CHAPTER 1

Building the Collaborative Organization

THERE ARE NEW AND INCREASING DEMANDS on today's organizations. Connectivity, uncertainty, and speed combine to make work environments more complex and more demanding. Connectivity or "the death of distance" (Cairncross, 1997) means that organizations (and all of their current and potential competitors) has instant access to customers, to colleagues, and to highly sophisticated information about their performance. Uncertainty means that organizations are required to create increasingly sophisticated products, delivered to increasingly demanding customers, across continually re-forming boundaries. In addition, managers must stay alert for the technological changes that will make products obsolete, services substandard, or prices noncompetitive. Everyone now faces a speed requirement created by a dizzying rate of unpredictable, discontinuous change.

More is known about an organization's customers, employees, and competitors than ever before. Tools exist that do much of the routine, back-breaking, mind-numbing work required in the past. Highly sophisticated knowledge of what costs what, what makes money, and exactly where the best sources of profits

lie drives focused decisions. On the other hand, global competition, fueled by disparate labor costs, creates intense and escalating competitive pressure on many organizations.

The accelerating rate of change for products and the increasing variety of products offered result in complex and changing requirements both for people and for systems. In addition, customers, suppliers, and technological innovations change at breathtaking speeds and require quick responses in order to protect relationships or competitive positions. Clearly, organizational life today is unpredictable and likely to become more so.

All of this puts new pressure on employees and on traditional ways of managing them. Organizations expect employees to have the skill, confidence, and commitment to use the plethora of tools and information available and to advocate for change when necessary. Structures are required that can deploy workers to meet shifting demands and priorities without the upset and delays historically associated with change. Managers expect workers to work together, often with changing collections of colleagues, to accomplish complex, demanding work. They expect their members to accomplish tasks that require a sophisticated understanding of the tradeoff decisions inherent in their businesses, tasks that require almost constant learning of new skills, and work that requires the trust, respect, and commonality of purpose necessary for cooperative effort. In short, the structure and people who make up today's organizations must be able to join together to accomplish complex, demanding work. New ways of thinking about how to structure and manage the people and the components of today's organization are required.

The designs used for organizations in the past cannot be used given the demands on today's, much less tomorrow's, organizations. A number of innovative designs have emerged in recent years to address these new demands, including: flexible organization; high performance work organization; new design plants, self-managing organization; virtual organization; reengineered corporation; and ambidextrous organization. John Child and Rita Gunther McGrath (2001) identified four common characteristics across these types of organizations: interdependence, disembodiment, velocity, and power. The new forms have been designed to overcome the formality and rigidity of hierarchical, bureaucratic organizational structures and to enable more creative, emergent, and spontaneous responses to problems and opportunities. Cross-functional integration, flattened hierarchy, and empowerment are essential. Such design changes increase the adaptability of the organization, but only when accom-

panied by management changes, including a shift in perspective about front-line workers and the ways they can add value.

Collaborative Work Systems as a Solution

Consciously designed and nurtured collaborative work systems (CWS) provide a key foundation for achieving competitive advantage. Organizations that actively leverage the talent of their people through knowledge sharing, mutual support, and co-creation outperform organizations that depend on talent alone.

Collaboration means working together. Effective collaborative means working together efficiently and effectively. This is not a new requirement for business success, but it has become a critical success factor that applies to all the relationships that create a business, including those with customers, business allies, suppliers, divisions, departments, functions, projects, specialties, vertical levels, and employees.

Many experiments have been tried to solve the problem of organizing work in ways that are good for the business; some of those experiments have included ways to make the workplace a better fit for human beings. A win/win solution where the company and its members benefit from the way work gets done has the best chance of enduring in changing times. (At least a win/not lose must replace the old version of win/use.)

A traditional, bureaucratic organization based on command-and-control hierarchy is designed with firm horizontal and vertical boundaries and the dominant practice of "repeat" rather than "create." As a result, the design is often too rigid, too simplistic, and too impoverished to adapt to a more complex world. The old organizational structure is too rigid to adapt quickly to changing environmental conditions; it is too simplistic to match the complexity of the environment; it is too impoverished through suppression of human talent and collaborative synergies to create a rich variety of responses to the challenges of the 21st Century environment. Although pure bureaucracies are now less common, the assumptions that underlie them continue to have strong influence on managers.

