

Collaborative Knowledge Networks

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Abstract

The effective use of community-driven Collaborative Knowledge Networks (CKN) is fast becoming a hallmark of high-performing organizations. Companies that learn to manage and leverage these networks effectively will be more agile, more efficient and more innovative than those that do not. This paper describes necessary tools and methods to identify, promote and manage the development of collaborative knowledge communities within organizations. Such communities tend to emerge spontaneously, the catalysts are myriad, and they exist for as long as the members derive value from the network. Their lack of formal hierarchy and boundaries appears to promote innovation and reduces complexity around problem solving and solution development. Harnessing these communities and realizing the benefits for business purposes is clearly attractive and yet the challenge is significant.

Introduction

Collaborative Knowledge Networks – spontaneous, informal communities of practice – are proliferating inside businesses today with stunning speed. Companies that embrace them are gaining significant benefits in the areas of knowledge transfer, response times and innovation.

In practical terms, Collaborative Knowledge Networks (CKNs) are groups of people linked and working together outside formal organizational structures. Supported by new technologies, they enable rapid and effective knowledge sharing that can accelerate many important business processes: They help companies align their organizations with customer needs, improve supply systems, streamline product development processes, and facilitate a wide range of special projects. Taking advantage of connectivity throughout the extended enterprise, CKNs make it possible for people to collaborate and communicate freely across geographic and organizational boundaries. CKNs fulfill these functions faster and more effectively than traditional structures and processes.

Traditional approaches to implementation and deployment do not work with Collaborative Knowledge Networks. Because they derive from virtual communities and social networks, CKNs cannot be mandated into action. Nor can they be controlled.

Spanning the boundaries of organizations and companies, Collaborative Knowledge Networks defy hierarchical practices – yet still manage to produce extraordinary results for companies willing to nurture them.

How executives respond to the growing CKN phenomenon may very well determine their success in harnessing their companies' knowledge-based assets for maximum advantage. We believe the effective use of Collaborative Knowledge Networks will become a hallmark of high-performing organizations in the years ahead. Companies that learn to manage and leverage these networks effectively will likely be more agile, more efficient and more innovative than those that do not.

This paper suggests specific strategies for companies that seek to use Collaborative Knowledge Networks effectively. It presents a framework for thinking about how to leverage these networks both within the enterprise and across the entire value chain.

CKN History

People have always come together to build opportunities and solve problems collectively. According to Etienne Wenger and William Snyder, writing in *Harvard Business Review*, these communities of practice extend throughout history. In classical Greece, they observe, corporations of metalworkers, potters, masons, and other craftsmen served both business and social needs. Today's networked communities fulfill similar functions, though instead of being composed of independent individuals, they often emerge within and across large corporate organizations. And instead of relying primarily on face-to-face communications, today's networks are largely enabled by web-based technologies that dramatically lower both the financial and personal costs of communications transactions.

For most of history, however, communications within communities of practice have been bound by the need for physical proximity. In the early 20th century, however, with the advent of the telegraph and telephone, increases in the frequency and ease of communications spawned a shift toward collaboration and knowledge sharing among people in different locations. Figure 1 illustrates the technological development leading to today's instantaneous communication on a global scale between many simultaneous users.

