

12-2008

Developing a Virtual Community of Practice Framework for a Dispersed Group of Innovation Practitioners

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*Developing a Virtual Community of Practice Framework for a Dispersed group of
innovation practitioners*

by

Ami S. Henriques

An Abstract of a Project in
Creative Studies

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Master of Science

December, 2008

Buffalo State College
State University of New York
Department of Creative Studies

ABSTRACT OF PROJECT

Developing a Virtual Community of Practice framework for a dispersed group of innovation practitioners

This project lays the groundwork for establishing a virtual community of practice (VCoP) for innovation professionals within my organization across 8 countries and multiple business units. The literature review includes definitions of communities of practice, how they vary from other types of groups and teams, the benefits they provide to the organization and to the individual, as well best practices and considerations for building and launching a VCoP. The deliverable is a proposal that will be submitted to the global leadership of the organization for review and approval.

Signature

Date

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Dates of Approval:

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ACKNOWLEDGEMENTS

I would like to express my appreciation and gratitude to all those who have supported me throughout this project, you have helped me through a difficult and intense time in more ways than you know. Special thanks to Dr. Keller-Mathers for her support, wisdom, and most of all patience. Also to my cohort for your diversity in thought, your consistent and unconditional support, and not to mention the often needed comic relief. None of this would be possible without the support and encouragement of my supervisor, Kevan Vetter and director, Marianne Gillette. And finally, my family and friends, who provide me with the love and care that keep me going.

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SECTION 1: BACKGROUND TO THE PROJECT

Purpose

In March, 2008 innovation practitioners within my company from around the globe came together in the US for a summit on creative and innovation process. With the outcome of this project, I am proposing to develop a framework that for a Virtual Community of Practice (VCoP) that incorporates elements of Action Learning to be used by the global innovation network, as well as other interested personnel, so that they may continue to support and extend their learnings from the summit. The framework will be based on best practices and key learnings from the vast literature focused on Communities of Practice. The intent of the VCoP is to provide a platform for communication, sharing and expanding knowledge, and collaboration for those involved in the global network. The outcome is a proposal that incorporates feedback from network participants and will be submitted to the Global Technical Council (GTC) which comprises company leaders from the various technical/innovation functions for the company around the globe.

Description

The initial intent of this project was to evaluate and recommend communication tools for use by the network. I originally thought I would focus on the literature specific to virtual teams and then investigate existing tools that might aid my dispersed group of professionals in knowledge sharing. While

reviewing the virtual teams literature, I came across the term “Communities of Practice.” Once I began using this as a search term, a different path opened up and my focus shifted slightly. I realized that establishing guidelines and parameters for a network format was much more important than identifying and recommending any specific tool.

Largely based on recommendations from the literature, the proposed VCoP format includes the following elements:

- A defined purpose
- Outline of benefits for the individuals, the community, and the larger organization
- Technology to be used
- Structure:
 - Various options for membership (core vs subscription)
 - Roles and responsibilities for core members
 - Community activities to encourage participation
- Support needed from Leadership

Input and approval were obtained from a few key members as well as recruitment from the larger group for foundational core members has been begun. The proposal will be submitted on behalf of the core members to the GTC upon completion of this project.

Rationale for Selection

In my company, the responsibility of our innovation process is somewhat of an isolated job as within any given location, there are typically only one or two individuals charged with execution of the process. Additionally, there is limited opportunity for exchange of ideas regarding program growth and enhancements due to lack of time or co-located experience. The global summit in March generated much enthusiasm and energy for the innovation process. My global counterparts were in varied stages of experience and understanding regarding creativity and process and all expressed interest and need in building on the momentum and continuing with the learning. Since the global summit, I have supported individuals on specific projects via email and phone calls, and learning something in return with each interaction. We do not currently have a sufficient format for extending these learnings and interactions to the entire group.

Not only is a tool/format needed for group communication, but also a depository for existing and future process tools and techniques. We currently have an internal database where we house process tools. However, this system lacks the ability for fluid communication and is cumbersome to use. We need the ability to communicate how we have modified and improved tools for specific applications or situations as well as the ability to easily add to our collective toolbox.

Creative Contribution

This project provides a new way for dispersed practitioners within my company to work together and learn from each other. With this format, individuals will be able to collaborate and problem solve on shared projects and challenges in a way that has not been possible previously. As a result, these efforts will help to advance the development of individuals as well as the innovation processes used by the larger organization. While such communities are prevalent in many other organizations, nothing like this currently exists in my company. By studying what experts have touted as good practices and understanding the many considerations involved in such communities, the proposed framework is hopefully in the best position to succeed and add value to my company and those involved.

SECTION TWO: PERTINENT LITERATURE

Introduction

Not knowing any better, I started my investigation within the literature using the search terms “virtual team”. I discovered that there is a large pool of research and information dedicated to this topic. I also learned that the term is broad and can mean different things to different people. For most however, the term refers to a group of individuals assigned to work together on a shared goal with interdependent tasks and a limited lifespan. This did not describe the type of group/network with which I intended to work so I kept searching and reading. I came across many related terms that somewhat described the current group within my company and what I envisioned it could be. Examples include distributed teams, distributed collaborative work, computer-mediated work group, knowledge network, and online learning, to name just a few. The one that struck a cord though was *communities of practice* (CoP). One of the simplest explanations of this group is “a group whose members regularly engage in sharing and learning, based on their common interests” (Lesser & Storck, 2001). Etienne Wenger (1998, p. 2), one if not the leading authority on the topic, describes the concept in more depth:

Members of a community are informally bound by what they do together – from engaging in lunchtime discussions to solving difficult problems – and by what they have learned through their mutual engagement in these activities. A community of practice is thus different from a community of interest or a geographical community, neither of which implies a shared practice. A community of practice defines itself along three dimensions:

- **What it is about** – its *joint enterprise* as understood and continually renegotiated by its members
- **How it functions** – the relationships of *mutual engagement* that bind members together into a social entity
- **What capability it has produced** – the *shared repertoire* of communal resources (routines, sensibilities, artifacts, vocabulary, styles, etc.) that members have developed over time.

These definitions resonated with me and perfectly described how I hoped to interact with this group/network/team with which I have been associated.

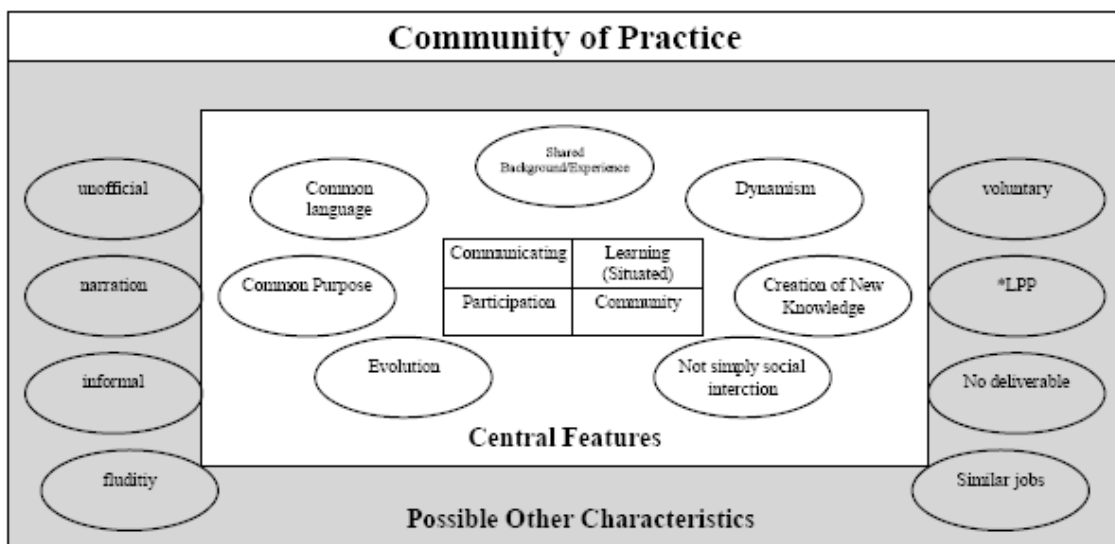
Wenger (p. 4) goes on to elaborate how CoPs differ from other groups within an organization:

- They differ from a “business or functional unit in that they are defined by their own understanding of the practice and have more flexible boundaries”.
- They differ from teams “in that they are held together by shared knowledge vs shared tasks”.
- They differ from a “network in that they have a specific reason for being (the practice) vs the relationship alone”.

Wenger states, “In their business units, they shape the organization. In their teams, they take care of projects. In their networks, they form relationships. And in their communities of practice, they develop the knowledge that lets them do these other tasks.” (p. 4).

Hildreth, Kimble and Wright (1998) scanned the literature to better understand the many characteristics that have been associated with CoPs. Hildreth et al. highlighted their findings in Figure 1. Here they show the 4

defining elements of CoPs in general, Communication, Participation, Learning, and Community, these are shown in the center table. They then differentiate between central features of a CoP versus other possible characteristics. They emphasize that these features may be present at different degrees and might gradually develop over time.



*LPP = Legitimate Peripheral Participation [Lave and Wenger 1991]

Figure 1: Community of Practice Characteristics
Hildreth et al., 1998, p. 4

Figure 1 is missing one element from the center table that Wenger (2004) emphasizes as central to a CoP and that is domain,

The area of knowledge that brings the community together, gives it its identity, and defines the key issues that members need to address. A community of practice is not just a personal network: it is about something. Its identity is defined not just by a task, as it would be for a team, but by an 'area' of knowledge that needs to be explored and developed. (p. 3).

