶ A recent study of KM in 131 Korean companies showed that those that combined strategies for managing both internal-oriented tacit knowledge and external-oriented objective knowledge performed the best.⁵⁷

Despite these success stories, there appears to be considerable room for improving OL interventions. A longitudinal analysis of Royal Dutch Shell described its rise and fall as a "premier learning organization" and questioned whether such a strategy could be institutionalized.⁵⁸ Argyris and Schon state that they are unaware of any organization that has fully implemented a double-loop learning (Model II) system.⁵⁹ Accenture, a pioneer in KM, experienced problems applying a standardized KM system across its global operations primarily because it did not take into account local and regional differences in how knowledge is generated and used.⁶⁰ A comprehensive study of KM in 431 U.S. and European firms also suggests that organizations may have more problems implementing KM practices than is commonly reported in the popular media.⁶¹ Only 46% of the companies reported above-average performance in "generating new knowledge." Ratings were even lower for "embedding knowledge in processes, products, and/or services" (29%) and "transferring existing knowledge into other parts of the organization" (13%). Another study of 31 KM projects across 20 organizations revealed that KM contributed to the fundamental transformation of only three of the firms studied.⁶² Many of the companies, however, reported operational improvements in product development, customer support, software development, patent management, and education and training. Because many of the existing reports of OL and KM outcomes are case studies or anecdotal reports, more systematic research is needed to assess the effects of these popular interventions.

Implementing a Knowledge Management System at Motorola Penang

Launched in 1974, Motorola Penang (MP) has become one of the largest and most respected hi-tech companies in Malaysia. The 3,500-person company produces two-way communication products for public safety and enterprise applications, including Motorola's iDEN and WiMAX chipsets. MP is structured into supply chain and R&D units. Supply chain includes forecasting, purchasing, manufacturing, quality, and logistics functions. MP's factory is highly automated and includes 21 manufacturing lines with more than 12 million units' capacity. It exports more than US\$1 billion worth of products annually.

Since mid-1990s, Malaysia's manufacturing sector faced severe competitive pressures. Globalization, combined with increased raw materials costs, product complexity, and customer expectations, pushed MP to rethink how it did business. At the same time, the firm's strong reputation and manufacturing capability encouraged other Motorola businesses to transfer their products to the Penang facility. As a result, MP became a "condo factory" where multiple product groups from multiple businesses operated on the same production floor. This diversity of products, technologies, and employees combined with the 24x7, three-shift operating system posed challenging problems. As each new product group was added, it tended to work independently and did not communicate with other product groups. Rather than jointly solve common problems, resources were wasted, manpower was poorly utilized, and opportunities for cost and productivity improvement went untapped. Because of MP's increased scale and complexity of operations, knowledge sharing became extremely difficult. Information about online performance, machine maintenance history, and the outcomes of troubleshooting was not captured and leveraged for efficient learning and improvement. On top of all this, MP needed to re-skill existing employees and get new hires up to speed to support the product growth.