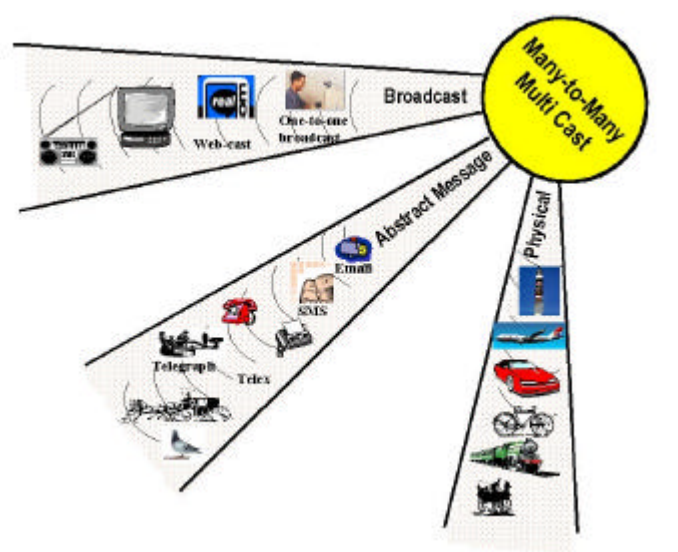


Figure 1. Development of CKN supporting technologies

By the 1960's and 70's, information technology had become a critical part of corporate infrastructures. Capabilities such as mainframe processing and EDI enabled functions never before possible. Suppliers, buyers and producers could now share information with a remarkable accuracy and immediacy – leading, for example, to the implementation of Just-in-Time manufacturing techniques. By the 1980's technology allowed Collaborative Knowledge Networks to operate even more efficiently. Local area networks, wide area networks and personal computers made remote collaboration and knowledge sharing commonplace. Observing, reporting and reacting to data now took hours instead of days. Enterprise Resource Planning solutions opened up windows into the operations of the organization as never before.

Over the past ten years, yet another wave of technology changes is spawning greater personal connectivity to enterprise networks, creating a new Web Workplace for the future. And the potential impact of Collaborative Knowledge Networks on organizational performance has increased dramatically. Advancements including Internet portals, digital workplace tools, online marketplaces and wireless technologies have all contributed to the growing influence of CKNs in many successful companies. Most recently, electronic discussion groups and instant messaging tools have reduced the participation costs to virtually zero – and emergence of CKNs has skyrocketed. The world's growing ranks of knowledge workers are coming to expect that Collaborative Knowledge Networks will be an integral part of their daily routines.

CKNs: How they work

Collaborative Knowledge Networks use technology to link individuals working together towards similar objectives. These individuals may be employed by a single company – or they may represent a variety of allied organizations focused on shared challenges. In most large companies, CKNs are already up and running, whether managers know about them or not. Indeed, Collaborative Knowledge Networks often simply “happen” in most large organizations where creative employees are tasked with solving business problems and operating more productively.

As a result, CKNs exist at many levels inside most companies. They can operate within small business units – and they can span the enterprise and the extended value chain. They can include employees, customers, vendors and partners – evolving as necessary to accomplish their objectives.

CKNs generally defy managerial intrusion. Collaborative Knowledge Networks can come together, operate for a few days or months, and then disappear or replace themselves as new needs, new agendas and new communities take shape. Participation changes depending on the nature of the objectives; newcomers replace old-timers; and the communities evolve organically as participants learn and exchange knowledge.

Collaborative Knowledge Networks don't fit with traditional organizational paradigms. Grounded in *community*, CKNs take shape informally around common missions shared by people who want to get things done. They are self-initiated and self-directed – and they cannot be mandated or controlled from the top. In addition, CKNs generally share the following characteristics:

- **Voluntary.** People choose to participate in CKNs. These people are typically highly motivated, which leads to deeper and more meaningful learning and performance.
- **Non-hierarchical.** Creativity experts know that rigid hierarchy, in which individuals exercise authority and position, can stifle innovation and fresh thinking. Substance and value contribution – not organizational charts – are the drivers in Collaborative Knowledge Networks.
- **Heterogeneous.** Diversity of participation spurs out-of-the-box thinking and creativity in effective CKNs. The downside is that highly diverse communities may carry a natural tension that can be challenging at times. But diverse participation has more benefits than risks. Knowledge can be spread more broadly; and cross-functional perspectives invariably add value.
- **Cohesive.** While this seems on the surface to conflict with heterogeneity, most Collaborative Knowledge Networks are highly cohesive – with participants intensely focused on their common purpose.

- **Focused.** Despite their social dimensions, effective CKNs are highly focused and aligned around business missions. For this to happen, participants must have a clear understanding of an organization's strategic business goals and value proposition. The community will only work if its members identify with the enterprise and the learning agenda that the community pursues. Only then will members keep coming together and investing themselves in pushing the community and its practice forward.

CKN Classification

With so much variability among CKNs, it can be difficult to discern the patterns through which they emerge and operate. Our experience suggests that CKNs can be usefully classified along the dimensions of scope and purpose. Scope can range from within the enterprise to the extended enterprise and beyond. The purposes of CKNs generally involve either shared expression, shared learning and/or shared goals. (See Figure 2.)