Much of the literature further dissects these communities and examines their benefits as well as the evolutionary stages and respective activities. The next two sections of the literature review outline the highlights. CoPs are not virtual by nature, most have co-located members. However, some researchers have explored the topic Virtual Communities of Practice (VCoP) which I review in the fourth and final section.

Benefits of the CoP

The impact of CoPs has been investigated in great detail in the literature and many benefits of have been reported and extensively discussed in the literature. The impact is often noted on 3 levels as described by Fontaine and Millen (2004): benefits to the individual, the community, and the organization. Fontaine and Millen conducted a survey in 2002 of 431 members across five different communities. They summarized their results in a Table (p.6) which I have included below (Table 1). The following 3 sections discuss in more detail the benefits that have been reported to the organization, the community, and the individual.

For the Organization and the Community

One of the most frequently mentioned organizational benefits, which is not explicitly mentioned in Fontaine and Millen's Table, is knowledge management.

Table 1
Individual, community and organization benefits

Type of Benefit	Impact of Community <i>It has improved or increased the following</i>	% Agree
Individual Benefits <i>What does participating in the community do for individuals?</i>	Skills and Know How	65%
	Personal Productivity	58%
	Job Satisfaction	52%
	Personal Reputation	50%
	Sense of Belonging	46%
Community Benefits <i>How does collective participation benefit others?</i>	Knowledge Sharing, Expertise and Resources	81%
	Collaboration	73%
	Consensus and Problem Solving	57%
	Community Reputation and Legitimacy	56%
	Trust Between Members	50%
Organization Benefits <i>How does participating in a community increase organizational efficiency, better serve customers and partners, and provide insights for the future of the firm?</i>	Operational Efficiency	57%
	Cost Savings	51%
	Level of Service or Sales	46%
	Speed of Service or Product	42%
	Employee Retention	24%

Many have provided examples and reason why CoPs should be an integral, possibly even central, part of any organization's knowledge management strategy, Wenger (2004), Hildreth and Kimble (2000), Ardichvili, Page and Wentling (2003), and Kimble, Hildreth and Wright (2001) are just a few. Wenger asserts that CoPs are the "cornerstones of knowledge management" as the "practitioners, the people who use knowledge in their activities, are in the best position to manage this knowledge." (p. 2). He explains how the

combination of the three key elements of CoPs, domain, community, and practice, is what enables them to manage knowledge, “Domain provides a common focus: community builds relationships that enable collective learning; and practice anchors the learning in what people do.” (p. 3). He goes on to add that, “Company-wide communities make learning available to all concerned. They make sure that the learning from various locations within and beyond the organization is synthesized and integrated, and then remembered and distributed.” (p. 3).

While Wenger addresses how CoPs facilitate knowledge management, Kimble, Hildreth and Wright (2001) discuss the type of knowledge that is managed through CoPs. Through the use of databases and other standard tools for knowledge management, explicit (or hard) data can be easily captured, recorded, and stored. Tacit knowledge (or soft data) is much more difficult to manage. Kimble et al. take the view that all knowledge is to some degree both hard and soft. They address a specific type of soft knowledge which they term internalized domain knowledge. They define this type of knowledge as, “skill, expertise and experience which has become second nature.” (p. 221). This type of information is typically shared through storytelling, or “war stories”, within the community. While this type of knowledge is difficult to store in the same manner as hard knowledge, it does become ingrained and stored within the intangible

fabric of the community. Kimble et al. suggests that this knowledge comes in three primary forms:

“Firstly there is the gathering of domain knowledge (for example how to solve a particularly tricky problem). Secondly, the construction of knowledge of work practices specific to the community (for example knowledge of the idiosyncrasies of an individual machine and how they are catered for). Finally, there is the knowledge that the community constructs about the competencies of its members (for example through the appraisal of their war stories).” (p. 223).

They maintain that CoPs are essential to the continuance of such knowledge as it is shared and exists through the relationships between members, especially as the members strengthen relationships and gain confidence in each other.

Additional benefits to the organization that I think are important to note are outlined by Lesser and Storck (2001) and result from the development of social capital that is facilitated by CoPs. These include a decrease in the learning curve of new employees, rapid response to customer needs and inquiries, reduction in rework, and an increase in new ideas for products and services. They elaborate on each of these in Table 2.

Table 2

Linking business outcomes with the dimensions of social capital

Lesser and Storck, 2001, p. 839

	Connections	Relationships	Common Context
Decrease learning curve	Find experts	Mentor and coach new employees	Understand rules of the firm
Increase customer responsiveness	Find individuals with similar experiences	Develop willingness to respond to random questions	Understand the common language
Reduce rework and prevent reinvention	Find artifacts and the individuals who developed them	Establish positive reputation	Understand situational nature of knowledge
Increase innovation	Leverage weak ties that provide exposure to new ideas	Build safe environment for brainstorming and testing new ideas	Understand which problems are of common interest

For the Individual

Ardichvili, Page and Wentling (2003) conducted a qualitative study investigating the motivations and barriers to individual participation in VCoPs. Ardichvili et al. surveyed 30 participants from 3 different virtual communities within Caterpillar Inc., a Fortune 100 corporation. Participants reported of multitude of benefits including (p. 71):

- “The system helps new people to more quickly integrate themselves into their new place of work and become productive faster”

- “The system provides various geographically dispersed units with a place to work together, and to communicate better”
- “Access to best practices”
- “Access to a Lessons Learned Database”
- “Timeliness of the information”
- “An easy link not only to one’s own community, but to other related communities and topics”
- “Increased efficiency of one’s work”
- “The system’s ability to provide benefits beyond specific solutions to immediate problems”
- “The system provides a space for jointly generating knowledge, not just capturing the existing knowledge”

Not only is this list of stated benefits useful for recruiting participants, it also gives me ideas of what should potentially be included within the VCoP I hope to establish such as a database or forum for best practices as well as lessons learned.

The Evolutionary Stages of the CoP

Gongla and Rizzuto (2001) developed an evolution model that depicts the various stages of development that are experienced by most CoPs. Five distinct stages, potential, building, engaged, active, and adaptive, were noted each with specific functions and characteristics as depicted in Table 3.

Table 3
Fundamental functions for the stages of evolution
 Gongla and Rizzuto, 2001, p. 846

	Potential Stage	Building Stage	Engaged Stage	Active Stage	Adaptive Stage
Fundamental Functions	Connection	Memory and context creation	Access and learning	Collaboration	Innovation and generation

They describe the potential stage as “prebirth”, it is just starting to form. The primary function here is to connect with each other to form a nucleus from which to grow. The next stage is the building stage, where the community begins to create things together such as defining what they want to be and what they want to do together. I believe our innovation group is in between these two stages. We first formed with the global summit earlier in the year, forming a very loosely bound group, and we are now, with my proposal, at the point of deciding that we want to be more and looking to engage others. The next stage is the engaged stage in which the community has a common and sustainable purpose, are building relationships, and learning from each other. Following that is the active stage in which the value of the community’s activities is fully realized, membership may be extended and collaboration is a key function of the group. The final stage is the adaptive stage. The authors hypothesize that this stage is rarely achieved by CoPs. At this stage the community innovates and generates and may begin to redefine itself and environment, or expand into new environments.

Gongla and Rizzuto suggest that the ability of a community to evolve and advance through these stages is dependent upon the forces of the people, processes, and technology that are supporting that community. They detail the characteristics of each of these elements for each of the stages in a series of tables. As I am most interested in those associated with the potential and building stages, I have included those tables below, Tables 4 and 5.

Table 4
Potential stage enablers that promote connection
 Gongla and Rizzuto, 2001, p. 849

Stage	Potential
Fundamental Function	Connection
People Behavior	Individuals find one another and link up The organization may be unaware of or uninterested in the potential community OR The organization may provide some support to locate and introduce individuals
Process Support	Identifying potential community members Locating potential community members Facilitating bringing individuals together
Enabling Technology	Electronic messaging systems: e-mail, chat rooms, lists Phone calls and teleconferences On-line forums On-line directories

Table 5
Building stage enablers that promote memory and context
 Gongla and Rizzuto, 2001, p. 850

Stage	Building
Fundamental Function	Memory and context
People Behavior	Core members: <ul style="list-style-type: none"> • Learn about each other • Share experiences and knowledge • Build common vocabulary • Create roles and norms • Begin a formal history together and record it • Start a repertoire of stories The organization recognizes the community
Process Support	Classifying and storing knowledge Developing ways to support the knowledge life cycle Planning for community operation Beginning deployment
Enabling Technology	Common repository Initial classification and categorization schema tools Document and library management systems Collaborative work environment

This information heavily guided the structure that I have suggested in the proposal for the VCoP of innovation professionals within my company (Appendix D); particularly the initial activities and technology.

Considerations for a Virtual CoP

Many of the CoPs discussed and evaluated in the literature are co-located. Several have investigated and reported on the challenges and needs of a virtual community of practice (VCoP) such as building the trust required to openly share information (Hildreth et al., 2000) and the fact that distance may

make it difficult to for members to remember that the community exists (Wenger, McDermott and Snyder, 2002). Dube, Bourhis and Jacob (2005), through an extensive literature search on existing VCoPs, developed a typology of the structural characteristics of VCoPs. The typology includes five categories, each with multiple elements as depicted in Table 6.

