

Introduction: The Dawning of a New Era: Internet, Knowledge and Collaboration

Rationale

"Collaborate or die—the writing is on the wall. Collaboration is the key to profitability in the New Economy." (J.D. Edwards)

"Organizations or individuals must be competitive to collaborate and at the same time they must **collaborate to compete!**" (Logan & Stokes)

With the unprecedented growth of the Internet as the medium of communication, knowledge has become the new source of wealth and the co-creation and sharing of knowledge through collaboration, the key to the success of today's organization. Unfortunately, the mindset of most business people is not one of cooperation, but of competition. This all-too-pervasive attitude is the major barrier to conducting business effectively in a networked world and, in particular, to the successful implementation of knowledge management (KM) systems. In this book, we address the critical question of how to create a collaborative organization and foster a spirit of cooperation among co-workers, suppliers and customers. We believe that since the Internet has served as a natural environment for collaboration without any management input or central controlling agency that there are lessons to be learned from the use of this medium. We therefore use the Internet as a model or metaphor for collaboration and examine how this technology can be used to promote collaboration. Our focus throughout this study, however, will be on the human-human interaction and not the technology.

The first quote above, found on the Web site of the software vendor J.D. Edwards, is more than just an advertising slogan. It reveals a fundamental truth about today's Internet-configured economy, one that can no longer be ignored. *Collaborate to Compete: Driving Profitability in the Knowledge Economy* is informed by this truth: The ideas expressed in our book are, we believe, a major step forward in establishing collaboration as the new business paradigm. In addition, we believe that we have developed a strategy for the most effective application of Internet technology to business and to the role it can play in the development and the implementation of an organization's collaboration strategy.

Our approach to developing an understanding of collaboration and the role it plays in the knowledge economy is to focus on the way in which personnel work with each other within the context of a networked world, and hence our concern with emotional intelligence and how it relates to the use of knowledge networks. In addition to our focus on the human issues of knowledge sharing and collaboration, we also take into account the technical issues as embodied in the use of information technology (IT), knowledge management (KM) techniques and human resource (HR) issues such as organizational development, training and education.

Other books on the topic of collaboration seem to focus on either the technical issues Skyrme (2001) or the human resource issues (Straus, 2002; Beyerlein et al., 2003). We

believe our book is unique in that we treat all aspects of collaboration and bridge the gap between HR on the one hand and IT and KM on the other hand. As a result this book will be of interest to IT personnel who want to build information systems that foster collaboration, as well as human resource personnel who want to use IT that will promote collaboration. In addition, it will be of interest to those charged with developing the KM strategy for their organization and want to make it work, realizing that collaboration is the missing link between IT and KM. The main purpose of the book is not to focus on the problems of any particular sector of the organization such as IT or HR, but rather it is intended for all members of the organization concerned with the success of their organization. Collaboration is not the concern of any one department or some specialized working group; rather it is the concern of every member of the organization from the CEO and CFO to the salesforce, to the marketing team, to the R&D group, to the shipping department. Collaboration is everyone's business and every business's concern.

Our book, co-authored by an academic and a business consultant/organizational psychologist, is in a certain way a response to the challenge posed by Bertels and Savage (1998) who called for KM research in a number of diverse areas: "We need an approach where academia and business work closely in what might be called an 'action research learning and implementation' approach." We have chosen to explore the role of collaboration in KM and to develop what we call a collaborative knowledge management approach.

The Transformation of Commerce by Information Technology

Computers and other forms of information technology have transformed the nature of manufacturing and commerce. The Industrial Era has given way to the Information Age in a transition that began about 50 years ago with the introduction of the mainframe computer into the world of business. The Information Age really took off, however, with the widespread use of microcomputers about 20 years ago, especially when they became networked to the mainframes. Although we now find computers are indispensable for our work, one of the ironies of their widespread use is the productivity paradox. The essence of the paradox is that the long-awaited increase in productivity that computers promised to deliver has never really materialized. Instead of a reduction in the number of hours worked per week there has been an actual increase in the number of working hours since the introduction of personal computers.

At first it was thought that this was because computers were merely automating out-of-date business processes left over from the Industrial Era. Hammer and Champy (1993) suggested that by reengineering these business process and restructuring organizations, primarily by downsizing, that computing's promised increase in productivity would be realized. After almost 10 years of restructuring and reengineering it is clear that the resolution of the productivity paradox will not be achieved by improving strategies of information or work flow or by developing more effective forms of information technology alone.