CKNs involving shared goals, for example, tend to be somewhat more formal and more selective than those focused on shared expression. In this regard, SHARED GOAL CKNs are exceptionally agile teams. They are likely to display firm boundaries with clear organizational sanctioning. In addition, they may require considerable technology support and managerial guidance. SHARED EXPRESSION CKNs, on the other hand, are less likely to require management involvement or advanced technologies. In general, the value of CKNs shifts from more personal benefits on the left to an emphasis on enterprise benefits on the right, where outcomes are likely to be more tangible (e.g., a new product design, an improved process, etc). Figure 2 presents examples showing the three different categories of CKNs.



Figure 2. Different types of CKNs

Some of the first community-of-interest networks to arrive in the Web Workplace were BUSINESS DEVELOPMENT CKNS. Salespeople facing management demands for higher productivity use these CKNS to share leads, sales presentations and closing techniques. These CKNS involve both shared learning and shared goals, and tend to have high value for both individual CKN participants and for the broader enterprise. BUSINESS DEVELOPMENT CKNS are freewheeling and fast moving communities – with few guidelines and little corporate oversight – that can help sales organizations become more agile and more productive. For example, the Siemens ShareNet is considered a great success by the 3000 members of the sales force of 60,000 employee Siemens ICN [Davenport 2000].

Another familiar kind of CKN is the WATER COOLER CKN. These generally take shape simply to build social networks and complain about company policies. Fortunately, WATER COOLER CKNS can provide substantial value for companies that embrace them. In one global professional services firm, a WATER COOLER CKN called *On the Beach* allows employees to make suggestions to senior management in a productive and non-threatening manner. WATER COOLER CKNS can even evolve into MENTORING CKNS in which employees in a particular department or unit may share best practices with one another, resulting in meaningful learning. A large technology company, for example, recently converted a WATER COOLER CKN into a MENTORING CKN – flexibly responding to employee complaints about the need for knowledge sharing and recognition among its elite knowledge workers.

Regardless of their genesis or evolutionary path, CKNS today play an increasingly important role in how work gets done in and around the Web Workplace. Here are some examples of CKNS in action.

COMMUNITY SERVICE CKN. WellSpan Health is a non-profit, online health community serving the mid-Atlantic region of the United States (www.wellspan.org). Using the Internet as the focal point for gathering members, WellSpan aims to improve access to high-quality health care and promote health and wellness. Working with both internal resources and partners, Wellspan has created a flexible network of services covering virtually every health need – from education and prevention to emergency services and medication. Consumers can use the WellSpan CKN to locate local doctors with specific specialties, get health news, learn about health-related events, and even see photos of the babies born within network hospitals. Approximately 500 physicians have a clinical point of entry to the CKN through their user IDs and passwords, enabling them to access clinical sites within the community. Member physicians can view patient records, get drug information, enter prescriptions, access lab results or check a patient's insurance coverage. Dynamic and self-improving in nature, the WellSpan CKN is proving itself highly responsive to the changing healthcare needs in the communities it serves.

SHARED LEARNING & BUSINESS DEVELOPMENT CKN. Morgan Stanley Dean Witter developed a CKN called *The M-Files* to explore the world of wireless communication and mobile commerce. Through an ongoing series of weekly virtual conferences, CKN

participants use a dial-in number, simultaneous videoconferencing and online presentations to engage directly with experts in telecommunications, computing and media. Participation is global, and CKN interactions extend beyond the realm of the conference series itself. For MSDW, this M-FILES CKN provides a flexible foundation for educating institutional investors and corporate executives about mobile commerce. Though initially focused on serving MSDW clients, participants also include professionals in technology, computing, telecommunications, financial services and media. In fact, anyone interested in learning more about wireless Internet applications and mobile commerce is welcome to register online in order to participate.

PROJECT ACCELERATION CKN. British Petroleum has multifunctional teams deployed around the globe. In 1995, the company implemented a CKN-based collaborative computing environment to unify its employees with four broad functions in mind: best-practices knowledge sharing; anytime-anywhere expert consultation; accelerated project implementation; and reduced travel costs. The CKN links 12 sites in four countries using 150 servers, and employs audio, video and data services that can be customized to meet individual needs. As a result of this initiative, BP generated savings of more than \$40 million in productivity gains, cost-savings and opportunities generated. CKN members attend focused meetings without multiple-day jetlag. Recruiting, consulting, engineering, research and development, management and maintenance operations all experienced the resource-optimizing benefits of a CKN-based Web workplace.