Table 6
Structural characteristics of VCoPs
 Based on Dube et al., 2005, p. 8-9

Structural Characteristics		Brief Definition
Basics	Orientation	VCoPs may be created for different purposes; some have strategic implications while others are created to increase operational efficiency.
	Life span	A VCoP can be assembled on a temporary basis (short life span) to accomplish a specific purpose (for instance, a response to an ad hoc environmental change), but is more often than not created on a permanent basis (long life span) with no definite time frame in mind, as an on-going mechanism for information sharing.
	Age	Age defines the period of time the VCoP has to experiment and to progress to a productive level.
	Level of maturity	Level of maturity refers to the phase reached by the VCoP
Organizational Context	Creation process	A VCoP can be deliberately established by management who will define its purpose and select key members (top-down approach) or can spontaneously emerge and be created by a number of interested members (bottom-up approach).
	Environment	Forces from the larger context include the characteristics of the environment, the culture and subcultures of the organization (or organizations) involved, the management style(s), and the whole political context.
	Resource availability	Describes the general availability of resources in the environment into which the VCoP is created.

Table 6
Structural characteristics of VCoPs (cont'd)
 Based on Dube et al., 2003, p. 8-9

	Degree of institutionalized formalism	Refers to the degree to which a VCoP has been integrated in to the formal structure of an organization. In a high degree of formalism, the VCoP has been fully integrated and considered a formal unit of the organization.
	Leadership	An organization can find it valuable to create a VCoP formal governance structure where individuals are appointed specific roles, or can leave roles and authority relationships to emerge through interaction around expertise.
Composition	Boundary Crossing	VCoPs are often created to break organizational silos and promote collaboration, learning, and information sharing. It is therefore common for VCoPs to cross boundaries across work groups, organizational units and even organizations.
	Cultural diversity	Cultural diversity is created by a mix of national, organizational, and professional cultures assembled into a VCoP. Refers to the level of cultural homogeneity in the VCoP.
Membership	Size	Refers to the number of members in the VCoP.
	Geographic dispersion	Refers to the physical location of the participants. In one VCoP, members may all be in the same building (low dispersion) while in another one, members may be scattered around the world (high dispersion).
	Membership stability	A VCoP can have an open membership whereby anyone can become a member and participate (ex. an Internet community) or a closed one (selected members only). Open or closed, membership may be relatively permanent, but can also have more fluidity.
	Members' enrollment	While members are more likely self-selected and volunteer to be part of a VCoP, members' participation can be "strongly" encouraged by management to the point where members do not feel free to turn down the proposition.
	Members' prior community experience	An existing network of individuals may be the basis of a new CoP or a new group of people can be assembled around a common interest.

Table 6
Structural characteristics of VCoPs (cont'd)
 Based on Dube et al., 2003, p. 8-9

	Topic's relevance to members	While day to day topics may vary, VCoPs are usually assigned a broad theme or objective that may be more or less relevant to its members' daily work.
Technology	Degree of reliance on information and computer technology (ICT)	While a CoP needs to be predominantly using ICT to be called "virtual", VCoPs may use technology to varying degrees.
	Members' ICT literacy	Refers to the level of comfort of members with technology

Dube et al.'s work illustrates the many factors involved in VCoPs as well as how different VCoPs can be from each other. Using this typology, they studied and characterized 17 different VCoPs to understand which factors at launching most impacted success. They found that two structural characteristics in particular that appear to affect the success of a VCoP. The first is the environment; those VCoPs with a facilitative or neutral environment were more likely to succeed than those with and obstructive environment. The second was the topic's relevance to members; those VCoPs with topics of high or moderate relevance to either the daily concerns of the individual or that of the organization overall were more likely to succeed. Both are important considerations when trying to establish a VCoP and recruit members.

Kimble, Hildreth and Wright (2001) point out additional challenges face by VCoPs. They note that relationship building is best done face-to-face and that

developing trust in a computer-mediated environment is difficult. This has two implications to the VCoP. One is that the sharing of soft knowledge, which typically happens via storytelling in the standard CoP and is one of the most touted benefits of CoPs, is less likely to happen in a low-trust environment. Additionally, strong relationships are important “for the members of the community to go the extra half mile for each other.” (p. 231). Kimble et al. stresses the importance of face to face communication when possible.

Kimble et al. also discovered the importance of a shared artifact as a conduit for participation and can aid in building trust and strong relationships. The shared artifact facilitates communication in that it can be the focus of meetings and communications, collaboration, and building bridges between communities.

The information I uncovered in the literature provided me what I needed to begin developing the framework for what a VCoP within my company should look like. The remaining sections of this paper outline that process.

SECTION THREE: PROCESS PLAN

Description of the Process

With the original intent of this project in mind, to evaluate and identify communication tools for a global innovation network, I deemed it necessary to first better define the network and gain an understanding from network participants regarding what they would like it to be. I started by soliciting input from my colleagues regarding specific needs and wishes for how we may function in a virtual world. I reached out to those that attended the Global Summit in March which was 30 individuals from 8 different countries; Australia, Canada, China, France, Mexico, South Africa, UK, and US. I found this moderately effective. From this inquiry I was able to cultivate a short list of needs and system requirements. Needs include:

- Project support – advice on projects, collaboration
- Communication of activities, successes, failures
- Process support – understand limitations, possibilities, modifications, additions, practice, etc
- Collaboration on new products – use of extra creative brains

System Requirements include:

- Security

- Stability – not going anywhere
- Simple and easy to use

However, while this helped define the activities and purpose of the group, this information alone was not sufficient in helping me to articulate what kind of network or group this is or should be and so I turned to the literature for assistance. Not knowing what other terms to use, I started by using the search term *virtual teams*. It turns out that virtual team is a broad term representing many different types of work groups with the main criteria being that it is a dispersed group that requires computer mediation. Most of the literature however focuses on groups and teams who have a shared goal with interdependent tasks and an endpoint that comes when tasks have been completed and the goal accomplished. None of this described the kind of group/network for which I was looking. Eventually, I picked up on a term that I had stumbled across a few times, *communities of practice*. This refers to a group that exists simply due to common interests and a desire to share knowledge. The literature on this topic is vast and rich. While reviewing information on communities of practice, I realized that I needed to rethink and shift the focus of my project. Instead of honing in on communication tools alone, I realized I should pay more attention to the larger format of the network with communication tools being one of many factors to consider.

During this time, I was also speaking with members of my company's Information Technology (IT) Department. Prior to this project, I was unaware of any technology currently available through my company that would provide the communication and knowledge sharing platform that I thought was needed for the VCoP. I originally thought identifying the appropriate technology would be the largest challenge in building this virtual network. I also knew that getting approval for new software (especially internet based software which is associated with increased security risks) through the company's highly bureaucratic IT group is a tedious, difficult, and often costly process. Based on precedent set by others within the company as well as some encouragement from my direct supervisors, I was open to exploring the option of going rogue to test out any new system with our global network. This of course would carry a degree of risk which would need assessment. Fortunately, none of this was necessary as the IT group had just purchased a new groupware system that had the capability to support the kind of communication and shared work that we needed for our VCoP. At the same time, I was realizing the need to shift the emphasis of my project from communication tools to network format. The discovery of this tool made that shift much easier.

The CoP literature is abundant with best practices and recommendations from experts. As I was reading, it was easy to begin formulating a proposal to more formally establish a community of practice for the global innovation

network. Using the common explanation of CoPs within the literature, I utilized the PPCO (Pluses, Potentials, Concerns, and Concerns) tool that I learned in my studies at Buffalo State to consider what might work regarding a virtual CoP within my company, what might not work, and how I might structure the VCoP in a way to overcome any of my thoughts regarding what might not work (Appendix B). This resulted in the construction of the first draft of the proposal complete, I sent it to a few of my colleagues within the network for feedback (Appendix C). Revisions were made with their input and a second draft (Appendix D) was issued to the larger group of current and potential network participants along with a survey (Appendix E) asking for comments regarding the pluses, potentials, and concerns of the proposed network format as well as to assess interest in core membership.

Timeline

<i>Week</i>	<i>Activity</i>
9/14	Write and submit concept paper draft
9/21, 28	Survey colleagues to understand their needs and wishes from a virtual network
10/5, 12	Literature review – <i>Virtual Teams</i>
10/19, 26	A redirection in literature review to information specific to <i>Communities of Practice</i> ; interview the company's IT

personnel to understand what technology may be available to support a VCoP.

- 11/2 Shift project focus from communication tools to network format
- 11/9 Utilize PPCO tool for use of general/standard VCoPs in context of my company; write proposal for a VCoP for innovation professionals within my company
- 11/16 Submit first draft of proposal to 5 colleagues for input; revise proposal; review proposal with a key member of the global leadership group
- 11/23, 12/30 Submit revised proposal to the larger community of innovation professionals within my company along with a survey for feedback; recruit core members for network; write manuscript
- 12/8 Print, bind, and mail manuscript; submit final by 12/12

SECTION FOUR: OUTCOMES

Introduction

The product resulting from this project is a proposed format for how a VCoP might work within my company for innovation professionals. This proposal has been constructed based on considerations and best practices found within the VCoP literature and with the input of my colleagues that will be involved in the community. The overall objective of the VCoP, as stated in the proposal, is:

To establish a framework for the company's Global Innovation Network that allows for sharing of process and information and that encourages a dialogue around these topics in an effort to connect the group and grow our innovation function and processes as a core competency for the company.

This proposal will be submitted to technical leadership within my company (the Global Technical Council) for approval. Once this occurs, the core membership can be finalized. That group will then own the VCoP and will determine the optimal structure and format using the proposal as a starting point and guide.

Description of the Final Product

The proposal outlines all of the critical components of a Virtual Community of Practice. The details were constructed with the company culture and the needs of the innovation network in mind. The network needs were those that were solicited from participants at the start of the project and include: project

support in the form of advice on projects and collaboration; communication of activities, successes, failures; process support specific to resource limitations, possibilities of use and growth, method modifications, addition of new tools, avenues for practicing new tools; collaboration on new products and access to additional creative brains; security of the system protecting proprietary and sensitive information; a stable technological platform; and a platform that is simple and easy to use.