This realization led us to the formulation of what we call the technology paradox, which states: **The more complex and sophisticated the technology, the more important are the human behavioral issues of attitude, cooperation and motivation, as well as the training, education and learning of all members of the organization.** The lack of better results from improved IT and the implementation of business process reengineering or KM initiatives is because issues concerning the personnel and their attitudes have not been properly addressed. **The soft issues are the hard problems.** Even in an area of KM as mundane as data warehousing, Michael Kull of the firm Running Light reported, "In the course of delivering data warehousing services to clients...most of the challenges were about process, people and change management issues."

If there is not a spirit of trust, sharing and collaboration, no amount of IT, business process reengineering (BPR) or KM techniques will create an organization that can tap fully into its own knowledge. We must remember that an organization's knowledge is not owned by any particular person or small group of people, but is distributed throughout the organization and requires the cooperation and collaboration of all to be accessed and utilized. One of the themes of our study is that the Internet and in particular the World Wide Web bring a human dimension to IT which facilitates collaboration. This is no accident that, as according to the words of one of its developers, Tim Berners-Lee (1999, p. 123), it was designed precisely to do this job: "The Web is more a social creation than a technical one. I designed it for a social effect—to help people to work together—and not as a technical toy."

With the collapse of the dot.com bubble there came some well-deserved skepticism as far as the use of the Internet goes. We want to make it perfectly clear to our readers that we are not Internet "evangelists" who believe that the Internet is the solution to every business problem that arises or that the Internet is a panacea that will so revolutionize commerce that all of the traditional ways of doing things will become obsolete. Not at all! We believe that the basics of commerce will remain much the same but, at the same time, that the strategic use of the Internet will be absolutely key if a company wants to be competitive in today's networked economy. The Internet has become a basic business tool just like the telephone or the computer. Any firm that ignores this technology does so at its own peril.

It is only through collaboration, through knowledge sharing and knowledge co-creation that an organization can tap into all of its knowledge held collectively by all its members, its customers, its suppliers and its business partners. It is only through collaboration that the executives, the managers and the staff of an organization can tap into each other's knowledge and the knowledge of their counterparts in customer and supplier organizations. In order for these things to happen there are two conditions to be met.

One is technical and fairly straightforward to achieve. It involves creating an Internet- or browser-based environment, which is linked to the organization's email system, groupware applications, document management system, data warehouse and any other applications being used. It also involves structuring the network so that it operates as a knowledge network, in which information

and knowledge can be communicated, shared, stored, organized and created. This is the work of an IT department, where the emphasis is usually on the day-to-day operations of the organization and on information rather than knowledge.

The second condition is the creation of an environment of trust, teamwork and collaboration and the promotion of emotional intelligence. Trust is something that is built slowly but can be destroyed very quickly, either by deception intended or not, or even by carelessness. Trust entails developing a new style of learning—one suited for collaboration and not just individual achievement. This is the work and responsibility of every manager and every employee in the organization, for there is no technical solution for developing trust and teaming. It is the role and responsibility of the human resource department to provide the corporate enterprise-wide support necessary for creating an environment conducive to collaboration. Learning styles cannot be imposed from a central agency but rather must emerge from the experience of each member of the organization.

As a result of the failure of BPR it has become clear that knowledge, not information, and people, not technology, are the keys to increased productivity and the creation of wealth. And by knowledge we do not mean a stock of information but rather the ability to use information to achieve one's business objectives. The challenge is then seen to be how to take advantage of IT so that people can create, share and utilize knowledge more easily, especially those technologies that promote interconnectivity as represented by the Internet and the World Wide Web, as well as intranets, groupware, local area networks, wide area networks, video conferencing and even the telephone. In particular the Internet is creating a communications revolution on the same scale as the one created by the printing press. The Internet in general has done for computing what Gutenberg did for writing.