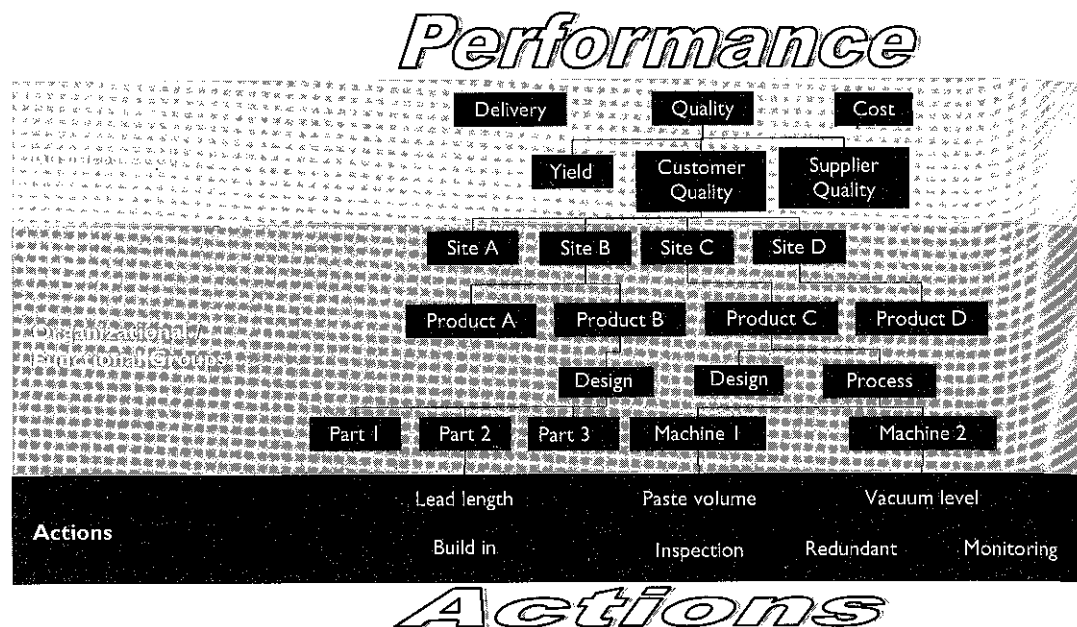
To address these challenges, MP's Engineering Director brought together the different manufacturing leaders to form an "integrated knowledge management system" team. The team's aim was to maximize knowledge sharing at the factory to

make problem solving more proactive, effective, and efficient. An integrated system for data gathering and retrieval was envisioned. It would break down communication barriers, facilitate problem solving and change, and support more "on-demand" training.

The team started by diagnosing MP's existing knowledge-sharing processes. It concluded that the implementation of an integrated KM system needed to account for the organization's culture, especially its behavioral norms and shared language. Specifically, to communicate effectively and efficiently, the new KM system would need to be based on a clear and understandable platform or taxonomy. A good taxonomy would enable users to navigate easily to needed documents and quickly assess their relevance and apply them to specific problems. The KM system would also need to be aligned to corporate goals so people could visualize the "big picture" and see where their contributions applied. Perhaps most important, the new system would need to proactively involve individuals in action planning and learning, thus taking advantage of MP's long tradition of employee participation.

Next, the team designed the new KM system to fit these requirements. It structured the system into three layers (see figure below). Senior executives defined the top layer, which included the overall business goals that drive performance at MP. The middle layer translated those goals downward to the firm's various organizational and functional units having to do with specific products or functions. The bottom and most fundamental layer included the concrete actions needed to drive performance and achieve results. They represented the day-to-day performances of the engineers, technicians, and line operators. The new KM system reflected MP's language and therefore enabled users across the organization to share a common "mind map" for synchronizing their actions toward common goals and performance. Hence, it was given the name "Actions to Performance."

Implementing the Actions to Performance system took almost a decade. The change strategy started small, with only a few groups participating.



For example, MP's engineers used a paper-based "problem-cause-solution" tracking system to record their daily troubleshooting activities on manufacturing operations. This information was compiled and used in daily operations meetings where engineers spoke with coworkers across product lines to identify shared technical problems, to offer solutions, and to create new knowledge that might be used for future problem solving. As the process gained acceptance, additional people and groups got involved. Eventually, the paper-based tracking process migrated into a computerized database system. Leveraging Motorola's intranet system tools, knowledge sharing became more sophisticated and efficient. When information was published electronically, knowledge sharing among engineers could occur without time and space constraints. Knowledge could be searched and retrieved anytime and anywhere.

Next, corporate initiatives were leveraged to create greater awareness and use of the KM system among MP's entire workforce. Company-wide programs, such as Teaming for Excellence and Technical Symposium, directly involved front-line technicians and operators in managing knowledge. Kiosk stations were set up on the production floor

to provide key information on machine performance, quality, and problem-solving histories. The human resources department incorporated KM training into people's development plans, tied KM to larger workforce transformations, and helped nurture a continuous improvement culture.