The entire proposal is included as Appendix D. The following elaborates on the thinking behind each section in the proposal.

1. Overall Objective: This statement sets the tone and context for the rest.
2. Glossary: This is provided to give the reader a better understanding of the terms used in the proposal, specifically *communities of practice* and *action learning*.
3. Purpose: This section elaborates on the objective and speaks specifically to the kind of information intended to be shared as well as the ways in which the members may connect to progress as a group and grow the innovation function for the company.
4. Technology: As mentioned, this is new technology for my company. It is called Quicr. More information regarding the capabilities of this program can be found in Appendix F. As no one on the team will have had prior

experience with this technology there will be a learning curve and possibly some anxiety. Training has been included as one of the start-up activities.

5. Structure: The proposed structure includes 3 components, membership levels, roles and responsibilities, and activities.
 - Membership: Two options for membership are being suggested, core membership and subscripitive membership. Core members would have more responsibility than subscripitive and would be expected to be generally more engaged. Most likely, core members would be those that already have some degree of responsibility for innovation process or outcomes. Subscripitive membership is for those who have interest in the dialogue but may or may not have direct responsibility for innovation, or perhaps they are new or learning. In general, CoPs are voluntary and membership is based on interest and intrinsic motivation. Because this VCoP is new and being formally proposed, it will require time and energy by interested members to get it off the ground and to keep it going. It will be useful to formally designate who these members are and to set specific expectations. At the same time, I feel it important to keep membership open so that anyone with any degree of interest can join with the option to choose or vary their level of engagement as they wish. In this way the VCoP can help to support the company goal of encouraging a culture of creativity

as well as maintain access to a larger group of individuals for fresh ideas and input.

- Roles and responsibilities for core members: Because the start-up activities may be many and overwhelming, and to provide individuals opportunity for ownership and to make the mark on the community, specific roles within core membership will be useful and even necessary. This is also in keeping with the structure of another developmental organization that is a part of the company culture and very familiar to most employees.
- Community activities to encourage participation: Because time is a limited resource for all, and this format and network is new and unfamiliar, specific activities will help to gain and keep the momentum needed to sustain a network like this. They can also help to ensure growth of the network through focused knowledge sharing/building regarding process and methods. Otherwise, if left completely unstructured, there is a greater likelihood that the VCoP is underutilized.
- Support needed from Leadership: The primary need from leadership is to allow their respective employees the time needed to participate. This section also lays the seed for providing some sort of reward or incentive for core member participation down the road once the VCoP has demonstrated clear value.

Table 7 depicts how the anatomy of the proposed VCoP compares with the structural characteristics outlined by Dube et al. (2003).

Table 7
Expected Structural Characteristics of the Proposed VCoP
 Based on Dube et al., 2003, p. 8-9

Structural Characteristics	The Proposed VCoP	
Basics	Orientation	To increase operational efficiency
	Life span	N/A
	Age	N/A
	Level of maturity	N/A
Organizational Context	Creation process	Bottom-up approach (vs top-down)
	Environment	Facilitating (vs Neutral or Obstructive)
	Resource availability	Low to medium
	Degree of institutionalized formalism	Pilot vs formalized
Composition	Boundary crossing	Medium = across business units within the same organization
	Cultural diversity	Heterogeneous = high cultural diversity
Membership	Size	Small (less than 60)
	Geographic dispersion	High = around the world
	Membership stability	Open = new members may join anytime
	Members' enrollment	Voluntary = people freely agree to participate
	Members' prior community experience	Medium = many informal networks exist among members
	Topic's relevance to members	Medium to high = topic discussed in the VCoP is relevant to the daily work of most members
Technology	Degree of reliance on ICT	High = very few face-to-face meetings are (will be) held (less than six times a year)
	Members' ICT literacy	Medium = most members have average experience with ICT

Feedback on the proposal was obtained in two stages. First after the initial draft I solicited comments from 5 colleagues that I presumed would participate as core members of the VCoP. Their comments and suggestions were used to enhance and clarify the proposal, I have included their input in Appendix C. The revised proposal was then submitted to a larger group of potential members, primarily those that attended the Innovation Summit earlier in the year for feedback. I obtained this group's feedback via an internet survey. The survey and their responses are included in Appendix E.

SECTION FIVE: KEY LEARNINGS

Introduction

With this project and my new knowledge and understanding of CoPs, my eyes have opened to a whole new world and many exciting possibilities regarding my role and responsibilities. Discovering this opportunity to affect positive change in this strategic and global way is rejuvenating and deeply satisfying. I am excited and pleased that I am able to introduce this format to my company and am hopeful regarding the value it will bring to the innovation program, the overall organization, and to my colleagues.

Content

Domain relevant skills that I developed through work on this project include awareness of CoPs, a deep understanding of the elements that comprise a CoP, the activities involved, as well as the benefits provided to both the individual and the organization. Additionally, I have a good understanding of what can make a CoP effective and successful, at least as outlined in the literature.

Domain relevant skills from which I drew upon include process knowledge (regarding innovation/creativity) and an understanding of what kind of support and development would make me and other innovation professionals within my organization more effective and successful. Additionally, my experience with

group dynamics and working with individuals where no direct reporting structure exists provides me with an understanding of how certain structural elements may prove useful (such as creating a more formal governance structure) for a VCoP within my organization. Also useful was my ability to build relationships when needing to obtain input as well as to generate some excitement. This also provided me an opportunity to strengthen some of those relationships. Lastly, through my work, I have a good idea of the type of environment needed for collaboration, this has enabled me to generate many ideas regarding how we may set the tone for this type of environment upon launching.

Things that worked include having the flexibility to shift focus when new needs were realized along the way. Things I might do differently next time would definitely include allowing more time for literature review. I also may inquire more with others regarding where to look/how to search.

Process

Regarding process, domain relevant skills from which I drew upon include clarifying the challenge as it was clear shortly after I started that asking colleagues what the needed/desired from a network would not be enough to define the type of group we were and wanted to be. Gathering data from multiple sources provided me with the different perspective needed to clarify what was really needed for the project and for the group for which I wish to serve.

Additionally, use of PPCO for idea development once again proved to be a valuable tool for me.

Things that worked included use of PPCO to further develop the idea and generate ways/solutions for overcoming some of the challenges that seemed apparent. Obtaining feedback from interested parties and stakeholders helped me to shape and revise the VCoP structure and proposal into something much better than if I had not.

Things to do differently include sharing share objectives with colleagues sooner, had I realized how eager and excited some would be about this opportunity, I would have involved them much earlier. I would have liked to involve a few of them more directly in the idea development phase and in the construction of the proposal.

SECTION SIX: CONCLUSION

Introduction

I must admit that I am taken aback by the positive response and excitement that this project has generated from the members of leadership and the colleagues with which I have shared the outcome. While a lot of thought, time, and energy has gone into this work, the concept of the VCoP is a relatively simple one. It is clear to me now that change leadership can be simple, too. It can be as easy as having an idea and sharing it with a broader community outside of your direct work environment and team. A specific title or formal leadership position is not needed to do this. A well thought out idea and good intentions presented with humble confidence appears to go a long way in getting others' attention and gaining respect. It seems to be rare in corporate environments that individuals extend themselves and their thoughts beyond their designated jurisdiction. Based on my current experience, doing so can have an even greater impact than the actual idea itself. I find this to be an empowering and profound realization.

Next Steps

I have several intended next steps. Feedback is still coming in from the larger group of potential members. During the weeks following completion of this

project I hope to complete recruitment and finalize a list of foundational core members. The proposal will be revised as/if deemed necessary by the core members. The hope is that it can be submitted to the Global Technical Council for review and approval by the end of December. By then, the software should be available for use and we can begin with training in January. My goal would be to have norms and rules of engagement established by the end of 1st Quarter, '09 and in time for a Global Summit for Product Developers that will focus on health and wellness strategies. It would be great if the innovation network can contribute to that summit in some way. It would also be a good recruitment opportunity and time to open the network up for subscription membership. Is this spelled correctly?

If this VCoP proves effective, it could easily be a model for other groups to adopt that have a similar desire to share and build knowledge. This has the potential to build relationships within the company and across borders unlike any other previous efforts. Additionally, this provides an opportunity to establish new working and learning behaviors that invigorate employees and increase creativity and effectiveness of the overall organization through collaboration.

REFERENCES

- Ardichvili, A., Page, V. & Wentling, T. (2003). Motivation and barriers to participation in virtual knowledge-sharing communities of practice. *Journal of Knowledge Management*, 7 (1), 64-77. Retrieved November, 2008, from http://www.waterwiki.net/images/6/68/Motivation_and_barriers_to_participation_in_online_CoP.pdf
- Dube, L., Bourhis, A., & Real, J. (2005). The impact of structural characteristics on the launching of intentionally formed virtual communities of practice. *Journal of Organizational Change Management*, 18 (2), 145-166. Retrieved November, 2008, from <http://www.hec.ca/gresi/documents/cahier0309.pdf>
- Fontaine, M.A. & Millen, D.R. (2004). Understanding the benefits of impact of communities of practice. In Hildreth, P. & Kimble, C. (Eds.), *Knowledge Networks: Innovation through Communities of Practice* (pp. 1-13). New York: Idea Group Publishing. Retrieved November, 2008, from <http://www.igi-pub.com/downloads/excerpts/159140200XE.pdf>
- Gongla, P. & Rizzuto, C.R. (2001). Evolving communities of practice: IBM global services experience. *IBM Systems Journal*, 40 (4), 842-862. Retrieved November, 2008, from

<http://www.research.ibm.com/journal/sj/404/gongla.html>

Hildreth, P. & Kimble, C. (2000). Communities of practice in the distributed international environment. *Journal of Knowledge Management*, 4 (1), 27-38. Retrieved November, 2008, from

<http://arxiv.org/ftp/cs/papers/0101/0101012.pdf>

Hildreth, P.M., Kimble, C., & Wright, P. (1998). Computer mediated communications and communities of practice. Proceedings of *Ethicomp '98*, March 1998, Erasmus Universiy, The Netherlands, pp. 275-286. Retrieved November, 2008, from

SSRN: <http://ssrn.com/abstract=681184>

Kimble, C., Hildreth, P., & Wright, P. (2001). Communities of practice: Going virtual. In Malhotra, Y. (Ed.), *Knowledge Management and Business Model Innovation* (pp. 220-234), Hershey, PA: Idea Group Publishing. Retrieved November, 2008, from

http://books.google.com/books?hl=en&lr=&id=nAccO2bjrxwC&oi=fnd&pg=PA216&dq=%22Communities+of+practice:+Going+virtual%22&ots=4t_usaC4aZ&sig=NrlqDL_x7Wy4Tyxf7Xhwx_5RE3k

Lesser, E.L. & Storck, J. (2001). Communities of practice and organizational performance. *IBM Systems Journal* 40 (4), 831-841. Retrieved November, 2008, from

<http://www.research.ibm.com/journal/sj/404/lesser.html>

Wenger, E. (1998). Communities of practice: learning as a social system.