When we refer to the Internet as in the above statements or in other remarks we make about this revolutionary technology we are including the World Wide Web, email, intranets and all of the forms of IT that support interconnectivity and facilitates the exchange of both information and knowledge. The Internet, as we will shortly document, has had a major impact on the way business is conducted. In addition, it has become the ideal medium for the implementation of KM. "Information is a relatively small component of the Web experience. A much more important component is and will be collaboration: people working together toward some goal" (Weinberger, 1999a). KM represents a major improvement over BPR in that it is based on the notion that knowledge has overtaken information as the principal source of wealth.

In fact, one can say that the Information Age, after a very short reign, is over and has been replaced by the Knowledge Era, in which the focus has shifted from data processing and management information systems (MIS) to KM systems. Although many people are now beginning to adopt the term, "the Knowledge Era", we believe that "the Collaboration Era" is an equally apt term or even the Collaborative Knowledge Era. We will stick to common usage, however, and refer to the newly emerging era as the Knowledge Era as most other authors do. When we use the term "Knowledge Era"

though, the term "knowledge" refers to the collaborative process by which knowledge is shared and co-created, because knowledge is a process and not an object or a stock. And when we speak of "knowledge management" we are speaking of collaborative knowledge management but we will not always insert the adjective "collaborative" before knowledge management. But if one considers collaboration as the essential element for successful KM we can avoid the unnecessary debate about whether or not knowledge can be managed. Collaboration, as we will see, in the next sections, has the missing element or link that has prevented KM from being more successful.

The Internet and Knowledge Management: Collaboration is the Missing Link

The Internet and knowledge management function as catalysts or stimuli for each other. The Internet provides a physical medium for the organization's sharing and co-creation of knowledge. As we will show later it also acts as a catalyst for the cultural shift in attitudes, which encourages cooperation and collaboration among all of the players in the activities of an organization including co-workers (by co-workers we mean all the members of the organization regardless of their status), suppliers, customers, business partners and in some cases even among competing firms. Knowledge management, on the other hand, requires a medium like the Internet for the distribution, facilitation and promotion of knowledge transactions. The Internet is reshaping collaboration and therefore one of the goals of this book is to understand how this is taking place and how we can take advantage of it.

Not only has the Internet functioned as an excellent medium for the practice of KM by speeding up the pace of innovation and the tempo at which commerce is conducted, but it has also been a driving force for bringing knowledge to the fore as today's principal source of wealth. In the age before computing and the Internet, when change was not so rapid as it is today, all players had more or less the same opportunity to acquire the knowledge to conduct business. In today's rapidly changing environment the ability to access and create knowledge is absolutely essential to success and, hence, the emergence of KM. When KM first appeared some 10 years ago it was skeptically regarded by many as just another management fad like BPR and total quality management (TQM). Even today there are still some holdouts, but it is safe to say that KM has altered the mainstream of business practice and is regarded by many if not most organizations as an essential part of their organization and operation.

The practice of KM has certainly led to many improvements in the way organizations share their information and knowledge, but if the truth be said, KM has not quite lived up to all the expectations that its promoters and practitioners led us to initially believe were possible. It is the thesis of our study that the reason for this failure of KM to deliver on its early promise is the lack of a desire by co-workers to share their knowledge, and for those with a desire a lack of the skills required to collaborate. We believe that collaboration is the missing link, which explains why KM has not enjoyed more success to date. The purpose of this book is to focus on this missing link by identifying how emotional intelligence, value sharing, trust, community, as well as the hard skills associated with KM can create an environment conducive to collaboration and hence the

whole KM program of knowledge sharing and co-creation. We believe that the development and successful implementation of an effective collaboration strategy would lead to robust knowledge co-creation and the better management of an organization's intangible knowledge assets, namely its intellectual or knowledge capital and, hence, a final resolution of the productivity paradox. In other words, an effective collaboration strategy would allow an organization to access the potential of each and every individual's knowledge and experience to create new knowledge.

We believe that to develop a collaboration strategy to facilitate the goals of KM, it is necessary to understand the way in which the Internet has changed business. We also need to understand the dynamics of the Internet, collaboration and KM. It is obvious to any observer of today's business environment that the Internet has radically changed the practice of commerce and will continue to do so for the immediate future. Perhaps less obvious is the fact that the Internet has been the most successful medium for collaboration in the history of the human race with the possible exception of writing itself, which is subsumed by the Net. One of the theses of this study is that if we are able to understand how organizations can develop collaboration strategies, we must understand what underlies the success of the Internet as a collaborative medium, a success, by the way, that was not managed, but rather developed spontaneously.