Why do we expect the collaborative organization to outperform a traditional bureaucracy? Because the collaborative organization capitalizes on the abilities of the members of the organization more effectively and leverages the synergies that occur in networks of people. Collaborative organizations are characterized by intentional efforts to create structures, cultures, forums, and practices that reinforce collaboration. Designing the strategies, structures, processes, and

culture enables improved flow of information and other resources across boundaries.

One such example of a collaborative organization is a team-based organization (TBO), where a team of interdependent contributors is the basic unit of work and a series of hierarchical teams reaccomplishes the lateral coordination necessary to integrate the work of their teams and the rest of the organization acts as support. Within a TBO, many forms of teams are utilized, temporary and permanent, functional and cross-functional, local and distributed. This wide array of team forms shows that collaborative work is being organized in creative ways to fit the situation. Leaders and change leaders in collaborative organizations are continually seeking ways to make their organizations more effective, adaptive, and relevant.

Work is becoming more complex, so individuals and isolated groups are not as effective as teams, who have the synergy essential to achieving performance goals. Employee learning and growth, sharing of information, responsibility, partnering, commitment, and so forth are promoted by the collaborative organization environment. Traditional organizations tend to keep decision making, information, rewards, and power at the top. As a result, the minds and hearts of the lower level employees are seldom engaged. Katz and Kahn (1978) referred to this as "partial inclusion"; others simply say, "Check your brain at the door," meaning "We only want that part of you that can do the simple and repetitive job we have designed." In a rapidly changing, fiercely competitive, global business environment, limited use and development of employees results in a "dumbing down" of the organization and competitive advantage is lost. The CWS environment requires significant changes, but the result is a workforce that thinks and cares—leading to a culture of commitment.

Collaborative Competencies

Organizations can be partitioned several ways—horizontal and vertical linkage, inside and outside the organization, within and across disciplines, and between people. The goal of the collaborative organization is to remove inappropriate barriers among these groups and individuals and to create opportunities to work seamlessly. Unfortunately, it seems that barrier building is more common and more natural than productive collaborative exchanges. An assessment of most people and most organizations would provide a low score on collaborative abilities. Creating the knowledge, skills, attitudes, culture, and

support systems necessary to create the collaborative organization produces impressive results, including:

- People collaborate more seamlessly, that is, fewer hiccups occur;

- People adapt more quickly to changes in products and services, changes in customer requirements, changes in work processes, and changes in the competitive environment;

- Nonproductive competition between people and systems drops off and is replaced by a preference for cooperation;

- The team becomes the more common unit of responsibility;

- Ideas and information are not dropped into the chasms between silos; and

- The organization functions as a more intelligent system because information and knowledge are shared more quickly and completely.

Collaborative Capacity

Effective collaboration in work situations represents a way of achieving competitive advantage in the marketplace. Effective collaboration represents a key facet of organizing. It contributes to customer satisfaction in myriad ways, including responsiveness to customer needs, quality of products and services, cost management, innovation, and speed. The collaborative processes in a highly collaborative organization consist of dynamic, interwoven, and disciplined exchanges of knowledge and information, participative decision making, and co-created solutions to emerging problems. Companies like Hewlett-Packard and Intel have created some of the infrastructure that enables effective collaboration across boundaries. Pioneering companies, such as W.L. Gore & Associates, Inc., provide examples of fully implemented collaborative designs. The two questions here are

1. What creates the foundation for achieving effective collaboration in all parts of the organization?

2. What additional practices could companies like HP and Intel design that would take them to the next level of collaborative capacity?

Collaborative practices apply to multiple levels of the organization: vision or mission level, business level, organizational level, interrelationships between level in the organizational chart, and so forth. Collaborative capability is built

at each of these levels. In addition, there are breakdowns that can occur in terms of who one collaborates with, both laterally and vertically.

Knowing, learning, creating, and relating are the most important processes in the organization. They make intelligent and inventive decision making and effective follow-up possible. Every organization has facets that promote or inhibit these processes. For example, in an organization with a strictly enforced chain of command, relating is often legislated in ways that prevent important information from reaching high-level decision makers. Both formal design features and informal cultural influences impact the ability to use the collaborative potential of the organization. Other constraints, such as limited time, information, tools, experience, and so on also have an impact. The ideal CWS would be based on values, structures, and practices that make effective collaboration possible on every appropriate occasion. Many organizations are taking steps to move in this direction. However, most conceptualize the goal in limited ways.