MP's recent introduction of Digital Six Sigma (DSS) provided another opportunity to integrate the KM system with other organization processes. DSS focused on aligning the organization's business goals to major initiatives to achieve them. As part of this effort, the online KM system evolved into a broader user interface that was Web-based and user friendly. It provided a "digital dashboard" that displayed performance measures continuously. People could log in to this system anytime, anywhere in the world and obtain real-time information. The digital dashboard enabled managers, engineers, and workers to make good decisions and take timely actions. Another KM interface helped people perform specific data analyses to support decisions about machine downtime, maintenance, and quality. Still another user interface facilitated data entry so that users could provide feedback on actions that had been taken. When line operators performed basic troubleshooting tasks on the

machines, for example, that information could be channeled back to the databases for further and wider use.

Motorola Penang has reaped numerous benefits from its integrated KM system. Once line operators mastered the system, they used the information to perform basic machine troubleshooting. In addition, best practices were shared across the organization and people took ownership to improve MP's per-

formance. The KM system provided a common communication platform for workers, staff, and managers. It promoted a culture of continuous improvement and knowledge sharing. The online availability of performance data in real time facilitates MP's move toward a virtual factory. In terms of hard numbers, MP's total quality has improved threefold, and defect levels for all manufacturing lines have been reduced by at least 50%.

BUILT-TO-CHANGE ORGANIZATIONS

One of the newest continuous change interventions involves designing an entire organization for change and not just for normal operations. Based on extensive action research at the University of Southern California's Center for Effective Organizations, Lawler and Worley have developed a built-to-change (B2C) approach to designing organizations.⁶³ It is based on the simple fact that most organizations are designed for stability and dependable operations. Their design elements and managerial practices reinforce predictable behaviors aimed at sustaining a particular competitive advantage. Lawler and Worley argue that many change efforts are unsuccessful, not because of human resistance or lack of visionary leadership, but because organizations are designed to be stable. Such built-in stability can be a recipe for failure in rapidly changing environments. In these situations, the ability to change constantly is the best sustainable source of competitive advantage. The B2C intervention helps organizations design themselves for change.

Design Guidelines

The B2C intervention includes guidelines such as the following for how organization design components can be configured to promote change:

Managing Talent. B2C designs are geared to selecting, developing, and managing the right talent for change. Selection practices seek quick learners who want to take initiative, desire professional growth, and thrive on change. Employment contracts specify clearly that change is to be expected and support for change is a condition of employment and a path to success. Rather than specific job descriptions, members are encouraged to discover what needs to be done by frequent goal-setting reviews where tasks are constantly assessed and revised. Training and development are continuous and aimed at supporting change and gaining value-added skills and knowledge.

Reward System. Rewards play a key role in motivating and reinforcing change in B2C organizations. Individual or team bonuses are tied directly to change goals, learning new things, and performing new tasks well. This establishes a clear line of sight between rewards and change activities. Bonuses can include one-time rewards given at the end of a particular change effort, or rewards targeted to different phases

of the change process. B2C designs also shift the basis of rewards from jobs to people. Members are rewarded for what they can do, not for the particular job they perform. Because jobs and tasks are continually changing, people are motivated to learn new skills and knowledge, thus keeping pace with change and enhancing their long-term value to the organization.

Structure. B2C designs emphasize flat, lean, and flexible organization structures that can be reconfigured quickly when the circumstances demand. These organic designs—process, matrix, and network structures, for example—put decision making into the hands of those closest to the work and the environment. They enable members to process information, share it with relevant others, and make decisions rapidly. Organic designs keep the organization closely connected with the environment, so that it can detect external changes and create innovative responses to them.

Information and Decision Processes. In B2C organizations, information and decision making are moved throughout the organization to wherever they are needed. These performance-based systems ensure that information is transparent and current and that it provides a clear picture of how the organization is performing relative to its competitors. They enable organizations to make timely and relevant decisions to keep pace with changing conditions.

Leadership. B2C designs stress the importance of shared leadership throughout the organization. Rather than having the organization rely on centralized sources of power and control, these designs spread leadership across multiple levels of the organization. This speeds decision making and response rates because those lower in the organization need not have to wait for top-down direction. It provides leadership experience and skills to a broad array of members, thus developing a strong cadre of leadership talent. Shared leadership supports continuous change by spreading change expertise and commitment across the organization. It increases the chances that competent leaders will be there to keep the change process moving forward.