There are the people who have figured out that the company intranet is actually a pretty great way to ignore the organizational hierarchy, cut through the red tape and join with other motivated people to get some real work done....Project teams form consisting of people who have found one another, not people invited because someone higher up has to be made to feel useful or loved....The Web itself is the largest, most successful unmanaged collaborative project since the species voted to walk upright. (Weinberger, 1999a)

As a consequence we regard the Internet as both a medium for and a model of collaboration. And it is with that in mind that we have crafted our study to describe the nature of a collaborative organization and, more importantly, how to build one.

What Is a Collaborative Organization?

A collaborative organization is one that has the following characteristics:

1. The values and objectives of employees and management are aligned,
2. A climate of mutual trust and respect exists,
3. The knowledge of all the staff, customers and suppliers is shared and pooled to optimize
the organization's operations and opportunities,
4. Decision making is more decentralized than it is in most current organizations and more
stakeholders in the organization play a role in defining the direction in which the organization moves, and

5. Hierarchical structures are kept to a minimum. The company is managed democratically

by consensus rather than by command and control. (By consensus we do not mean that every member of the organization was in agreement with every decision, but it does mean that all members of the community were heard and their views were taken into account by those responsible in the organization for making decisions.)

Collaboration has far-reaching implications for the enterprise-wide culture of an organization. Collaboration, as contrasted to the more circumscribed concept of teamwork, cuts across organizations, divisions, departments and working groups. It also involves more than just cooperation; it requires the ability and willingness to creatively share ideas and knowledge and to create new knowledge with others. And this is the crux of the problem, because it is hard for individuals to do this when they still believe that "knowledge is power" and they hoard their knowledge.

The Challenge of Collaboration

In the collaborative organization, the workplace is a community where people trust each other, share similar values and respect each other. Given the realities of today's corporate environment, our definition of collaboration creates a major organizational challenge. But we are confident that by embracing the paradigm of collaboration companies will experience improved efficiencies and greater profitability. Here's one example of how: "The Documentum content management system is making it easier for DuPont engineers, designers, contractors and others, both inside and outside the enterprise, to perform their jobs effectively and to collaborate efficiently with one another. The end result is faster time to completion for new plants and other projects, which contributes to competitive market advantage and significantly increased cost savings for the company's bottom line" (www.documentum.com, 2003).

We predict that companies that do not become more collaborative with their managers, employees, customers, suppliers and alliance partners will not survive in the Internet era. We realize that the sophisticated reader has already heard something like this before, when similar claims were made for TQM, BPR and other formulae that turned out to be just another fad. So why do we think this is different? The answer is that the essence of a company is collaboration, as opposed to individuals working on their own. It is interesting that it is only within the past few years that people have begun to recognize the importance of collaboration and how it incorporates the whole spirit of commerce or doing things together.

Why the Internet Creates a Natural Environment for Collaboration

The Internet affects business today in every sector in ways that are only beginning to be understood. The foundational relationships between a business and its customers and suppliers, other businesses and even its competitors, has already evolved through radical changes that weren't even conceivable just a few short years ago. And more significant changes are coming, brought about by the use of the Internet as the new, ubiquitous

language medium of two-way communication between any business and its customers and between businesses themselves.

Companies are using the Internet to realize new efficiencies that lower costs, thereby making them more competitive, and to increase their level of customer support, hence increasing the level of their collaboration with their customers. Customers now have the expectation that they should receive immediate answers to questions they have about the supplier's services and products, online information, online support and the facility for online ordering. Some customers would like to participate in the design of the next generation of products or services of their supplier (customer as customizer). Companies are using the Internet to create new business opportunities for themselves by pooling their knowledge and interests with the knowledge and interests of their customers.

The creation of a collaborative culture within an organization makes collaboration between businesses and organizations more feasible. But, because the rapid improvement of the technology is so dazzling, we are often blinded to the critical psychological and organizational cultural issues to which the new media give rise. These are the areas on which we focus our analysis in this book; these are also the areas that lead us to the conclusion that the Internet not only makes collaboration possible, it demands that a company be collaborative to succeed and thrive in the burgeoning Internet world of knowledge-savvy customers.