The most common structural change to improve effective use of collaboration is the introduction of work teams. Typically, based on analysis that identifies interdependent processes, a boundary is defined around a group of workers and changes in responsibility, identity, and training are imposed. The team designation creates a pocket of collaborative practice that focuses team member effort and attention and supports collaborative relationships and processes. Well-designed and supported teams provide:

- A useful mix of expertise,
- An opportunity to increase commitment through involving employees in decision making,
- Leveraging of resources through identification of interdependencies,
- Pooled energy through commitment to the team or common purpose, and
- Possible synergies in decision making.

Work teams represent a leap forward in collaborative potential for many organizations. The problem is that most teams fail primarily because they exist in what can be termed a hostile environment—an environment that neither demands nor sanctions collaboration.

The team-based organization (TBO) has emerged as a solution by providing an environment within which a variety of teams can flourish. The TBO is characterized by:

- Teams as the basic unit of work and accountability,
- Teams leading teams,
- A variety of team types (temporary versus permanent, production versus research, and so forth),
- Alignment of support systems with team needs, and
- A culture promoting collaboration and accountability.

A culture that promotes collaboration includes adequate attention to the informal aspects of collaboration. The transformation from a traditional organizational structure is slow and challenging. Everything must change. For example, the selection system must identify people with a tolerance for change and ambiguity, a preference for teaming, and an ability to learn. As the transformation progresses, however, collaborative capacity is built.

Every organization depends on collaboration. By definition, people organize in order to accomplish tasks that cannot be accomplished as isolated individuals. The collaborative organization does not *require* formal teams or a TBO, but collaborative potential is often enhanced by the use of those structural devices. Teamwork is possible without work teams. Southwest Airlines, Johnsonville Sausage, Semco of Brazil, Asea Brown Boveri, and the W.L. Gore Company are examples of this. High levels of collaboration are possible because of the sense of community, enjoyment at work, continuous learning, and the creation of a sense of meaning on a daily basis (Kets De Vries & Balazs, 1999).

As collaborative capacity increases, its value as a source of competitive advantage increases. Competitive advantage lies in the facets of an organization that are not easily replicated. A new computer system only provides advantage until competitors buy and install one. The talent of a single individual can be hired away. But the collaborative network of relationships within an organization or across its boundaries with customers, suppliers, and partners cannot be bought, copied, or stolen; it must be created from scratch in competing organizations. Hence, collaborative capability remains a key source of competitive advantage.

The Collaborative Organization

Thousands of researchers and millions of business people have been inventing new and better ways to organize work for many years. Over that period an advanced social technology of work design has emerged. An accumulation of

lessons learned from research and practice has informed more effective prac-
tice. New forms of organizing have been invented and tested, and the process
continues.

The collaborative organization is designed for effective coordination, shared
decision making, and decision implementation. The emphasis is on a collabora-
tive approach, because that provides an opportunity to utilize multiple perspec-
tives and generate synergies and commitment. The collaboration occurs across
both vertical and horizontal boundaries, so flow of information, people, coordi-
nation, and materials escape the constraints of silos. The collaboration rests on a
culture of shared responsibility, authority, and accountability for results.

Table 1.1 illustrates three levels of collaborative work systems: work teams,
team-based organizations, and the collaborative organization. Each level aims
at increasing the organization's capacity to serve its customers, employees, and
owners with an increase in investment and results moving from left to right.
Each design advocates changes intended in order to

1. Increase employee ownership of, and involvement in, the organization
    and the accomplishment of its goals;

2. Make decision-making processes more public and more disciplined;

3. Decrease the influence of position power and increase the influence of
    expertise in decision making;

4. Increase the organization's capacity to identify and respond to relevant
    changes in its environment;

5. Promote learning and the sharing of learning across the organization; and

6. Increase both the ability and propensity of members to collaborate within
    and across levels of the organization.

There are, however, significant differences in the ways that traditional teams,
team-based organizations, and collaborative organizations approach similar
goals. Much of this difference in approach is driven by the kind of work for
which the models were derived. Traditional teams were created and initially
implemented in manufacturing settings. The model created teams that were
relatively stable, intact, and composed of members with similar status and
expertise. Team-based organizations were designed primarily for organizations
responsible for abstract and highly interdependent work, usually in the devel-
opment arena. Members in these organizations were often on multiple teams,

and coordination was critical. The concept of collaborative organizations represents an attempt to create a context and culture that embodies the values and behaviors common to the other two, but that recognizes the dynamic nature of today's environment and the need for collaboration in multiple arenas.