Application Stages

Lawler and Worley stress that not all organizations should be built to change, though most could benefit from applying some B2C principles. This intervention is mainly for organizations having problems adapting to complex and rapidly changing environments. For them, the following five initiatives can help the transition to a B2C organization:

1. **Create a Change-Friendly Identity.** This first stage addresses organization identity—the established set of core values, norms, and beliefs shared by organization members. Similar to organization culture, identity is the most stable part of an organization; it is deep-seated, taken for granted, and guides decisions and behaviors like an invisible hand. Organization identity can promote or hinder the transition to B2C depending on whether it supports change or stability. In many traditionally designed organizations, values and norms reinforce stability and predictability, thus making change difficult. To move toward a change-friendly identity requires surfacing existing values and norms, assessing their relevance to change, and making appropriate adjustments. This typically involves highly interactive sessions where relevant stakeholders openly discuss and debate questions about the organization's identity and how it can be "reframed" to be more change friendly. Attention is directed at creating values and norms that focus behavior on the organization's environment and help members see change as necessary and natural. To enhance member commitment to a new change-friendly identity, these new or reframed values and norms are placed in the context of important external pressures facing the organization and what these mean for its effectiveness. The organization's existing design is also assessed in relation to the new identity, and plans are made for changing specific components using the B2C guidelines outlined above.

2. **Pursue Proximity.** This step helps the organization get closer to current and possible future environments. Starting from the organization's identity, the intervention looks outward to gain a clearer picture of environmental demands and opportunities. Rather than try to predict what's going to happen, attention is directed at developing scenarios of possible and desired future environments. Senior executives commit significant time to thinking about the future and to creating possible paths to future success using various scenario-planning methods. They identify how the organization's core competencies and capabilities can contribute to making desired futures happen. This is then translated into a robust strategy for what needs to be done to move the organization and the competitive environment in the desired directions.
3. **Build an Orchestration Capability.** This stage helps the organization gain the ability to implement the strategy and to execute change effectively. It first specifies the events and decisions necessary to make the strategy happen, including how new competencies will be developed, if necessary. Then, based on the B2C belief that the ability to change is the key to competitive advantage, attention is directed at building this change capability into the organization. This involves three related activities. First, change management skills are developed widely in the organization by hiring people with those skills and by training existing managers and employees to acquire those skills. Second, an organization effectiveness function is created with competencies in strategic planning, organization design, and change management. This center of excellence is usually staffed by professionals from the strategic planning and human resources functions; they provide advice and facilitation for planning and executing change in the organization. Third, organization members learn how to apply their change capability by engaging in organizational changes and reflecting on that experience. This so-called "learning by doing" is essential for building an orchestration capability. It provides members with the hands-on experience and reflective learning necessary to hone their change skills in action.
4. **Establish Strategic Adjustment as a Normal Condition.** This step involves creating dynamic alignment in implementing strategy, developing new capabilities, and fitting organization design elements to emerging environmental demands. In fast-paced environments, the organization must continually make strategic adjustments as part of normal operations. It must constantly work at changing and coordinating all of the organization design elements so that they promote new strategies and capabilities and respond to shifting environmental demands and opportunities. Keys to making strategic adjustment a standard practice include pushing decision making downward in the organization, sharing relevant information widely, giving members the relevant skills and knowledge, and measuring and rewarding the right things. These "employee empowerment" practices (described in Chapter 15) reinforce the enormous value placed on human resources in B2C organizations; they also provide the structures, talent, and systems to support continual change and adjustment.
5. **Seek Virtuous Spirals.** This last stage involves bringing all of the prior processes together to pursue a series of temporary competitive advantages. This so-called "hit and run" approach rests on the logic that in turbulent environments, success results from identifying future opportunities, organizing to take advantage of them, and then moving on to the next opportunity when things change. Because specific sources of competitive advantage do not last long, B2C organizations continually modify their capabilities and designs to take advantage of emerging prospects. They constantly work to balance the short and long runs, to keep close to an unfolding environment, to sustain dynamic alignment among their design elements and capabilities. When they do this for long periods of time, a virtuous spiral results. The organization's design and capabilities support a successful strategy.

which in turn provides the rewards and motivation to create even better designs and capabilities for newer strategies, and so on. In rapidly changing environments, B2C organizations are more capable of seeking and creating virtuous spirals than traditional organizations.