The Obstacles to Collaboration

Knowledge management systems have been organized to achieve the collaborative goal, but have only met with partial success as documented by Lucier and Torsilieri (2001): "Knowledge management fails to deliver significant results. Across the 108 companies we studied, we found no correlation between systematic management of knowledge and improved bottom-line performance. That is, we found that companies with extensive knowledge management programmes were not more likely to achieve bottom-line performance than companies without extensive knowledge management initiatives." These researchers did find some companies where KM initiatives did pay off. "Buckman Labs captured value by identifying and measuring relationships between investments enabling collaboration and sharing, time spent with customers, rapid problem resolution, sales from new products and overall growth." In other words a focus on collaboration, especially with customers so as to meet their needs, results in KM initiatives having a positive impact on the bottom line.

In terms of technology, it is not all that difficult to set up a knowledge network to facilitate knowledge sharing and knowledge co-creation. The challenge is to get managers, employees, suppliers and customers to actually use these systems. The problem is one of company culture, especially trust and the attitude of employees, often attitudes the employees bring to their organization based on their prior experiences.

Traditionally our education system has emphasized individual accomplishment and learning in a highly competitive environment in which students are graded and ranked.

For most students their ability to find satisfactory employment and enjoy financial success depends on their ability to do well in school, which does not necessarily entail deep learning, but rather scoring well on tests and competing successfully with their classmates. Once these former competitors are employed they find themselves in a similar environment of competition. Now they must compete with their co-workers for the prestigious, more important and higher salaried positions within their organization. They quickly discover that personal knowledge and information is power, and that if they wish to advance their careers it is probably better to keep what they know to themselves.

Not only does the competitiveness of the former students add to an environment of mistrust, the organization itself, through its actions, adds to the level of mistrust. This is partly due to the nature of a free market economy in which the organization must think in terms of defending itself from its competitors. This adversarial mind-set adds to the general lack of trust within the organization. Another factor adding to mistrust in the business world is the massive amount of downsizing that has characterized most organizations in recent years, which has contributed to employees' mistrust of their employers. As a result, employees often put their own personal career goals way ahead of the needs of their company. This is reflected in the large staff turnover that many companies experience. The lack of trust operates in both directions. Because of the difficulty in retaining staff, companies create, and then exacerbate, a vicious cycle by not investing enough in their employees' professional development, which would build a greater atmosphere of trust.

The lack of trust, endemic in the culture of most companies, is the single biggest obstacle to creating a collaborative organization. Rodgers and Banerjee, in a white paper written for J.D. Edwards, concur with our judgment: "Although technology shortcomings are a significant hurdle to true collaboration, the biggest medium-term barriers to evolving a collaborative commerce strategy will be cultural and organizational. At an organizational level, successful collaboration is built on the principle of trust." (www.jdedwards.com, 2003)

When a climate of trust is created within an organization, by no means an easy thing to do, the cultural barriers can be overcome. It is for these reasons that the focus of this book is on the human issues of trust and cultural adaptation, and not on the technical issues of the deployment of IT. Technology will not be ignored, but where we do talk about the technology, it is to show how technology can be used to create community, trust, the alignment of personal and corporate values and objectives, and a spirit of collaboration within the organization.

Not Collaborate or Compete, but Rather "Collaborate to Compete"

The title of our book is intended to resolve the apparent paradox between collaboration and competition. We believe there is no conflict between collaboration and competition and that in fact, to compete in today's networked knowledge configured environment one must actually collaborate to be competitive, even to merely survive. There are two senses in which we believe an organization can compete by collaborating. One is through the

internal collaboration among the organization's managers and employees. The other is external, through collaboration with other organizations beginning with customers, suppliers and business partners, but even including competitors if the circumstances are right. This second form of collaboration is known as collaborative commerce or c-commerce.