Table 1.1. Comparison of Three Levels of Collaborative Work Systems

	Traditional Teams	Team-Based Organizations	Collaborative Organizations
Characteristics of the Work	Concrete interdependencies that can be broken down into smaller (team size) units	Abstract work that requires significant levels of planning and decision making; significant interdependencies across teams and at business unit levels	Fluid set of interdependencies that may exist inside and outside the organization; moving target; varying levels of complexity
Primary Focus of Collaboration	Team	Project	Varies
Organizational Type	Traditional	Matrix	Varies
Purpose of Redesign	Cohesion, commitment, better use of expertise at all levels of the organization	Coordination, resource management, responsiveness, better use of expertise	Responsiveness, coordination, entrepreneurship
Primary Intervention Point	Relationship	System	Culture/Context
Framework for Decision Making	Consensus within self-managing teams; star model; teams and managers negotiate over goals, schedules, and so on	Consensus and voting within teams; hierarchical and lateral set of governing and coordinating systems; teams managing teams; expertise/ accountability primary source of influence	Varies; decisions made at all levels of the organization; clear and communicated set of priorities and tradeoff criteria; highly disciplined decision making; expertise, accountability, and relationship sources of influence
Collaborative Units	Co-located, management created, intact teams	Manager-created project teams; problem-solving teams; coordination teams and management teams; management-appointed team leaders	Individual, team, and organization units of accountability; multiple sets of temporary and semi-permanent teams and organizations; manager-created and spontaneously created teams and partnerships

Collaborative Culture

The term that summarizes all of the informal aspects of the organization is *culture.* In recent years, researchers have identified several levels of culture within the organization. *Nested* cultures are subcultures within a larger cultural system, such as teams where members have agreed to do things in a ways that are not in alignment with the organizational patterns around them. *Cross* cultures are those that link people across boundaries, such as the loyalty engineers and other professionals feel for their profession and the bonds it creates within and outside the organization. With so many subcultures influencing behavior in the organization, members experience conflict, and misalignment is common.

Culture may range from the type where the assumptions, beliefs, and values of the members support authoritarian and submissive behaviors across all levels of the organization to one where there is mutual trust and respect and a strong sense of equality. The latter characterizes the collaborative work system. A collaborative culture includes:

- Trust and respect in everyday interactions;
- Egalitarian attitudes among members at all ranks;
- Power based on expertise and accountability;
- Shared leadership where all members take initiative;
- Valuing of diverse perspectives;
- Commitment to the success of other members, rather than just one's own;
- Valuing of truth and truth telling;
- Commitment to continuous improvement of the whole organization;
- Active learning; and
- Personal responsibility.

The impact of these cultural facets depends on a strong and consistent consensus about the values and on their practice by leaders. Delpizzo (1999) calls it the "organizational software" required for enterprise success. The facets of culture determine both the nature and the style of the organizational routines that drive the effectiveness of communication, cooperation, and collaboration within an organization.

Most organizations demonstrate some of the above cultural facets, although they may occur in pockets rather than across the board. Work teams may represent such pockets embedded in traditional environments. As such, they are at risk; the dominant culture is likely to act like a corporate immune system, applying pressure for them to re-conform (Pinchot, 1985). A well-developed team-based organization is likely to have most of these facets in place, with the proviso that continuous development is underway, but a collaborative organization depends on these facets. One of the best examples of such a design is the W.L. Gore company, described below.

W.L. GORE, INC.: A COLLABORATIVE ORGANIZATION

A world-class collaborative organization is a rare thing. Most organizations are somewhere on a continuum from command-and-control to a highly developed collaborative organization. W.L. Gore anchors the right end of that continuum as an outstanding example of a fully developed collaborative organization. The company operates in a way intended to enable the full potential of each member.

At W.L. Gore, practices are based on commitment, empowerment, and innovation. Culture is based on risk taking, personal responsibility, trust, and collaboration. There are no formal teams, but teaming occurs as appropriate. For example, core groups ranging from three to eighteen members work across the boundaries of disciplines, plants, and countries (Pacanowsky, 1995).

Other examples of businesses that have many similar characteristics to a collaborative organization include Lockheed Martin's Government Electronic Systems, Syncrude Canada's Mine Mobile Maintenance Division, and Sequa Chemicals (Purser & Cabana, 1998), and Oticon in Denmark (LaBarre, 1996). Each of these organizations has relied on collaborative work systems to achieve business results.