BEST PRACTICES CKN. Some organizations are masterful in leveraging the output of CKNs – whether that be knowledge about employee morale, new skills for workers, or new products that create competitive advantages. For example, success at General Electric Industrial Systems requires a high degree of collaboration across its 100 plants and 20 design centers. Using a BEST PRACTICES CKN called Web City, GE engineers from anywhere in the world can come together virtually to tackle a product development project. Web City's technology captures and documents work in progress, and feeds the company's best practices framework for company-wide applications. Web City makes GE Industrial Systems more innovative and more agile.

LINUX: THE QUINTESSENTIAL CKN. When one thinks of CKNs, among the first examples that comes to mind is the worldwide community of Linux developers, initiated by Linus Torvalds of Finland. The LINUX CKN shows how collaboration can create breakthroughs in innovation that may be difficult and more costly to achieve through traditional hierarchical structures. Self-initiated, self-driven and self-regulating, the LINUX CKN brings together global programming talent for continuous improvement, collaboration and camaraderie. These advantages have helped strengthen Linux offerings in many industries – including Hollywood, for example, where digital animation firms have seen the advantages of implementing Linux over Microsoft or Silicon Graphics alternatives. Because the Linux source code and development process is completely transparent, Linux can be easily adapted to the specific hardware and software needs of individual users. This transparency is critical to agility – and is one of the defining characteristics of effective CKNs.

Large enterprises today contain scores of communities of interest. For companies without strong technology infrastructures, such communities are severely constrained by geography and time. For companies with robust Web Workplaces, where employees have easy access to new technologies, communities of interest expand and flourish across geographic and temporal boundaries – efficiently leveraging an enterprise’s information, technology and human resources.

CKN Benefits

Companies can expect significant benefits from knowledge networks. For example, CKN’s can greatly accelerate knowledge transfer. They are strong building blocks for creating, sharing and applying organizational knowledge. They help companies leverage knowledge assets more effectively and enable participants to locate and communicate with experts more quickly.

They also increase agility and productivity. Workers with easier access to relevant knowledge perform more productively. They spend less time looking for information – and more time focused on applying that information. They can make good decisions more quickly.

CKNs foster creativity. Enthusiastic, self-motivated people with diverse backgrounds working together in a CKN on a common goal are the foundation for successful innovation.

And finally, CKNs facilitate asset optimization. The dynamic nature of CKNs enables them to operate with great efficiency. People who are adding value stay engaged and those who are not move on to pursue other goals. And when the mission is accomplished, CKNs naturally disband – leaving a legacy of knowledge but not an organizational shell that requires management disposal.

CKN Enablers

Traditional organizational models are not conducive to CKN success. Even Jack Welch, an archetype of command-and-control practices, has predicted as much: “Leadership of companies is going to have to become much less CEO-driven. People within the company are going to have so much data on their hands that they will be able to challenge [a CEO’s] decisions all the time. The pace of events is going to be so fast that people aren’t going to wait for the next layer of approvals. There’s going to have to be far more delegation. There’s going to have to be far more participation. The leader must become an ever more engaging coach, an ever more engaging person.”[Garten, 2001]

So while collaborative networks appear to work best in cultures with strong leadership, motivation, support and trust, command-and-control environments tend to stifle their performance and demoralize participants. The leader's principal job in a collaborative and learning organization is to create a culture that helps people become more productive and more creative. In this sense, organizational support for knowledge communities is akin to cultivating and nurturing a garden. "Successful communities are driven by the passion, identification and leadership of their members; the environment can either favor or hinder their growth." [Wenger, 1999] There are a number of specific and important actions leaders can pursue to increase the likelihood of constructive collaboration. The first involves technology infrastructure.

Provide the necessary infrastructure

It is no accident that the emergence of CKNs coincides with the rapid proliferation of networking technologies. These technologies provide the tools necessary for community participants to seek out and engage others quickly and efficiently. They make expert knowledge readily available throughout the extended enterprise – and they capture much of that knowledge in sustainable forms for ongoing application.

High-performing CKNs depend on high-performing technologies – and companies must ensure that their technology decisions and investments enhance collaboration practices. For CKNs to work effectively, companies must achieve integration across multiple platforms, multiple systems and multiple applications. They must also ensure that technologies are aligned with enterprise objectives along three primary dimensions: degree of personalization, degree of globalization, and degree of collaboration desired (figure 3).