Application 21.3 describes how Capital One Financial created a built-to-change organization. It shows how change capability is built into the firm's strategy, design features, and culture.

SUMMARY

In this chapter, we presented interventions for helping organizations change themselves continually. These change processes are particularly applicable for organizations facing turbulent environments where traditional sources of competitive advantage erode quickly. Building change capabilities directly into the organization is essential to constantly renew forms of competitive advantage to keep pace with a rapidly shifting environment.

A self-design change strategy helps a firm gain the capacity to design and implement its own continuous change. Self-design involves multiple levels of the firm and multiple stakeholders and includes an iterative series of activities: acquiring knowledge, valuing, diagnosing, designing, implementing, and assessing.

Organization learning and knowledge management interventions help organizations develop and use knowledge to change and improve themselves continually. Organization learning interventions address how organizations can be designed to promote effective learning processes and how those learning processes themselves can be improved. An organization designed to promote learning can create a continuous stream of valuable knowledge. Knowledge management focuses on how that knowledge can be organized and used to improve organization performance.

Built-to-change organizations are designed for change, not stability. They are based on design guidelines that promote change capability in the firm's talent management, reward systems, structure, information and decision processes, and leadership. In a rapidly changing environment, this change capability can be a source of sustained competitive advantage.

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53. This application was developed by Ms. Ong Swee Hoon, Dr. Teoh Ping Chow, and Mr. Lim Ka Tick. The authors gratefully acknowledge their contribution and the permission of Motorola to describe its KM system. MOTOROLA and the stylized M Logo are registered in the U.S. Patent & Trademark Office. All other product or service names are the property of their respective owners. © Motorola, Inc. 2007.
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Creating a Built-to-Change Organization at Capital One Financial

application 21.3

Capital One, a leading financial services firm and a top issuer of credit cards in the United States, has built an organization that does not view change as an unwanted intruder or as an afterthought to get resistors to buy into a new initiative. Rather, change capability is integrated into every aspect of Capital One's strategy, structure, and culture. This enables the firm to execute change routinely.

Capital One treats strategic planning as a continuous process of exploring alternative futures and gaining momentary advantages in a fast-paced competitive environment. According to Mike McDermott, former Director of Organization Effectiveness, "Strategic thinking goes pretty deep on two levels. On one level, the strategic planning department runs a variety of scenarios that look several years out." As described by CEO and Founder Rich Fairbank, "Eighty percent of strategy is figuring out where the world is going, and twenty percent is figuring out what you are going to do in response. If you can figure out where the world is going, what you need to do usually becomes obvious." For example, Capital One might explore the broader forces affecting interest rates or the impact of changes in China's monetary policy. Each business line, in turn, would consider how these future trends might affect its particular business. "On another level," notes McDermott, "the executive committee meets regularly to discuss and debate a set of annual 'imperatives' or bold challenges. The imperatives are just that ... they are things that *must* be done if we are to achieve our long-term vision." They are intended to provide Capital One with a series of temporary competitive advantages.

This robust strategizing enables Capital One to "test and learn" how best to compete in a constantly changing environment. It combines educated guesses about how the environment is changing with rigorous analysis of consumer behaviors to produce testable propositions about what credit services to offer specific consumer groups. When a consumer group and its associated service reach a certain threshold of business, a potential competitive advantage exists. The service then is broadened to a larger customer base. Because consumer profiles, competitor behaviors, and other market

forces are constantly changing, however, any current advantage is fleeting and new ones must be identified to grow revenues. Moreover, to monetize a competitive advantage even in the short run, Capital One must often modify its human capital, resources, systems, and structures. Thus, it constantly renews itself as it moves from one competitive advantage to the next.