Collaborative Capital

We are introducing the new term of *collaborative capital* (CC) as a process and relationship system representing a key asset of the organization. Collaborative capital resembles the established term "intellectual capital" (IC). Intellectual

capital captures the idea that intelligence/knowledge have an implicitly rec-
ognized value for an organization. The products and services that the intellec-
tual capital produces have explicitly recognized value. Intellectual capital
represents one key capability of the organization—the ability to produce, cap-
ture, and synthesize information into knowledge that *can be used* to produce
some product or service. Sometimes that service may simply be the sharing of
information or knowledge, as in consultation.

Simply put, IC represents what we know and how well we use it; CC rep-
resents who we know and how well we work together; and financial capital
represents the current score in the marketplace of how well we meet our cus-
tomers' and stakeholders' needs. (The terms "social capital" and "relationship
capital" represent the social network part of collaborative capital and not the
disciplined processes of effective collaboration.)

The foundation level of collaborative capital consists of the ability to col-
laborate at the lowest level of peers within the organization and simultaneously
have that group collaborate with the highest level members. The highest level
of collaborative capital is generated by a corporation with the ability to collab-
orate effectively (fast, good decisions that also build long-term relationships)
at all levels and with current and potential customers around the world. This
process completes a key communication and feedback loop with significant
ramifications for the way a business operates.

Collaborative capital includes both the process of collaboration and the rela-
tionships to make that collaboration work. It represents an interweaving of the
social network, work processes, and organizational structure, which include
the formal and the informal communication in the organization. Collaborative
capital rests on a foundation of competencies, structures, and culture that
enables collaborative practices. The external relationship part of the organiza-
tion is already considered an asset, priced into the sale of all businesses. For
example, the customer base of a company is a significant asset based on estab-
lished relationships. Researchers are working on ways to capture the internal
facets of collaborative capital; examples include Kennedy's index (2001) for
team return on investment.

Some measures of collaborative capital can be formalized, just as some col-
laborative practices can be formalized. However, an intuitive assessment for the
effectiveness of the organization's collaborative work systems can be picked
up by walking around, looking, and listening, that is, managing by eavesdrop-
ping. The approach represents a holistic assessment based on tacit knowledge

acquired from years of learning from experience. It should not be discounted but rather used as a way to validate the quantitative assessment of performance.

The beginning point is recognizing that collaborative practice and process builds a new asset for the organization: collaborative capital. At one site where required overtime led to the operators working from 7 a.m. to 10 p.m. for three weeks before having a day off, the operations manager said, "It was the resilience created by the teaming initiative that got us through this tough time." Measurement of CC remains challenging in such situations, but its value is increasingly recognized.

Collaboration and Teams

Teams are perhaps the most studied, if not the most prevalent, form of business collaboration and much of what is discussed in this book relates to the design, management, and work processes of successful teams. It is important to remember that teams are simply the forum for the collaborative processes, and not the process itself. Teams can be effective or ineffective at collaboration, both within the team and between the team and other individuals and teams inside and outside of the organization.

If teams represent the most recognized form of collaboration, team-based organizations (TBOs) represent one of the most advanced current forms of a Collaborative Work Systems (CWS). A TBO capitalizes on the competitive advantage of collaboration that grew out of socio-technical systems work, where the need to jointly optimize the social and technical facets of the organization was recognized as the key to performance (Beyerlein, 2000). The building block of the TBO is the team: teams are the unit of accountability and teams lead teams. This is a radical shift away from the individual focus of most organizations. It provides the opportunity to create synergies within work groups and across boundaries and so to leverage human resources.

Today teams are central for businesses to accomplish their work goals and manage the complexity of their work. Since there are many misunderstandings about teams, the following definition will be used in this book:

> "Teams are defined as a group of individuals who work together to produce products or deliver services for which they are held mutually accountable" (Mohrman, Cohen, & Mohrman, 1995, p. 2).

Mohrman, Cohen, and Mohrman distinguish teams from a team-based organization. They say that team-based organizations are "Organizations in

which teams are the core performing units" (p. 6). Many of the early examples of teams in organizations described the installation of teams in pockets of the organization, instead of redesigning the work and the systems to support teams as the foundation for accomplishing the work. Team-based organizations may also have multiple types of teams, and the teams may be an alternative to the multiple layers of organizational structure. However, team-based organizations usually develop after years of successful implementation of teams.

Throughout the 1970s and 1980s, more businesses experimented with teams, many with amazing success, including manufacturing sites such as Corning Glass and Saturn and service companies such as Aid Association for Lutherans and Shenandoah Insurance. In the 1990s, businesses moved beyond experimenting with teams to implementing them on a large scale to achieve their strategic goals. While many organizations struggled with their performances some American businesses realized that their members were not being used as effectively as they could be. These organizations were team-based, since they used teams to complete their core business (Mohrman, Cohen, & Mohrman, 1995).