Systems Thinker, 9 (5), 1-10. Retrieved November, 2008, from

http://ewenger.com/pub/pub_systems_thinker_wrd.doc

Wenger, E., McDermott, R. A., & Snyder, W.M. (2002). The Challenge of

Distributed Communities. In *Cultivating communities of practice: A*

guide to managing knowledge (pp. 113-137). Boston, MA: Harvard

Business School Press. Retrieved November, 2008, from

<http://books.google.com/books?id=m1xZuNq9RygC&printsec=frontcover&dq=Cultivating+communities+of+practice&ei=Bv87SczoJaTmyATnprSADg#PPA117,M1>

Wenger, E. (2004). Knowledge management as a doughnut: shaping your

knowledge strategy through communities of practice. *Ivey Business*

Journal, London, Ontario. Retrieved November, 2008, from

<http://www.sc-eco.univ-nantes.fr/~tvallee/memoire/pratique/KNOWLEDGE%20MANAGEMENT%20AS%20A%20DOUGHNUT.pdf>

APPENDICES

Appendix A: Concept Paper

Appendix B: PPCO for use of a Virtual Community of Practice within my company

Appendix C: Qualitative feedback from 5 colleagues regarding the first draft of the proposal

Appendix D: Proposal for Establishing a Virtual Community of Practice

Appendix E: Survey and responses from the larger group of potential members regarding the proposal

Appendix F: A brochure detailing the capabilities and benefits of Quickr, the proposed technology

APPENDIX A

The Concept Paper

Evaluating Tools to Support a Global Network's Need to Communicate and Share Information Relevant to Creative Process

Name: Ami Henriques

Date Submitted: 09/18/08

Project Type: Using a Skill/Talent to Improve the Quality of Life for Others

For this project, I will utilize my knowledge gained regarding creativity, specifically process and environment, as well as my analytical skills to evaluate existing communication tools to support a global network that is focused on creativity and innovation processes.

Project Background and Description

Earlier this year, innovation professionals within my company from around the globe came together in the US for a summit on creative and innovation process. Given that this event is likely to occur no less than every two years, there is the need to establish a format that will allow the group to support and extend their learnings. For this project, I would like to evaluate existing tools that may support this effort. I hope at the conclusion of this project to be able to recommend a tool and a specific format for use by this global group.

Rationale for Choice

The global summit in March generated much enthusiasm and energy for our company's innovation process. My global counterparts were in varied stages of experience and understanding regarding creativity and process and all expressed interest and need in building on the momentum and continuing with the learning. Since the global summit, I have supported individuals on specific projects via email and phone calls, and learning something in return with each interaction. We do not currently have a sufficient format for extending these learnings and interactions to the entire group.

Not only is a tool/format needed for group communication, but also a depository for existing and future process tools and techniques. We currently have an internal database where we house process tools. However, this system lacks the ability for fluid communication and is cumbersome to use. We need the ability to communicate how we have modified and improved tools for specific applications or situations. Any communication tools identified through this project will either replace or work in

conjunction with the current database in use. As far as I am aware, there is no existing platform or portal, such as an intranet, within the organization that could support the kind of communication tool we need. The company does utilize an enterprise system that manages all business transactions, but not, from what I know, a format for communication and information sharing.

Ideally, the format will allow for just as rich an experience as if individuals were together in person. I am one who far prefers verbal communication over written and tend to have a different learning experience when using one communication style versus the other. I would like to identify a tool that can equally accommodate preferences for different communication styles.

Project Outcomes

With this project, I intend to identify and deliver a list and explanation of criteria for a successful global network format, a list of tools evaluated including the analysis of fit with criteria, and a recommendation of one format with an implementation plan.

Criteria Used To Measure The Effectiveness Of This Achievement

To determine criteria of the tool itself, I intend to solicit input from the participants of the global network. Success of this project will include collaboration with members of the network for criteria determination, development of tool/format criteria that accommodates more than one style of preferred communication, complete evaluation of 5-10 existing tools, a recommendation for 1 tool/format that meets a minimum of 75% of the success criteria determined from the group, and an implementation plan that can be executed within 3 months of project completion.

People Involved in the Project and My Role

The participants in this project include all current members of the global network. These members have a role in driving/executing innovation projects at their respective locations. This includes representatives from each of the following countries:

Australia

Canada

China

France

Mexico

South Africa

UK

US

I will gather their input from my colleagues within the network regarding their desires for

the ideal communication format. I will submit my recommendations at the end of the project to my supervisor and leadership team for final approval.

Project Timeframe

Phase one of the initiative will occur for the duration of the fall semester, 2008 and include the scope of this master's project. Phase two will focus on any customization or formatting of the preferred tools based on the needs and desires of the group and will occur during the winter months, December, 2008 through March, 2009. The final phase three will include a tentative launch of the tool by end of March, 2009.

Where This Project Will Occur

This project will occur in Hunt Valley, MD at the headquarters of a global food ingredients company.

The Importance of This Project

The project will be the first phase toward a format that allows colleagues from around the globe to interact in a way that allows them to share learnings from successes and failures of innovation projects and process, a place to share information learned through continued education and conferences, an opportunity to collaborate, and a depository for current and future process tools. Ideally, this format will allow us to maintain and hopefully build upon momentum that was generated earlier in the year and provide all members with support and stimulation to help grow our respective and collective competencies. Phase one is an essential part of the overall initiative because it facilitate obtaining input from critical stakeholders, identify needs and criteria, and will identify a solution that best fits the needs of the network.

Personal Learning Goals

Build and increase my knowledge of communication tools in existence.

Better understand the needs to support and sustain a network who's purpose is to share and learn creative process to fuel innovation.

Find a format/tool and possibly identify some strategies that will help me to overcome or compensate for my dislike of written communication with colleagues outside of specific project needs.

Strengthen my relationship with my global counterparts.

Support and extend my department's goal of cultivating a culture of creativity in our workplace.

Process Plan

The activities I will engage in to support this project include the following:

Surveying and talking with my colleagues within the network to better understand their interests and desires from a communication format/tool.

Literature review focusing on supporting creativity and activities of virtual teams and environments.

Identifying the success criteria by which I will evaluate network communication tools/formats.

Identifying and then evaluating at least 5 and up to 10 existing tools.

Understanding how/if any promising tools might be modified for the needs of the network.

If more than 1 promising tool presents itself throughout the evaluation process, I may present up to 3 options to my colleagues to obtain their feedback and preference.

I will make a final recommendation for a format (that might involve 1 or more tools) via a proposal to submit to my leadership. The proposal will also include a plan for implementation.

Evaluation

I will be asking for written and verbal feedback from my colleagues in which the network supports at 2-3 critical points throughout the process:

Initially when trying to determine criteria for format/tools

After evaluation and before final recommendations if I need to narrow down from 2-3 distinctly different but promising formats/tools

At the conclusion of the project feedback will be needed on the final recommendation as well as for any possible modifications/customization. Feedback will include:

Fit with criteria

Feasibility of use

Additional modifications needed

Possibilities for growth

I also intend to obtain feedback from my SBP, other cohorts, and professor at these points as well.

Prepare Project Timeline

	September		October					November				December
	14-20	21-27	28-4	5-11	12-18	19-25	26-1	2-8	9-15	16-22	23-29	30-6
Write and submit concept paper	6hr											
Survey Colleagues			10hr									
Literature Review			15hr									
Check-in with Sue				.5hr								
Identify Success Criteria				8hr								
Whole class chat					3hr							
Write and submit Chap 1-3							8hr					
Identify Tools							10hr					
Evaluate Tools							25hr					
Whole class chat/chat with Sue								3.5hr				
Consider modification of promising tools								10hr				
Obtain feedback on short list of tools									6hr			
Write and submit Chap 4-6										8hr		
Write proposal and final project											12hr	
Present to cohort												3hr
Chats with John Yeo, SBP	.5hr	.5hr	.5hr	.5hr	.5hr	.5hr	.5hr	.5hr	.5hr	.5hr	.5hr	.5hr

Pertinent Literature or Resources

Boule, M. (2008, January). Best Practices for Working in a Virtual Team Environment. *LibraryTechnology Reports*, 44(1), 28-31. Retrieved September 18, 2008, from Academic Search Premier database.

Butler, K. (2008, February). Virtual reality: Most teams work remotely, increasing need for different processes. *Employee Benefit News*, 22(2), 57-57. Retrieved September 18, 2008, from Business Source Premier database.