The roots of the conflict between collaboration and competition can be traced back to the Industrial Era and Adam Smith's notion of the invisible hand of the marketplace. According to Smith, each person in the market economy was to act in their own narrow self-interest and allow the invisible hand of the marketplace to determine the value of their labor or the products they were able to produce. The whole system was built on the notion that unbridled competition would rapidly determine the correct values in all exchanges and therefore if each person only looked after their own selfish needs a fair and equitable system would emerge. We do not dispute the power of the marketplace to effect a basically fair exchange of goods and services, and in light of the failure of the planned economy model know of no better system. Yet, we believe that as is the case with all human systems and technologies, they provide both service and disservice and one must always try to strike a balance between the positives and negatives of all systems. It was only natural that in a competitive market-based economy that there were, and are bound to be excesses. Hardin illustrates this point with his famous parable of the "Tragedy of the Commons," where he points out how the purely selfish behavior of the herdsmen results in the overgrazing and destruction of their commonly held pasturage.

The Eight Key Messages of the Book

1. The foundation of a profitable business culture is characterized by a robust spirit of collaboration between:
 - employees and management
 - internal departments or divisions, and
 - the organization, its customers and its suppliers.
2. A collaborative environment best enables staff to align their professional goals with the objectives of the organization and to implement strategies and tactics to realize these objectives.
3. In order for a KM strategy to be successful it must include a strategy for collaboration.
4. The Internet and the World Wide Web provide a powerful paradigm of collaboration for any organization.
5. There is a cognitive, emotional and motivational dimension to collaboration.
6. The book provides a number of practical recommendations for tools and processes that will help develop a culture and psychological environment of collaboration.

7. A unique assessment instrument, the Collaboration Quotient, measures the readiness of individuals and their organization to collaborate. This tool, created by the authors and introduced for the first time in the book, is also used to monitor the organization's progress in developing collaboration.

8. An Internet-based knowledge network dramatically facilitates knowledge sharing and co-creation. The book introduces a detailed design for a practical and effective knowledge network.

Each of the eight key messages forms the subject, respectively, of the eight chapters of our book:

Chapter 1 - The Impact of the Internet on Business: The Need for Collaboration

This chapter describes the way the Internet is changing the nature of business and, as a result, the organizational structure of business. The Internet provides a medium for aligning and integrating the operations of an organization's activities. We give examples of this by examining the impact of the new media on certain organizational activities, including sales and marketing; customer relations and product support; and human resources activities including training, education, recruiting and retention of managers and employees. The impact on procurement is covered in Chapter 2. One of the objectives of our study is to show how these diverse functions can be made to work together more effectively and profitably in a collaborative organization.

We conclude this chapter by showing how the use of the Internet has contributed to the realization that knowledge, not information, is the ultimate source of wealth. We carefully define the difference between information and knowledge and describe the emergence of KM. We identify the lack of trust and collaboration as the factors that have limited the success of KM.

Chapter 2 - What Is a Collaborative Organization?

We survey the nature of and/or the lack of collaboration in the pre-industrial, industrial and post-industrial eras. We describe the difference between a hierarchical, command-and-control organization and a collaborative one. We present a historical review of commerce to explain the roots of command-and-control management. We then describe the cultural change in business as hierarchical organizational structures began to break down and shift towards collaborative ones brought about in part by three technological breakthroughs: namely the introduction of 1. mainframe computers, 2. personal computers, and 3. the Internet. We examine the collaborative nature of EDI (Electronic Data Interchange), e-commerce and e-procurement (i.e., electronically configured supply chains) and of the new phenomenon, collaborative commerce, or c-commerce, in which business partners and allies come together to create and share a common enterprise.

Chapter 3 - The Treatment of Collaboration in the Management Literature

We review the recent work of management experts who have partially addressed the question of collaboration. We will specifically explore the role of collaboration vis-à-vis a number of ideas that have been developed in the management literature in the past 10 years, including the notions of business reengineering (Hammer and Champy, 1993); the learning organization (Senge, 1990); knowledge capital (Sveiby, 1997); Charles Armstrong's (2002) enterprise capital model; knowledge creation (Nonaka and Takeuchi, 1995); knowledge networking, dynamic teaming, knowledge management and value sharing (Savage, 1996); and the nature of collaboration in the scientific community and its analogy with knowledge sharing in the business community. We then show that knowledge is an abundant resource and that knowledge transfer is a form of metaphor.

We close the chapter with a survey of some of the very recent works that look at collaboration explicitly, namely Allee (2003), Amidon (2003), Beyerlein et al. (2003), Saint-Onge and Wallace (2003), Skyrme (2001) and Straus (2002).