These team-based organizations flattened their structures and redistributed decision-making responsibility to better align with the expertise and perspective of their members. Organizations that utilized teams well had impressive results, according to Fisher (1999):

- The TRW Company, Canada LTD, in Tillsonburg, Ontario, a plant that manufactures automotive steering components, increased total sales per employee by 179 percent in five years;

- The Borg-Warner Automotive plant in Frankfort, IL, which makes automatic transmission bands, reduced its work in progress by 73 percent in five years;

- The Baxter HealthCare Corporation in Mountain Home, AR, which makes disposable medical products, improved their first-pass yield 71 percent over five years to 99.4 percent;

- The Dana Corporation in Hopkinsville, KY, reduced their order-to-shipment lead time by 67 percent in five years;

- The Quaker Oats Company in Danville, IL, had production employees who reduced the plant's product-development cycle time by 75 percent in five years; and

- The Halliburton Energy Services Duncan Plant, which produces equipment for the oil industry, reduced their manufacturing cycle times from 103.7 days to 28.5 days and improved their on-time delivery rate from 64 percent to 94 percent in five years.

As organizations published their success stories, others moved to copy the practices and planned to implement teams, among other strategies. One study (Tudor & Trumble, 1996) reported that one in five companies planned to implement teams in the near future as part of their strategy to meet the new expectations in the marketplace. Another survey reported that the number of project teams had exceeded the number of production teams.

Teams changed the standard by which work was being completed across the United States. However, in the late 1990s a shift occurred from the use of formal teams toward more temporary and project-based forms of collaboration (Lawler, Mohrman, & Benson, 2001). Now collaborative organizations are beginning to raise that standard. They represent an intentional and disciplined utilization of the synergies of working effectively together in many ways under many circumstances.

The Payoff from the Collaborative Organization

Collaborative work has been around since the beginning of civilization. The leveraging of individual resources provides a synergy that exceeds individual effort. Recently, managers have rediscovered the benefits of effective collaboration. We will describe three types of benefits, illustrating the "business case" for collaboration. These types of benefits include: general qualitative benefits, benefits reported by specific work sites, and broader benefits to the overall corporate "bottom line." As researchers and practitioners over the last twenty years, we have identified a number of benefits that managers of high-performing CWS report themselves. These are summarized below.

Qualitative Benefits

One of the greatest benefits of the collaborative organization is the generation of greater commitment among members. Members take greater personal ownership for their work. They require less direct supervision. They self-initiate to solve problems, improve processes, and work with customers to ensure that their needs are met.

Collaborative organizations tend to be more flexible and better able to adapt to changing business conditions. One of the key features of the collaborative organization is that members develop a greater set of skills and competencies. They are able to better cover for absences, training, vacations, and business trips of other members. Similarly, members can be shifted around as demands change. If business conditions change, a different balance of skills and abilities may be required. With more multi-skilling, the collaborative organization can easily adjust to the changing requirements.

Collaborative organizations develop the skills of employees better. They focus on helping people develop those skills they are interested in and those that will benefit the organization. Often people are used in more strategic ways. When managers are freed up from the day-to-day supervision of people, their roles are redefined in many more value-adding ways. Some examples include: exploring new technologies or processes; working more closely with customers to ensure their needs are met; and problem solving on complex, recalcitrant issues.

And last, the collaborative organization creates flatter, more flexible organizations. Levels of management are stripped out. With fewer layers, communication with the top levels improves. It is easier for the leaders of the collaborative organization to communicate problems they are facing and to ask for resources needed to resolve these problems. Members of the collaborative organization have better access to senior leaders, who can provide them more immediate, accurate, and unfiltered information about the business environment and related business strategies. Alignment improves the thinking of senior leaders and front-line operators. Everyone is pulling in the same direction and understands what is going on. Staffing costs are also reduced.

Benefits Reported by Collaborative Organizations

A number of company sites report dramatic improvements as a result of implementing collaboration. For example, Monsanto introduced formalized collaboration into their Greenwood, SC, nylon fibers plant using self-directed work teams. The role of the traditional supervisor was redefined into that of team leader, providing greater autonomy to teams. Monsanto reported a 50 percent productivity increase over a five-year period (*Chemical Processing*, 1990).