Calloway, J., & Awadzi, W. (2008, January). Trust, Communication, and Leadership Challenges in Virtual Teams. *Consortium Journal of Hospitality & Tourism*, 12(2), 25-32. Retrieved September 18, 2008, from Hospitality & Tourism Complete database.

- Ferrari, S. (1981, April). Creativity Training: A Cross Cultural Approach. *Journal of European Industrial Training*, 5(3), 8-10. Retrieved September 18, 2008, from Business Source Premier database.
- Hall, B. (2008, May). Building Exceptional Virtual Learning Teams. *Chief Learning Officer*, 7(5), 20-20. Retrieved September 18, 2008, from Business Source Premier database.
- Harville, D. (2007, September). Mastering Virtual Teams (3rd edition). *Personnel Psychology*, 60(3), 790-793. Retrieved September 18, 2008, doi:10.1111/j.1744-6570.2007.00091_9.x
- Janice, L. (2005, January). Creativity in Virtual Teams. *Training*, 42(1), 38-38. Retrieved September 18, 2008, from Business Source Premier database.
- Kelsey, K. (2008, January). A Review of: Teaching and Learning With Virtual Teams. *American Journal of Distance Education*, 22(1), 63-65. Retrieved September 18, 2008, doi: 10.1080/08923640701713455
- King, R. (2008, May 19). How Virtual Teams Can Succeed. *Business Week Online*, Retrieved September 18, 2008, from Academic Search Premier database.
- King, R. (2008, May 16). How Virtual Teams Can Succeed. *Business Week Online*, Retrieved September 18, 2008, from Academic Search Premier database.
- Levina, N., & Vaast, E. (2008, June). Innovation or Doing as Told? Status Differences and Overlapping Boundaries in Offshore Collaboration. *MIS Quarterly*, 32(2), 307-332. Retrieved September 18, 2008, from Academic Search Premier database.
- Lindgren, H., & Lindgren, F. (1965, October). Creativity, Brainstorming, and Orneriness: A Cross-Cultural Study. *Journal of Social Psychology*, 67(1), 23-30. Retrieved September 18, 2008, from SocINDEX with Full Text database.
- Liu, X., Magjuka, R., & Lee, S. (2008, September). The effects of cognitive thinking styles, trust, conflict management on online students' learning and virtual team performance. *British Journal of Educational Technology*, 39(5), 829-846. Retrieved September 18, 2008, doi: 10.1111/j.1467-8535.2007.00775.x
- Lubart, T. (1990, February). Creativity and Cross-Cultural Variation. *International Journal of Psychology*, 25(1), 39. Retrieved September 18, 2008, from Academic Search Premier database.
- Minkin, S. (2008, Spring2008). Implementing Virtual Teams. *Armed Forces Comptroller*, 53(2), 32-34. Retrieved September 18, 2008, from Business Source

Premier database.

- Monalisa, M., Daim, T., Mirani, F., Dash, P., Khamis, R., & Bhusari, V. (2008, July). Managing Global Design Teams. *Research Technology Management*, 51(4), 48-59. Retrieved September 18, 2008, from Business Source Premier database.
- Nemiro, J. (2002, January). The Creative Process in Virtual Teams. *Creativity Research Journal*, 14(1), 69-83. Retrieved September 18, 2008, from Academic Search Premier database.
- Osborn, M., & McNess, E. (2002, Summer2002). Teachers, creativity and the curriculum: a cross-cultural perspective. *Education Review*, 15(2), 79. Retrieved September 18, 2008, from Academic Search Premier database.
- Rudowicz, E. (2003, July). Creativity and Culture: a two way interaction. *Scandinavian Journal of Educational Research*, 47(3), 273. Retrieved September 18, 2008, from Academic Search Premier database.
- Singh, S. (1970, June). Creative Abilities: A Cross-Cultural Study. *Journal of Social Psychology*, 81(1), 125-126. Retrieved September 18, 2008, from SocINDEX with Full Text database.
- Tiscareno-Sato, G. (2006, October). Borrowing Brains. *Faces* (07491387), 23(2), 12-15. Retrieved September 18, 2008, from MasterFILE Premier database.
- Thomas, D., Bostrom, R., & Gouge, M. (2007, November). Making Knowledge Work in Virtual Teams. *Communications of the ACM*, 50(11), 85-90. Retrieved September 18, 2008, from Business Source Premier database.
- Tavčar, J., Žavbi, R., Verlinden, J., & Duhovnik, J. (2005, December). Skills for effective communication and work in global product development teams. *Journal of Engineering Design*, 16(6), 557-576. Retrieved September 18, 2008, doi:10.1080/09544820500273797
- Zakaria, N., Amelinckx, A., & Wilemon, D. (2004, March). Working Together Apart? Building a Knowledge-Sharing Culture for Global Virtual Teams. *Creativity & Innovation Management*, 13(1), 15-29. Retrieved September 18, 2008, doi:10.1111/j.1467-8691.2004.00290.x

APPENDIX B

**Summary of PPCO Regarding Member Usage/Participation of a VCoP
Within My Organization**

Summary of my PPCO regarding member usage/participation for a VCoP within my organization

<p>Pluses:</p> <ul style="list-style-type: none"> • A chance to connect dispersed members who have similar roles and responsibilities • Provide opportunities for growth and development for all • A chance to learn how others operate and about the best practices they've put in place – share case studies • A place to learn about new methods and tools others are using 	<p>Potentials:</p> <ul style="list-style-type: none"> • Possibility of troubleshooting – having others to “bounce” things off of • Webcast seminars, “lunch (or dinner or breakfast or snack) & learns” • Possibility of collaborating on like customers/projects • Potentials to advance and grow the process and methods
<p>Concerns:</p> <ul style="list-style-type: none"> • H2 deal with learning curve with new technology • HMW have time for participation • HMW build trust and get to know members on-line • H2 encourage participation 	<p>Overcome:</p> <ul style="list-style-type: none"> • Provide time for training, try joint training and opportunities for practice • Obtain leadership approval for members to spend time on VCoP • Obtain leadership sponsor to be an advocate for the group • Have virtual ice-breakers periodically • Consider utilizing the SBP format in some way • Establishing formal roles may help here, perhaps the roles can rotate yearly – similar to the MMB IBC • Scheduled meetings on a regular/consistent basis – monthly? • Special projects may help as well – the challenge will be keeping anything like this manageable re: time and ensuring that it will add value to members and the organization

APPENDIX C

Feedback From Colleagues Regarding The First Draft Of The Proposal

Feedback from first draft of proposal

(n=5)

Colleague #1

Location: UK

"Looks good to me. I would be very happy to be involved.

Personally, I would want to formally include some commercial support within the "supportive membership". As we don't (yet) have a VP of Technical / R&D, we all report through commercial lines here. I guess this is also the case with other global units.

We are lucky here in the UK that the commercial guys do see a real benefit from Create IT style development programmes. As these kind of knowledge networks require a lot more effort to set up and maintain than people think, folks must be allowed time in their schedules to dedicate to them. Otherwise, they run the risk of falling by the way."

Hopefully speak soon,

Colleague #2

Location: Canada

"I just completed reading the document, here are some thoughts and concerns.

English being a second language, I found the information somewhat difficult to navigate thought due to the combination of definitions, process benefits, my only recommendation would be to maybe separate the definitions from the content.

overall feedback

I think the concept is so valid and a great way for us to maximize the benefits and implementation of Create it. many times the options to better exchange best practices has been communicated and the richness of the content has been expressed as well as the benefit it could offer to all the countries involved

concerns:

I think if the tool can be simple enough to navigate and regular meetings scheduled (ie monthly perhaps), I believe everyone would take the time to participate-at least I would. I do think that these 2 factors will make or break the effectiveness since time is always an issue, therefore if it is a regular commitment it makes everyone that much more accountable.

Also the outcome for everyone in getting insights, learnings from it- I would think people would commit their time. I guess the success is based just like the create it summit on everyone participation and commitment to getting something out of it. That being said, I also believe you would need to get the management team of each country to endorse it and make sure that it is part of their agenda.....

benefits:

I would recommend adding the value this would bring from an effectiveness perspective for the management teams that always have that priority front and center (kind of the what is in it for everyone else)

1. Sharing of tools
2. process efficiency
3. maximize resource efficiency
4. Global customer alignment
5. Leverage global innovation for customer impact.....”

Colleague #3

Location: US

“I think it is a great idea!

Thanks for letting me get a sneak peek! I have heard other rumblings of a LN enhancement for team sharing (beyond the team rooms). I am excited to check it out once it launches! Here is the draft with my thoughts embedded. Feel free to use or lose!

- Do we also need support for the resources (time) needed to be an active member? I am guessing not as time intensive as MMB, but perhaps close to that in order to really make it all it can be. Is there (should there be) some reassurance that the efforts will be global, multi-directional? In other words, will there be benefits to all? Certainly not equal all the time, but give and take throughout. Hard to monitor and measure, but thinking out loud...
- Speaking of measure...how do we gauge success of the coLABatory (LOVE the name, btw!) It may make sense to create a membership position of Historian (weak name, maybe “Metrics Master,” “Success Tally Taker,” “Creativity Reporter?”) Ok – also all with major flaws, but I hope you see where I am going! that collates when shared tips have been effectively used?

Addressing Security Concern:

Rules of Engagement would be established to eliminate the possibility of sensitive, project-specific information being shared while a project is still underway, and including until a specified time period has elapsed. (I am a firm believer that whatever we do for ANY client should be fair game to any all if the original client doesn’t move forward with it. Maybe a year? I am not the final word on this by any means, but it has always bothered me. Figured I may as well vent it here while the concept is being defined!)”

