



Communities at work

Communities of Practice: Making the most of intellectual capital

A software specialist is at her wit's end. Her customer is using a program designed for the music industry. Unfortunately, the system that the customer has been using randomly shuts down. Despite repeated calls to the help desk, intermittent failures continue to occur. The software specialist shares her frustration during a weekly on-line chat session with other repair specialists. An e-mail from halfway around the world brings the answer in the form of a question: Is this software being run on a computer that is physically located inside the recording studio? Quizzically, she responds in the affirmative. She is told to check the location where the network server is installed. Likely, if anyone touches the server rack inside the studio, the static electricity generated by the encounter will cause the system to re-boot. Armed with this knowledge, she heads back to the client site, more confident in her ability to solve the problem.

In an environment where the ability to respond quickly and accurately to customer issues is a key yardstick for success, an organization must be able to find ways of tapping into its most important resource: its intellectual capital. This intellectual capital often comes in a number of different forms: it can be written down and stored in a variety of paper or electronic media woven into the organization's processes, practices and procedures or maintained in the heads of individuals, networks and groups. Many organizations, recognizing the importance of being able to take advantage of this intellectual capital have undertaken a range of projects designed to better identify, locate and share knowledge across the organization. Many of these efforts have focused on employing a number of technology solutions, such as the implementations of intranets, groupware applications and portals. Many of these types of efforts have focused on providing easy access to individuals attempting to search across multiple structured repositories of documented, or explicit knowledge.

Introduction

While on the surface, these efforts seem to be well intentioned, many times these technologically driven solutions are not sufficient to address the needs of organizations looking to improve the use of their knowledge assets.

Challenges that we see in these types of efforts include:

- *There are no resources in place to structure and update the content that is captured in repositories.* As a result, the content in the repository is either difficult to find, or quickly becomes out of date. Users of such systems quickly become frustrated at their inability to find relevant materials and rarely return to the site.
- *Individuals are reluctant to contribute content.* In many situations, employees are reluctant to take the time and effort to post documents to a repository. They are often unsure that they will be recognized for their contribution, that the knowledge they post will be used appropriately, and that others will submit content that is relevant to their own needs.
- *There are no mechanisms for validating content.* Just because individuals have access to content doesn't ensure that the content is either correct or relevant. In many ways, the intranets of many firms resemble the larger Internet as a whole: occasionally there are valuable nuggets of material mixed in with large amounts of self-aggrandizement and questionable insights.
- *The materials in the repository do not contain enough context to make them relevant.* Often times, documents alone do not carry sufficient background and meaning to effectively transfer knowledge. Often times, without a detailed understanding of how the knowledge was developed, under what conditions the knowledge was created and why the knowledge was important, it is extremely difficult to make practical use out of any sort of documentation. Any novice of home repair or assembling toys realizes the importance of being able to communicate the subtleties that are often lost when knowledge is committed to paper.

To overcome these various challenges, we have found one particular strategy that is valuable in effectively managing intellectual capital: the identification and support of informal groups of individuals who have similar work related activities and interests. These “communities of practice,” (or CoPs) that exist within formal organizational structures of many companies, play a key role in ensuring the effective creation, sharing and use of intellectual capital within organizations. Many organizations, ranging from the World Bank to IBM, have begun to actively foster and support these communities so that they can more effectively take advantage of their knowledge assets. Recent articles in academic and popular business literature have added additional credence and focus to this important topic.

Communities of practice differ significantly from other types of organizational forms and structures. Being primarily informal, the membership of these communities often fluctuates, in terms of both the number of participants and the level of intensity in which people partake in community activities. Further, communities tend to emerge from existing networks of individuals, often crossing traditional organizational boundaries. In addition, communities tend not to have direct responsibility for a production of a specific deliverable within a given time span, as a typical project team would. Rather, the community tends to set its own agenda over its own lifespan, continually defining itself by the needs of its members. Communities typically take part in a number of formal and informal activities, ranging from education sessions and conferences to day-to-day interaction designed to solve specific work problems.



Communities of practice to the rescue

As part of research conducted by The IBM Institute for Knowledge Management, Lotus Research and Boston University, we have looked at a number of communities of practice across different industries. Through our analysis of these communities, we have identified four critical areas where communities can help companies use their intellectual capital and contribute to business results:

Making it easier to reuse tangible knowledge assets.