Shenandoah Life Insurance redesigned their back office processing area. They broke down traditional functional work areas and replaced them with

multifunctional work cells. They were able to process 50 percent more applications with 10 percent fewer people (Hoerr, Polluck, & Whitestone, 1986).

Celestica, a $3 billion chip manufacturer, completed a comprehensive redesign into a CWS at their Toronto facility. They created a customer-focused CWS comprised of customer accounts manager; manufacturing, process, and quality process engineering; and supply chain to address needs of individual customers. This resulted in a 100 percent productivity increase, thereby leading to an increase in manufacturing capacity without additional labor or equipment. The manufacturing cycle time was reduced eight-fold, and quality (defects/unit) improved by a factor of two (Dyck & Halpern, 1999).

Pratt and Whitney instituted a team-based lean manufacturing system and pay-for-skill/gain-sharing plan at a seventeen-year-old aircraft engine components manufacturing plant in Maine. They broadened job descriptions so that inspectors did repair as well as inspection. The gain-sharing plan generated a first-year payout of $1,633 per employee. Overall operating costs fell 20 percent. Defect rates dropped 30 percent. A three-tier pay-for-skills system enabled the CWS to be automatic, conscious, and creative (*Wall Street Journal*, 1996).

Broader Benefits to the Overall Corporate "Bottom Line"

Other organizations report even more dramatic financial results, resulting in dramatic improvements to overall business metrics. Kravetz (1988) conducted a study looking at the differences in financial performance of companies with traditional management practices versus "progressive" management practices. Progressive management practices included collaboration-based organization structures, team-based reward systems, and extensive training. When tracking the financial results of Fortune 500 companies over a five-year period, he found:

	Progressive	Traditional
Profit growth	10.8%	2.6%
Sales growth	17.5%	10.7%
Earnings growth	6.2%	-3.9%
Dividend growth	13.4%	9.2%

Lawler and his colleagues completed a series of surveys measuring the financial impact of team-related practices (Lawler, Mohrman, & Benson, 2001).

In their most recent survey of a broad range of Fortune 1000 companies, they found that team-related practices were associated with the following:

- 66 percent higher return on sales,
- 20 percent higher return on assets,
- 20 percent higher return on investments,
- 14 percent higher return on equity,
- 1,700 percent higher return to investors, and
- 257 percent higher market-to-book ratio.

Barry Macy has spent over ten years studying the leverage that arises from change efforts in industry. In a study of more than two hundred companies examining sixty major change initiatives and calculating the behavioral and financial outcomes for each, Macy concluded that collaborative-based organizing comes out on top (Macy & Izumi, 1993) and that collaboration in various forms has more positive impact than any other approach to reorganization.

Other researchers and practitioners have found similar results. The body of evidence is now clear. Collaborative-based organizations significantly improve overall business performance by any number of measures used.

Leveraging the Most out of the Collaborative Organization

Leverage means multiplying effort. Archimedes said about 2,500 years ago: "Give me a place to stand and I can move the earth." He meant that he needed a platform from which he could apply a lever that could move anything. The inertia in organizations resisting change may seem to have a mass the same as the earth's. But finding platforms to work from that enable change under such conditions is a treasure hunt worth the investment of time and money. Collaborative-based organizing stands out as one of the few proven platforms.

A lot of organizational processes are essential to growth and stability in volatile markets. The processes include: learning, inventing, redesigning, communicating, leveraging, organizing, motivating, locating, linking, serving, leading, training, conversing, debating, assessing, and adapting. Organizational strategy, structure, policy, and practice are designed with the goal of making those processes work effectively and in concert. The continued existence of the organization depends on it. In spite of the impression given by Wall Street, organizing for sustainability is a marathon, not a sprint, in most ways.

The processes are executed by people. Some have been automated, but the outputs from those subsystems are handled by people. The decisions to use those automated systems are made by people, and the systems are overseen by people. People do the learning, the deciding, and the relating. Even in the case of a highly automated plant, people engineered the site, managed the site, and created the markets for the site's outputs. When the business world was simpler (pre-1973), it was possible to do a lot of that work as an individual. Since then, it has increasingly required collaboration with team members who have diverse backgrounds.

Organization—Learning Dialogue, Knowledge Sharing

Intelligence comes into play when appropriate information from the environment is utilized in making decisions about what actions to execute. Business intelligence is a people process. Individuals from the executive suite to the shop floor can demonstrate it and sometimes do so in impressive ways, from the executive suite to the shop floor. Using collaboration leverages the intelligence of individuals. This is most evident in creative problem solving, where complexity and uncertainty reign. That territory used to belong to executives, scientists, and engineers, but now it belongs to everyone associated with an organization. Routine used to be the dominant organizer, but changing environments require frequent nonroutine responses, which means that intelligence is a key to organizational sustainability. In other words, collaboration between people, and especially across organizational boundaries, makes the organization smarter.