To adapt quickly to gain new competitive advantages, Capital One has developed a highly agile organization design. It begins with hiring people who have a passion for excellence, collaborate well with others, and thrive in a changing environment. Once hired, associates are given challenging work assignments and opportunities to develop new skills as business needs change. Complimenting the selection process is a decentralized and fluid organization structure, with few layers of management and decision making pushed downward in the organization. Associates are allowed to take on a variety of tasks without having to worry about job descriptions and pay grades. An adaptable performance management system completes Capital One's flexible design. It focuses on both performance and development. Rewards are tied directly to current results as well as to developing competencies the organization believes are important for its future.

The final feature of Capital One's built-to-change organization involves change capability. In the past, the firm's aggressive growth often left associates feeling overwhelmed by the rapidly changing product/service offerings. Adding to the stress were frequent updates in associates' knowledge base, reorganizations that tested their ability to remain flexible and to take on new assignments, and modifications in work processes and methods to maintain customer satisfaction. To make change manageable and even routine, Capital One charged McDermott with developing the firm's change capability. With the help of a design team composed of HR generalists and line managers, he created a unique approach to change management.

Most organizations develop change capability by deploying HR generalists to facilitate change in business units or by creating a center of excellence

in change management staffed mainly by OD professionals. Capital One created a more embedded strategy. It rooted change skills and responsibilities directly into the roles of line managers. This promised to radically shorten the cycle time of change because managers would have the expertise needed to carry out most changes on their own. But tasking managers with change management responsibilities raised important questions about Capital One's commitment to change capability as a source of competitive advantage. Critics argued, "Shouldn't the focus of line managers be on getting business results?" The design team answered affirmatively, of course, but then added that in fast changing environments, this was not enough to succeed. Managers needed to be able to combine their business expertise with knowledge about change so that strategies to acquire new competitive advantages could be implemented faster and their benefits gained sooner.

Capital One's embedded approach was based on a standardized change methodology that everyone shared and learned. Called ADKAR, it proposed that successful change followed a process of (1) creating *awareness* of the need for change, (2) having the *desire* to change, (3) possessing the *knowledge* to change, (4) having the *ability* to change, and (5) being *reinforced* for change. The change model included a common language and mindset for thinking and communicating about organizational change; it afforded Capital One a highly efficient approach to change management. For example, service changes often required cooperation among the credit card business, IT services, and the regulatory compliance and HR departments. Because all parties were familiar and comfortable with the same change model, coordination costs and change cycle times were significantly reduced. This contrasted to earlier times when Capital One employed over 17 different change models and more than 160 different change tools throughout the firm.

To implement the new change method, McDermott's team applied three action levers: knowledge/skill acquisition, visible demonstrations, and alignment

with performance management. First, Capital One's corporate university offered two courses to build people's change knowledge and skill. One course, attended by both managers and staff, went deep into the change methodology and provided the opportunity to apply it to existing change projects. This helped participants learn by doing, while driving change in the organization. The second course was a one-day program designed for line managers. It provided an overview of the methodology and linked it to the organization's values and leadership competencies. This helped managers see the connection between change capability and performance management.

Second, McDermott's team targeted several large-scale change projects as visible demonstrations of the change model. This created an internal "buzz" for the methodology and encouraged people to learn how to apply it. For example, McDermott's team highlighted change initiatives coming out of a strategic imperative called ACE (Achieving Corporate Excellence): a large-scale systems conversion project, an HR reengineering effort, and a workplace redesign process called the Future of Work.

Third, McDermott's team worked closely with a group revising Capital One's performance management system to ensure that it measured and rewarded change management competencies. Together, the two groups increased the number of change-related behaviors that were rated, assessed, and rewarded. This sent a clear message about the importance of these behaviors for the future.

Capital One's built-to-change organization is widely accepted and firmly entrenched in the firm's culture. Change capability is treated like a muscle that gets better with exercise. Not surprisingly, Capital One engages in lots of change and is getting better and better at it. Its change capability is a key source of sustained competitive advantage. As one executive put it, "We can take on more change because with this new muscle, it doesn't seem like we are changing all that much. It feels like we are changing less because we are capable of handling more change than our competitors."