Personalization. Workers in the Web Workplace should be able to set their preferences for content and personalize the content that is published to them. Their profiles should be transparent across the enterprise, ensuring they have full access to all content relevant to their interests. This frees participants from continually redefining their needs and interests – and from maintaining redundant profiles for each site within the network.

Globalization. Globalization is about harmonizing and normalizing online services to improve the user experience and optimize the Internet investment. Companies must determine how much content control to retain and how much freedom to allow – especially when CKNs expand to include workers in other companies, customers, suppliers and other stakeholders.

Participation. To create a collaborative environment, networking technologies must provide users with interaction and communication channels, such as chat, forums and versioning of communications. This may require different kinds of technologies for different kinds of CKNs. Collaborative product development, for example, may call for sharing virtual prototypes using specialized software. Guidelines for managing the collaboration

infrastructure must be developed to ensure that high-value CKNs operate as efficiently as possible.

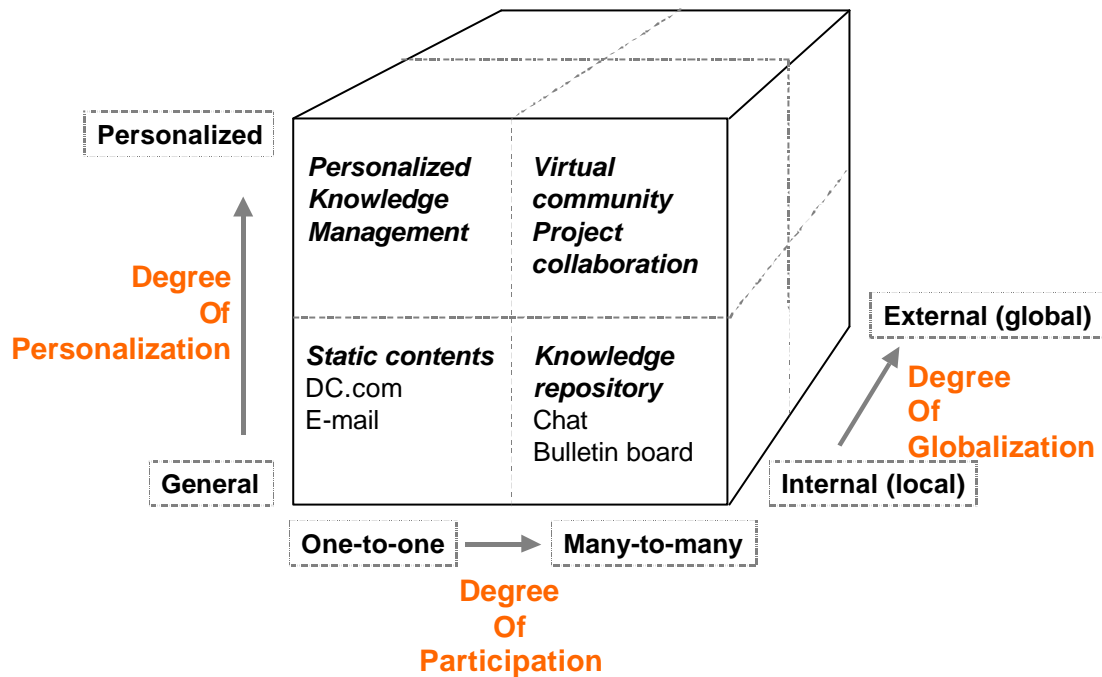


Figure 3. Technology dimensions for CKN success

For highly complex applications, much of the technology described above may be required. For less complex needs, a company intranet may be all that is necessary.

But technology and information sources alone will not enable the collaborative practices necessary for high-performing knowledge networks. Creating successful Collaborative Knowledge Networks is not a matter of “build it and they will come,” as many companies would like to believe. Companies that simply load the desktops of employees with sophisticated Web information bases, will almost certainly not make them more productive.

Sponsor, Support and Nurture

Virtual communities are already operating within most companies. Some may be well known to company leaders; others may be flying below the radar – coming and going based on employees’ needs and their ability to participate. In either case, the benefits a company gets from its Collaborative Knowledge Networks will be significantly enhanced by senior management attention and interest.

One of the most important and easiest things companies can do to support CKNs is find out from participants if they need any help. This could simply involve letting employees know their participation is valued – and asking if there are barriers that the company can help eliminate.