Chapter 4 - The Five Collaborative Messages of the Internet, a Medium for and a Model of Collaboration

In Chapters 1 and 2 we illustrated how the Internet and KM are changing the nature of commerce so that for businesses to be economically effective, they must transform themselves into collaborative organizations. In Chapter 3 we reviewed a number of pertinent approaches to KM and collaboration. In this chapter we set out our own comprehensive approach to the development of the collaborative organization in which knowledge is co-created and shared by all the members of the extended organization that includes customers, suppliers and business partners, as well as executives, managers and employees.

In order to develop our approach to collaboration we demonstrate that the Internet also serves as a model or metaphor for collaboration and thus plays a central role in the creation of a collaborative organization. We make use of the insights of Marshall McLuhan, with whom one of the authors (Dr. Robert K. Logan) worked. McLuhan showed that a medium has a certain effect on its users independent of its content, which he expressed with his famous aphorism, "The medium is the message." We show that the Internet, which is a hybrid technology of telephony and computing together, with the World Wide Web, which marries the Internet to hypertext, has a unique set of five properties or characteristics ("messages" if you will) that, taken together, make it the ideal medium for collaboration and knowledge networking. They are:

- The two-way flow of information,
- The ease and speed of access of information,
- Continuous learning,
- Alignment and integration of common objectives, and
- The creation of community.

No other communication medium prior to the Internet possessed all five of these properties to the same extent (although certain media possess some of these properties),

all of which, as we show in this book, are necessary (and sufficient) for creating a successful collaborative organization. This is what makes the Internet the ideal vehicle for collaboration.

We then show how the five properties or "messages" of the Internet create both an environment and a spirit of collaboration that allow the qualities of trust, shared values and the formulation of common objectives and strategies to flourish within a collaborative organization. Out of this discussion we develop the Logan-Stokes model, a model of collaborative knowledge management.

We conclude the chapter by discussing the role of values in promoting collaboration and introduce the idea of the organization value web in which collaboration encourages group cohesiveness, which encourages loyalty and retention, which encourages excellence and passion. The end result of harnessing the five collaborative messages of the Internet and the value web is a successful collaborative organization that maximizes the intelligence and innovation of its entire human resource population to best meet the challenges in today's and tomorrow's global competitive business world.

Chapter 5 - Three Psychological Dimensions of Collaboration: Cognition, Emotional Intelligence and Motivation

Since the human dimension, rather than the technical dimension, of collaboration is the greater challenge, we examine the nature of emotional intelligence and motivation and their impact on successful collaboration. (This has been a central theme in the practical consultative work of one of the authors, organizational psychologist Dr. Louis Stokes.) We explore the relationship between emotional intelligence and motivation on the one hand, and leadership and trust on the other hand.

For an organization to become successfully collaborative, executives, managers and employees must learn to become more aware of and manage their own feelings and emotional reactions about collaboration within the business environment, and how these internal forces impact their self-motivation and their ability to understand and relate to others, which is the foundation of building trust with another individual.

We will show the reader how to better understand his or her own intrapersonal reactions to people and events and how their emotions within the business context, if intelligently managed, positively affect their collaborative relationships with others. Based on this foundation of self-knowledge, managers can then learn to increase their interpersonal skills so they can communicate their ideas more persuasively, create the organizational environment to support better team relationships, deal with conflict more effectively, and create a more empowering work environment by assisting others to be more collaborative, which, in turn, encourages the diversity of innovation necessary to be a leading-edge company.

Chapter 6 - Practical Steps in Building the Collaborative Organization

In this chapter we provide a number of practical recommendations to implement the ideas presented in the book. We develop ideas for everyday activities to promote collaboration and increase trust to support the organization's objectives. In particular, we examine how to transform a command-and-control organization (or a partial command-and-control organization) into a collaborative one. We also address the question of how to maintain and increase collaboration once an organization has minimized its hierarchical barriers.

We examine ways to increase the overall trust within the organization, which includes the employees' trust of each other and of their managers, as well as the managers' trust of each other and their employees. We recommend ways to increase the number of individuals in an organization who are self-motivated and ready to accept the responsibility of carrying out the organization's important objectives. We argue that within a collaborative organization with motivated employees, the amount of time devoted to supervising and managing staff is greatly reduced, which can result in significant cost savings and thereby allow managers to focus on creating new business.