Colleague #4

Location: Australia

“The proposal looks great !! I think it will be an excellent communication tool and fabulous to have structured activities. In particular, I think the scheduled times throughout the year for a specific activity / interaction will be great for us as we have found in the past we focus on Create It intently for 2 months and then leave it for 6 months and then feel like we're learning it all over again. For us in Australia I think it

will have the potential to link us up to other smaller units that are adapting the methodology to suit their needs. My only concern is getting training on the technology.

Anyway, I look forward to hearing more about it.”

Supervisor

Location: US

“LOVE, LOVE, LOVE IT. I like that it puts structure to what we need to be doing. I definitely like the MMBish reference and think that can be a key selling point. Down the road I think that being able to solicit projects for the LAB to work on would be fantastic, whether they come from GTC or any area of the biz.

What is the Quickr software that is being tested?”

APPENDIX D

Proposal to Establish a VCoP Within My Company

Proposal to Establish the Create IT® collABoratory:
A Virtual Community of Practice (VCoP) that employs elements of Action Learning

Overall Objective: To establish a framework for the Global Create IT® Network that allows for sharing of process and information and that encourages a dialogue around these topics in an effort to connect the group and grow Create IT® as a core competency for company.

Glossary

Communities of Practice (CoP): “a group of people informally bound together by shared expertise and passion for a joint enterprise,”¹ or similarly, as a collection of individuals bound by informal relationships that share similar worked roles and a common context².

When virtual, they have also been referred to as “Knowledge Networks” which is described as:

“Knowledge networking is an effective way of combining individuals’ knowledge and skills in the pursuit of personal and organizational objectives.

Knowledge networking is not easy to define or describe. It is a rich and dynamic phenomenon in which knowledge is shared, developed and evolved. It is more than access to information, because it also delves into the unknown. It is more than using the rules and inferences of expert systems, because it is about knowledge that is evolving.”³

Action Learning (aka Project Based Learning): “A process of reflecting on one’s work and beliefs in the supportive/ confrontational environment of one’s peers for the purpose of gaining new insights and resolving real business and community problems in real time”. Much like the MMB approach, participants are working in teams to solve problems and answer questions relevant to their business environment.

1. E.C. Wenger & W.M. Snyder, “Communities of Practice: the Organizational Frontier,” *Harvard Business Review* 78, No. 1, 139-145.

2. P. Gongla & C.R. Rizzuto, “Evolving communities of practice: IBM Global Services Experience,” *IBM Systems Journal* 40, No. 4, 842-862.

3. D. Skyrme, “Knowledge Networking” Website: *Knowledge Connections*, David Skyrme Associates, www.skyrme.com/insights/10knet.htm

Introduction:

The proposed Create IT® colLABoratory would be a hybrid combining the principles of CoP with an Action Learning approach for core members. Interaction would primarily be electronically mediated and supplemented with face-to-face meetings whenever and as often as possible. Face-to-face might happen via Summits, cross-training, joint attendance at creativity/innovation conferences or courses, or through participation in select customer events.

The following sections outline additional details regarding how the colLABoratory may be structured, the benefits it may provide, as well as the resources that will be needed.

Purpose:

To provide a channel for:

- The creation, accumulation, and diffusion of knowledge
(Definition of diffusion: The spread of linguistic or cultural practices or innovations within a community or from one community to another)
- Moving information, such as best practices, tips, or feedback across organizational boundaries
- Discussing novel ideas, working together on problems, and to keep up with developments inside and outside of the company
- Bringing and keeping the company on the forefront of innovation and fuzzy front end practices.

Technology: Using groupware technology that is currently being tested/evaluated for use at the company. It is called Quickr and is an add-on for Lotus Notes. The system provides a user friendly platform for:

- discussions/forums
- storage (document repository)
- knowledge building (using wiki technology)
- application sharing (useful when collaborating on documents/materials)

Who: All pertinent Create IT® personnel from all global locations as well as any others who have interest.

Why: Benefits include:

- Support and professional development for individuals responsible for using and advancing Create IT® Process and Methods
“In their business units, they shape the organization. In their teams, they take care of projects. In their networks, they form relationships. And in their communities of practice, they develop the knowledge that lets them do these other tasks.” (cite)
- Knowledge management: a repository for explicit knowledge/info as well as a place to share and discuss tacit knowledge

- Better ability for the company to stay current and cutting edge with process and resources

Community Structure:

The network hub is a place for dialogue and an exchange of information in the form of questions, advice, best practices, tips, etc.

To encourage and support this dialogue, as well as to advance the learnings of the individuals, group, and greater organization, the following membership format is proposed:

2 Levels of Membership:

- **Core membership** (ideally at least 1-2 reps from each geographic location)
Responsible for further defining the activities and interactions of the network
Responsible for administration and maintenance of the network; to promote participation and advancement, assign key roles that may rotate by year and by location (a rotation schedule may be created in advance for this); key roles to be determined by membership, however, roles to consider may include:
 - Chair/Leader/Manager – responsible for the overall guidance and management of the VCoP, builds and maintains the VCoP, encourages participation, helps direct attention on important issues and brings new ideas to energize the VCoP if required
 - Secretary – Updates membership and contact information, keeps calendar up to date with pertinent info
 - Communications – (may be shared by 2 or more members) Responsible for communications with GTC and others outside of network such as PD, Marketing, etc
 - Membership Development – (may be shared by 2 or more members) Coordinates webinars, guest speakers, etc.; Welcomes/orients new members
 - Special Projects – May be recruited as needed versus a continuous role
 - Sponsor – from GTC, could also be a rotating role – this person is the liaison between GTC and colLABoratory – connect to business strategy, help to obtain resources as needed
- **Subscriptive membership**
This would be for those interested in the group’s activities and the knowledge shared, they may have dotted line to Create IT® process/methods but not direct responsibility, they may be willing to provide input as appropriate/needed and as often as they like but they may also simply observe from the “periphery”

Activities:

- Dialogue can occur on an on-going and continuous basis with minimal, if any, moderation

- Core membership may choose to also facilitate additional activities. Examples may include:
 - 1 case study per year from each location
 - Coordinate activities for International Creativity Week
 - As needed, the core members may choose to schedule times throughout the year for specific activity/interaction – i.e. 4 times a year, a kick-off/introduction, two times for special projects, and a closing “meeting”
 - Plans future Create IT® Summits
 - Special “projects” to practice methods/process such as global immersions, online mapping or ideation, etc.

Initial activities of the colLABoratory:

First 3-4 months

- Identify core members
 - Determine if any limits/guidelines are needed for core membership (i.e. limit to 2-3 core members per location, etc)
- Hone objective(s) of the network
- Provide training on technology
- Identify and assign appropriate roles
- Determine scope and structure for activities (if needed)
- Determine norms/guidelines/rules of engagement for interactions
 - This includes security and establishing/maintaining appropriate firewalls to eliminate the possibility of sensitive, project-specific information being shared while a project is still underway and including until a specified time period has elapsed.
- Determine how best to track activity and successes over time

Special Projects:

Once the colLABoratory has established norms and is fully operational, they may choose to take on special projects to advance learning and the global program. Ideally, the outcomes of these projects would benefit more than those involved in the community.

Examples may include:

- Coordinating a global immersion on a specific topic
- Exploring potential use of Quicker with customers
- Identifying/testing new methods

Support needed from GTC:

- Allow members time during work hours to participate
- Resources – primarily help securing use of the technology
- Rewards/incentives/recognition for core members – possibilities: opportunities for attendance at creativity/innovation professional meetings, work rotation/cross-training or global exposure of some sort, summit attendance, performance appraisal – leadership
- Recognize contributions and promoting actively the VCoPs successes

- Communication of strategy/goals/efforts

Future Potential Enhancement:

Use of the colLABoratory for customer projects

APPENDIX E

**Survey and Responses from Larger Group of Potential Members Regarding
the Proposal**

Create IT® coLABoratory Feedback

After reading the proposal to establish the Create IT® coLABoratory, please take a few minutes to answer the following questions. Your responses will be used strengthen the proposal as well as to identify the appropriate individuals to involve in the creation of the network should it be approved.

1

Do you have any questions regarding the proposed network or the proposal? Is anything confusing?

2

After reading the proposal, what **PLUSES** come to mind? (i.e. what's good about it, why should we establish the network, why will it work?)

3

What additional **POTENTIALS** come to mind? (i.e. where could this go or lead to, what good things might come out of this?)

4

What **CONCERNS** do you have about the network, especially if you were to be a member? (i.e. what might be bad about the network as it is currently outlined, why won't it work?)

If you have any suggestions for how to overcome your concerns, please include those as well.

5

If approved by leadership, are you interested in being a **CORE MEMBER** of this network (vs a SUBSCRIPTIVE MEMBER)?

As a core member, you would be involved in the start-up activities as well as keeping the dialogue going on a continual basis. *This would ideally involve **no more than 1-3 hours per week**.*

Yes

Maybe

No

Other, please specify

6

Are there any other McCormick employees that you think should be a **CORE MEMBER**, or would be interested in core membership?

7

Who do you think might be interested in **SUBSCRIPTIVE** membership?

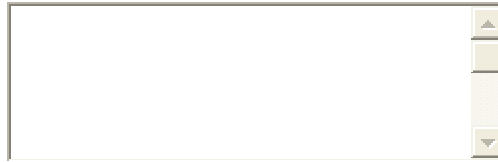
8

Please include your name, **ESPECIALLY** if you indicated interest in CORE membership...otherwise I have no way of tracking you down.

Name	<input type="text"/>
Job Title	<input type="text"/>
Supervisor	<input type="text"/>

9

Any additional comments?