Collaboration and Community

An atmosphere that encourages and enables collaboration begins to look a lot like a community. Ogdin (www.it-consultancy.com/extern/sws/community.html) differentiates community from other kinds of organization with the following characteristics of success:

- *Boundary and Exclusivity:* some definition of who is a member and who is not;

- *Purpose:* some reason for the community to exist beyond just "having community":

- *Rules:* some limits on community member behavior, with a threat of ejection for misbehavior;

- *Commitment to Others' Welfare:* some essential caring by each member for others in the same community, or at least some responsibility of individual members toward the community; and

- *Self-Determination:* the freedom to decide for oneself how to operate and whom to admit to team membership.

Community represents the informal part of the organization. Collaboration occurs in both formal and informal processes and environments. The leveraging of collaboration is optimized when the processes cross boundaries: formal and informal, project to project, level to level, company to customer, company to supplier. A network of collaborative processes across all of these kinds of boundaries produces excellence.

Conclusion

Disciplined practice of key principles builds core competencies that, in turn, create capital in various forms that can be transformed into each other. Ask yourself three questions:

1. What are the assets that add value to the organization and create competitive advantage? Your answer may look like this:

   - Finance (cash, property, investments, etc.)
   - Leadership
   - Market share
   - Customer relationship
   - Intellectual (knowledge/learning/intelligence)
   - Organizing (for example, flat, fast, flexible)
   - Time (a key resource)
   - Relationship (for example, social network)
   - Technology

   Intelligent use of these assets is a key to achieving market share.

2. What are the core competencies that are robust (they contribute to development of all of the types of capital)? Your answer may look like this:

   - Collaborating
   - Executing well

- Changing
- Creating/innovating
- Learning
- Relating (based on emerging definition of customer service)
- Organizing
- Assessing
- Scanning
- Communicating
- Adapting
- Preserving (what do we keep stable?)

These are all written as gerunds to indicate that they are processes that form the skeleton of a dynamic system. These processes can be executed well or poorly. Collaborative approaches grease the wheels of the execution to move toward world-class levels of performance.

3. What are the principles and disciplined practices that build the core competencies? (This is the topic of the next chapter, where the ten key principles for creating collaborative excellence are described in detail. Disciplined practice is considered prerequisite for capitalizing on these.)

The problems managers face range from: (1) *simple, linear* situations, where problem definition is easy (tame problems) and an algorithm can be plugged in to determine a solution, to (2) *ill-defined* situations, where the problem is not clear from the beginning so it is not clear what the solution should be, to (3) *wicked* problems, where stating the problem *is* the problem. Wicked problems are complex with interdependent facets (Pacanowsky, 1995).

With "wicked" problems, when a solution is applied to one facet, other parts of the problem change. The most salient facets receive the most attention, but a new facet revolves into awareness after a partial solution impacts the whole. To make matters worse, the context of the problem requires that the solution be context-specific. The solution must be invented over time. Organizational transformation for solving the problems of competition and of collaboration are wicked problems. Multiple perspectives must be integrated in a dance of change as incremental and revolutionary changes are introduced into the situation.

There is a tendency in organizations to ignore wicked problems, which cause cognitive strain, and to take a purely incremental approach to the facet

of the day, hoping for the best. In wresting with wicked problems, heuristic guidelines replace algorithms, continuous creation replaces simple reinvention, collaborative thinking replaces unilateral decision making, and a framework of principles and values replaces a menu of standard responses. New solutions are created jointly over time within the framework.

To compete in the business environment of the 21st Century, organizations must be designed to engage the minds and hearts of their members and create effective relationships across all boundaries. The hardware and software technologies have been tried often in the past twenty years, but they have often failed to create more effective organizations. The development of collaborative work systems has been emerging as an essential piece of the puzzle. As the competitive landscape shifts, those who are quickest to adopt the advanced social technology of collaborative design are likely to be the winners. The collaborative organization enables the optimal development of the intellectual and social capital that increases the financial capital for an organization.

The next chapter presents ten principles that represent the foundation for effective collaborative processes and the generation of collaborative capital. An organization creates its collaborative advantage by operationalizing those principles through disciplined processes and consistent practices.