But when it comes to actually getting management involved in CKNs, management needs to encourage rather than mandate. An overly intrusive manager can squelch CKN participation in a heartbeat. “Virtually everyone who has studied them agrees that they cannot be created out of the blue by management fiat . . . and it is very easy to destroy communities of practice by meddling.”[Wenger 1998]

Finally, there is value in having different Collaborative Knowledge Networks communicate and working with one another. Communities, by their very nature, tend to want to interact with one another. But problems occur when management tries to force inter-community dialogue. Managers can help communities become aware of one another – and even facilitate introductions – but it is best to let participants themselves sort through how they will or will not interact.

Reward and Encourage Participation

In general, people come together because they share interests, issues and a desire to learn. But they may not naturally share their knowledge. Sometimes coaching, encouragement and incentives may be required to get participants to share what they know, and to absorb what others may have to offer. This may be especially true in organizations with strong histories of command-and-control cultures.

Yet even in companies with traditions of collaboration and innovation, clear guidelines about CKN participation can be important. Explicit provisions that allow “slack time” for brainstorming and networking may be in order.

Since 1956, for example, scientists at 3M have been encouraged to dedicate 15% of their time to experimenting and inventing in an area of their choice. “No one is told what products to work on, just how much to work. This loosening of controls has led to a stream of profitable innovations. 3M’s sales and earnings have increased more than 40-fold since instituting the 15% rule. The mechanism has helped generate cumulative stock returns 36% in excess of the market and has earned the company a frequent ranking in the top ten of Fortune’s most-admired list . . . By giving up control and decreasing predictability, you increase the probability of attaining extraordinary results.”[Collins 1999]

In sum, employees must truly believe that company leaders have the interests of the rank and file at heart – and that risk-takers will be rewarded, not punished. Companies cannot ask people to start operating in a different way – to participate in collaborative networks – if their incentive system does not reward those efforts.

Train Employees in Collaboration, Communication and Networking

Some people are natural collaborators; others need more coaching. Training and coaching around CKNs should focus on those skills that will drive effective participation. It

should also underscore and reinforce the importance of interpersonal communications: Successful collaborations are fundamentally dependent on successful relationships.

Without a common understanding – and a shared vocabulary – it can be difficult for employees to construct the connections necessary to create and foster collaboration.

At Xerox, employees must participate in the company’s “Leadership through Quality” training program. “A primary objective of the program is to develop sensitivity to the group dynamics issues that may limit productivity. Employees learn interaction and facilitation skills, but, more importantly, they internalize the use of a common vocabulary that reinforces a strong sense of organizational culture . . . The result is a climate of social activism, in which the potential for counter-productive interaction is mitigated by following well-established organizational norms and processes.”[Brown, 2000]

The ways in which participants relate to one another within virtual communities will largely determine the results they achieve. The interpersonal factors that will drive success are shaped by trust, shared norms, values, commitments and expectations.

Build Trust

At some level, a company either has a culture grounded in trust – or it does not. If it does not, Collaborative Knowledge Networks will not stand much chance of success. But beyond having a strong foundation in integrity and trust, companies can take specific actions to ensure that participants get that their efforts will be respected, reciprocated and rewarded.

“While trust has always been an important anchor to any CEO, its value is heightened today. In the old economy, rigid bureaucracies prescribed what people did and how they did it, leaving little room for creative judgment. Most companies operated in self-contained units and within their home countries. The pace of change was slow, and large-scale restructurings were not commonplace. All this is different now: Employees work in flexible teams with fewer guidelines than they once had; companies are more dependent on outsourcing and partnerships, and virtual organizations are becoming increasingly the norm; executing deals requires a high level of cooperation among employees resident in different countries, and every great company is in a continuous state of organizational change. The ethos of trust – between leaders and their colleagues and employees and among workers themselves – is the glue that holds everything together in the new economy.” [Garten 2001]

Respect The Need For Face-To-Face Interaction

To be most effective, CKN participants need occasional opportunities to meet face-to-face. This “face time” not only facilitates communication, but contributes to trust-building. There is ample evidence that collaborative efforts are less effective without some face-to-face encounters.

Although today's technology vendors promise that virtual meetings are as effective as those conducted in person, many experts on the subject disagree. One recent study found that co-located teams sharing the same physical space are twice as productive as those that are merely "nearby." Other studies have found that members of distributed workgroups frequently experience misunderstandings in communication that lead to conflict.