Survey Results

(n=7)

- These results do not include the 5 colleagues who provided feedback on the first draft, I have spoken with them either by phone or email since and all have committed to core membership.
- There are about 15 outstanding surveys at the time of publications, several have asked for more time to review and consider and some have been out of the office. I expect that at least 9 others will express interest core memberships and the rest I imagine subscripitive membership.

Questions
Is there going to be a president of this team like the MMB that will administrate and communicate with all divisions?
No. All seems clear.
no
I am not sure about some of the technologies: wiki, QuickR,
No
No,I think that it was pretty clear and detailed.
How will we keep it up to date? Purge old info? Security?
Pluses
reduce the time to answer the innovation problems
Create It it's a great tool for innovation. Having a communication channel with other countries that parctice this same method would be very nourishing and will be part of becoming a global company.
Anything that helps the flow of information and sharing of ideas must be good!
with proven business contribution via Create IT established, it only makes sense to keep all units informed of progress, pitfalls, new info etc.

great way to gain knowledge and get "training" without spending a lot of money. We have lots of expertise here and it would be good to share that knowledge. If you don't use it, you lose it and this would be a way to stay current even if you don't use CreateIT every day
1.A repository for explicit knowledge/info as well as a place to share and discuss tacit knowledge. 2.Discussing novel ideas, working together on problems, and to keep up with developments inside and outside of the company.
It will build a sense of community between the various sites using Create IT. It will serve as a common place to share ideas and ask questions and it will enable us to build off of one another's experiences. For those of us who don't use Create IT regularly, it's a good way to stay informed.
Sharing, idea building, help, cross training, learn from others
Potentials
To create a community that shares success stories, best practices and experiences about a process that has no boundaries and it's a great tool to offer new ideas and perspectives for challenging times
Create a wider forum for debating general business benefits of Create IT, rather than just executional practicalities.
use CreateIT as a source of revenue like the consumer testing facility. could end up publishing papers and getting industry recognition for what is being done. have a much better trained/confident group of CreateIT facilitators world wide.
As mentioned above, it would provide a stronger sense of being one and would open up communication.
Global customer enhancement, leadership and skills development, prove the process on a larger scale, re-invigorate the weary, call on others for assistance/help
Concerns
Whether I apply correct the method in my area
To have a community and members fully compromised with continuous feedback and information shared.
Confidentiality is very important but also sharing information is the basis for this community. How this is going to be handled
Must not be seen as an easy alternative to personal contact via phone or face to face. Otherwise, I don't have any concerns.
There is no info provided on financial investment for Quickr, other IT costs - so cost/benefit can't be weighed. I assume there is more cost involved than a team room? Also - very good to mention setting performance measures as one of the first steps - a bit tricky, I imagine.
concern that there might not be support from individual units on an ongoing basis. Initially, it would probably take a lot of time to set up and don't know how much time people could devote unless it was part of their job description. Might have to have a week set aside to have a team work on getting a big chunk done all at once rather than individually by bits and pieces as it works in the schedule. Another concern would be the focus. Would it be mainly for industrial customers or equally for retail?
1.How it could be managed well while you have a lot of urgent/general daily work. 2.How it could be made more helpful for matching the different countries' needs.
Lack of participation -either because of low interest or not having enough time to commit to the network.

Staying on top of what is there, staying on top of what I need to input, clutter and noise, confidentiality, organization of data so that it is usable, not just another PC file
Core Membership?
Maybe
Yes
Yes
No - I'd like subscriptive membership
Maybe - A lot would depend on the time commitment
Yes
Maybe
Yes
Additional Comments
This is a great idea, Congratulations!
All looks good to me.
I took a stab at the objective after re-reading it several times. To my mind- this wording is better:
To establish a Global Create IT® Network that facilitates dialogue around process and information, resulting in a connected team who continue to build Create IT® as a core competency within -----.
I think to make it work, you would need commitment from all units. As CPD does not have anyone specifically assigned to CreateIT, I would think a commitment would have to be obtained from Rick before anyone from technical could participate. I would be interested in participating, but only if there was commitment from management to do so.
I'm definitely interested in helping with this project but depending on when this gets started, it might be better for me to wait until the second term of members are selected. Potentially I could be somewhere in between a core and subscriptive member for the first year.
Great job - does this meet all the needs expressed at the summit?

APPENDIX F

**Brochure Detailing Capabilities and Benefits of Quickr, the Proposed
Technology**

Collaboration solutions
To support your business objectives

Lotus. software



Taking team collaboration to the next level ... IBM Lotus Quickr software.

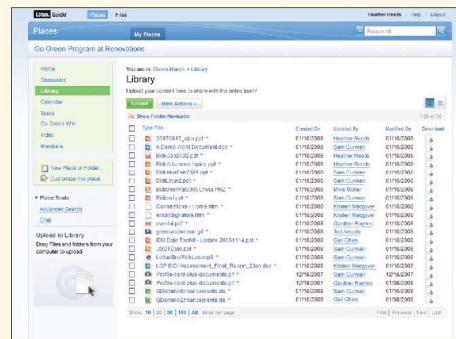
Coordination across time zones, organizations and networks has never been easier—or faster.



IBM Lotus® Quickr™ team collaboration software is designed to transform the way work groups work together on projects and share everyday content—such as documents and rich media. Lotus Quickr software supports teams inside or outside the company firewall—making it simple to use with customer, partner or supplier teams as well as with internal department or project teams.

Content libraries

Content libraries help you easily organize and share content for your projects, your teams or yourself. You can quickly set up content libraries for all your documents and rich media files. Use check-in and check-out, version control and other tools to help manage content.

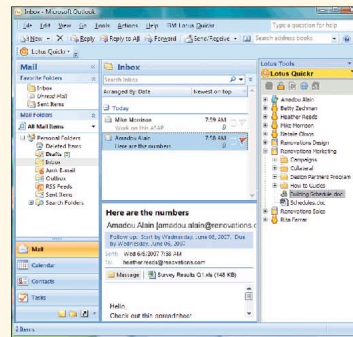


Early reactions

- "This works like your mind thinks!"*
— Line-of-business executive
- "This brings the collaboration and the content together in one place, and it really amplifies the scalability of whatever project you are doing."*
— IT executive
- "It's the best of multiple worlds all brought together."*
— IT executive
- "This is great! It gives us a way to easily share ideas. You don't have to be a techie to use this—sales and marketing people could use this easily."*
— Line-of-business executive
- "This technology is not just supportive—in a way it becomes a member of the team!"*
— IT executive
- "This product has some really original features—and drag and drop, believe it or not, is one. The reminder when attempting to send an e-mail with an attachment is nice. Add in expertise formally and informally, as it evolves over time, and it can become a source for valuable information, searchable information as well. I like the looks too."*
— IT executive
- "This [Lotus Quickr software] is enterprise scalable."*
— IT executive

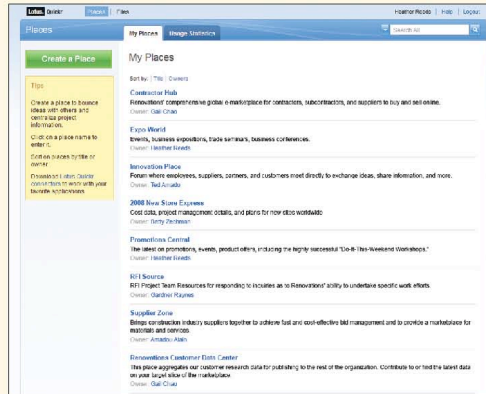
Access content in Lotus Quickr libraries right from your favorite applications:

- Microsoft® Office software
- IBM Lotus Sametime® software
- Microsoft Outlook software
- IBM Lotus Symphony software
- IBM Lotus Notes® software
- Microsoft Windows® Explorer software and more!



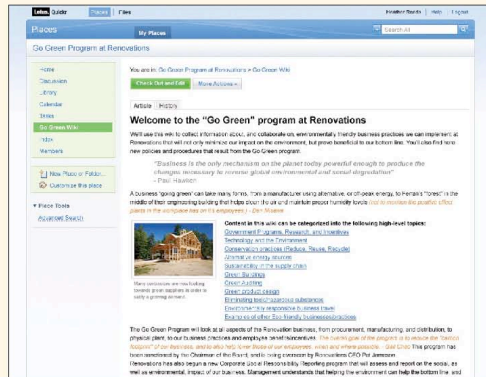
Team places

Creating a Lotus Quickr team place is easy for anyone to do. You just follow the do-it-yourself guide from the Lotus Quickr home page, or you can use the ready-to-use templates.



Customize your place with:

- Team blogs
- Wikis
- Team calendars
- Discussion forums
- Other collaboration tools for managing projects

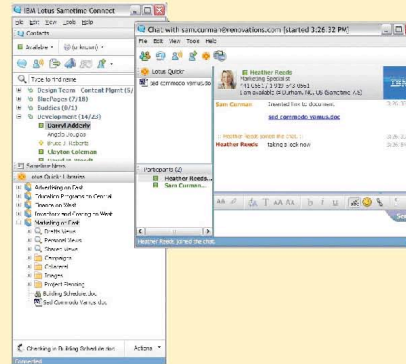


Connectors

Lotus Quickr connectors provide easy integration with the applications that people use every day. You can access content and collaborate from where you are without switching applications.



With a simple click, you can move a Lotus Notes or Microsoft Outlook attachment to a Lotus Quickr library and send a link instead of large e-mail files.



Lotus Sametime users can exchange links to Lotus Quickr content and collaborate right from an instant messaging session.

Microsoft Office or Lotus Symphony users can just as easily check documents in and out of the Lotus Quickr content libraries and more!

For more information

To learn more about IBM Lotus Quickr software, please visit:

ibm.com/lotus/quickr



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LOF10861-USEN-01