The organization's resource systems and processes must support the individual's development of collaborative behavior. We identify what processes and tools are necessary to support collaboration. We address the issue of leadership and employee initiative. We suggest that an organization in which decision making is more decentralized, but aligned empowers and motivates its employees and at the same time achieves the organization's overall goals and objectives. We'll examine how the organization can find ways to reward and encourage collaboration so that both managers and employees willingly align with the company culture of collaboration and commit themselves personally to collaboration. We also answer the question: Where does the "buck" stop in a collaborative organization? Answer: It stops at everyone's desk.

The discussion of this chapter is framed in terms of seven collaborative building blocks needed to make the transformation to a collaborative organization. They are:

1. Vision,
2. Leadership,
3. Trust,
4. Goals,
5. Strategies,
6. Tactical objectives, and
7. Action and implementation.

Chapter 7 - The Collaboration Quotient (CQ): Measuring the Collaborative Capacity of an Organization and Its Personnel

$$\text{CQ} = \text{IQ} \times \text{EQ} \times \text{MQ}$$

This chapter describes the Logan-Stokes Collaboration Tool, which includes the Collaboration Quotient and is a suite of collaborative knowledge management measuring instruments that allows an assessment of an organization's readiness for collaboration.

The information gathered using this tool makes it possible to make the appropriate decisions for building a collaborative organization. The suite of collaboration tools consists of the following four elements:

- 1) The Collaboration Quotient (CQ), which measures the willingness and ability of individual employees to collaborate in co-creating and sharing knowledge.
- 2) The Manager's Collaboration Quotient (MCQ), which measures the level of support and encouragement for collaboration from senior executives and the middle managers.
- 3) The Organizational Collaboration Quotient, which measures the degree to which the organization's current systems, policies procedures and infrastructure support collaboration.
- 4) The Collaborative Commerce Quotient, which measures the organization's readiness to enter into collaborative relationships with customers, suppliers and potential business partners.

The Collaboration Quotient (CQ) specifically measures the capability of individuals to engage collaboratively in knowledge co-creation and sharing. We identify three key factors that allow an individual to enter into collaborative relationships with their co-workers, customers, suppliers and business allies. They are:

1. The cognitive factor, which embraces analytic, communications and learning skills and includes such specific skills sets as the ability to formulate goals, devise strategies, develop objectives and implement action plans, and which we identify with IQ,
2. The emotional intelligence factor, which includes interpersonal and sociological concerns, such as trust, integrity, vision, agility, responsibility and the ability to share, and which we identify with EQ, and
3. The motivational factor, which includes psychological concerns, such as motivation, self-actualization, drive and willingness to share, and which we identify with MQ.

We formulate the equation $CQ = IQ \times EQ \times MQ$, where IQ is a measure of business-relevant cognitive skills, EQ is a measure of the emotional intelligence and MQ is a measure of the level of motivation. The reason that CQ is the product of EQ, MQ and IQ is that a person can be totally brilliant on the technical level, but if they do not have the proper social skills or motivation their collaborative contribution is ineffectual. Conversely, a well-motivated person with great social skills, but without strong strategic thinking skills or intellectual competencies has very little to contribute to a collaborative effort. Therefore it is our basic premise that emotional, motivational and intellectual competencies are all required for successful collaboration.

Based on the results of the CQ and the other collaboration tools, one can identify gaps in the organization's resources and processes that should support the collaborative behavior,

and what blockages are hindering collaboration. As a result of this analysis, certain systems, processes and procedures may need to be modified or eliminated, which, in turn, may entail significant changes in the company's organizational development and culture.

Chapter 8 - The Logan-Stokes Collaborative Knowledge Network

One of the themes of the book is that a browser-based knowledge network is an ideal environment in which knowledge sharing and collaboration can take place. We describe the design of a typical knowledge network based on our experiences working with former clients, namely the Logan-Stokes Collaborative Knowledge Network, which is comprised of three basic elements: a learning system, a sharing system and a measuring system. The primary functions of the knowledge network are:

1. A medium for the development of a knowledge community through internal dialogue and information and knowledge sharing,
2. A knowledge management tool for the development of the organization's human resources
3. A delivery mechanism and brokerage for online training and education, and
4. A medium for storing organizational memories and hence enriching the organization's culture.