"Although electronic interaction was useful in maintaining community-mindedness, we observed that technology alone [is] insufficient for effective community development. In fact, the Alliance [a project at Xerox] members strongly believed in the value of face-to-face meetings. They told us that this was the primary means of shaping the deeper knowledge and mutual trust that are precursors to effective group work with digital technologies." [Brown, 2000]

Many collaborative practices in the future may not allow participants the luxury of meeting face-to-face on a regular basis. But thoughtful managers will understand that some degree of personal interaction can significantly enhance the performance of a company's CKNs.

CKN Obstacles

The nature of Collaborative Knowledge Networks is hard to pin down. Unlike most business and technical issues, their boundaries are fuzzy and their operating characteristics are fluid and dynamic. And yet, they consistently deliver value that enhances the performance of the companies that embrace them.

So it may be a daunting task to persuade a company's management team to fund CKN technology support when returns from earlier web investments may not yet be clear, especially in today's dismal investing environment.

But beyond funding considerations, managers should also be aware of other challenges and barriers to success. For example, security and privacy issues will surface immediately. The risks of sharing knowledge – and viruses – throughout a company's value chain will demand careful scrutiny and effective policies.

Additionally, CKNs create the potential for divided loyalties among participants. Employees who deliver superior performance in their virtual communities may grow to feel constrained by the bounds of traditional organization structures. Managers must be flexible and focused on achieving success – not obsessed with maintaining control.

Each of these challenges is exacerbated by the diversity of participation that occurs in effective CKNs. A highly functioning collaborative network brings together participants who literally speak different “languages” based on the national, regional and organizational perspectives they bring. Such diversity can spark innovation and creativity, but it can also present barriers. “Diversity may be essential to building the intellectual capital of a company to develop and exploit markets, but a tension exists between diversity and a unified corporate culture that enables a company to efficiently execute strategies, communicate among its component parts, differentiate itself from other companies in the same business, and not run afoul of its core ethical standards. Unless carefully managed, extensive diversity could lead to corporate chaos. Striking the right balance represents a new frontier in management.” [p. 85, Garten, 2001]

Finally, CKNs and virtual communities take time. Ensuring that participants understand their priority commitments – especially when they operate within multiple networks simultaneously – is essential.

CKN Outlook

The Collaborative Web Workplace is happening today inside each company. Using a host of new technologies, knowledge networks are already proving their ability to enable higher levels of individual and enterprise performance – more agility, more effectiveness, more innovation and more productivity – than ever. In the future, we believe Collaborative Knowledge Networks will have even broader impacts on how companies operate.

According to Thomas Malone, the growing trend toward technology-based communities is grounded in the basic economics of organizations. “Economists, organizational theorists, and business historians have long wrestled with the question of why businesses grow large or stay small. Their research suggests that when it is cheaper to conduct transactions internally, within the bounds of a corporation, organizations grow larger, but when it is cheaper to conduct them externally, with independent entities in the open market, organizations stay small or shrink.

With the introduction of powerful personal computers and broad electronic networks – the coordination technologies of the twenty-first century, the economic equation changes. Because information can be shared instantly and inexpensively among many people in many locations, the value of centralized decision-making and expensive bureaucracies decreases. Individuals can manage themselves, coordinating their efforts through electronic links with other independent parties. Small becomes good.” [Malone 1998]

With this in mind, the organizational implications of CKNs are potentially far-reaching. In some companies, CKNs will not only complement traditional organizational structures – they may even replace them – achieving new levels of performance. In other

companies, agile virtual communities may become the dominant organizational response to situations demanding rapid change and creative problem solving.

But companies who wait for “the future” to understand and manage their emerging knowledge communities may find themselves at a competitive disadvantage. CKNs are already at work in their organizations – and now is the time to begin reaping their performance benefits.

Acknowledgements

This paper is the result of an active CKN, with original members Robin Athey, Gene Chua, Aaron Eisenberg, David Garland, Peter Gloor, Anne Gauton, Tom Malone, Jim Protzman, and Stuart Rosenberg. The CKN is now rapidly growing, I would in particular like to thank Ann Baxter, Doug Downing, John Gibbons, Susan Gretchko, Aadrian Jooste, Nico Kleyn, Thomas Schmalberger, Gilbert Toppin, and Karl Wiig for their valuable contributions to this project. Financing has been provided by Deloitte Research. An extended earlier version of this paper can be found as a Deloitte e-View at www.dc.com.

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