Communities can help make it easier for individuals to share explicit forms of knowledge. While many communities use repository-based systems to create a shared “place” where individuals can find examples of tools, past proposals, presentations and the like, they also ensure that the repository actually serves the community needs. First, communities can help serve as a vetting mechanism by sorting through and filtering content that is placed in a repository to ensure that the material is valuable to others. In many of the communities we examined, members served as content moderators and facilitators, actively soliciting contribution from members and identify-

ing the relevant meta-data that made it easier to search and locate documents. Perhaps, more importantly, many of these communities sponsored face-to-face meetings where individuals were able to get to know other practitioners and develop the sense of trust and mutual obligation that is critical to encourage contribution among individuals. These face-to-face meetings also served as forum to recognize the contribution of others and highlight the value of reuse of intellectual capital.

Responding quickly to customer needs.

Communities serve a valuable function in being able to help organizations react to customer inquiries. They are useful in quickly identify individuals with the right subject matter expertise necessary to provide the best answer to a client problem. This is especially important in organizations where the expertise needed to solve a client problem may be separated by time zones, distance and/or organizational boundaries. Through both face-to-face and virtual interactions, the knowledge of individuals in the community becomes more visible. This visibility can play

a significant role in reducing the search time and costs associated with finding the right expert. Communities can also foster a sense of “connection” between members that will make it more likely for someone to return an e-mail or phone call from someone looking for a particular type of knowledge.

Decreasing the learning curve of new employees.

A challenge faced by many organizations is the need to quickly increase the productivity of new employees. As employee mobility continues to increase, the ability to get someone “plugged in” to the new methods, tools and activities of their position represents an important capability. In the companies we examined, we found that communities of practice were quite valuable in helping newcomers identify subject matter experts who could answer questions and guide them to resources within the organization. Further, the community served as a forum for the development of mentoring relationships between more junior employees and established practitio-

ners. CoP's also played an important role in helping new employees understand how their role fit within a larger organizational context—how their job impacted other individuals and processes.

Spawning new ideas for products and services.

In many organizations that we examined, the community provided an important spark for innovation. The community of practice provided a forum where individuals could share perspectives on a variety of topics. For example, software engineers who worked with different segments often got together to share ideas about potential fixes and ideas for new software programs. The community also provides a safe environment in which people were willing to bounce ideas off each other and ask difficult questions without the normal pressures of day-to-day performance. Individuals appeared to be more forthcoming in environments where they recognize that others have faced similar situations and are willing to contribute potential ideas and solutions.



Making communities successful

Through our research on this topic, we have identified a number of important areas where organizations should focus to enable communities to better manage their intellectual capital. While each community is unique in the types of organizational support it requires, there are some general guidelines that can be applied in many situations:

Focus resources on communities that have strategic implications for the organization.

In many large organizations, there could potentially be dozens, if not hundreds of communities of practice that currently exist. However, it is unlikely that an organization will be able to fund and support the needs of all of the communities. Companies that decide to invest in communities of practice need to closely examine which communities could have the greatest impact on the organization's business goals. For example, a pharmaceutical

company that derives the greatest part of its income from the creation of new drugs might choose to support communities related to specific research and development initiatives. Other organizations might decide to fund communities that are based on specific customer segments, or geographic regions. In either situation, an organization should develop an understanding of the types of knowledge that are critical to achieving strategic business objectives and focus resources on those communities that are most likely to provide and take advantage of that knowledge.

Provide the community with time and space to interact.

Communities, like most knowledge management initiatives, require some investment to facilitate knowledge sharing and use. Formal organizations can support CoP's by providing them with the resources to enable com-

munity members to get to know each other and build the social capital necessary to effectively share knowledge. Companies can provide funding to enable community meetings such as brown bag lunches, training sessions and community forums. The organization can also provide the technology that allows for the establishment of “virtual places” where communities can store documents, hold synchronous and asynchronous discussions, “Web seminars” and other events where community members can get to know each other and engage in discussion. Perhaps most important is to ensure that individuals have the time to participate in community events, and recognize that a small investment in time can potentially result in larger payoffs in the future.

Designate roles and responsibilities to support the community.

Most informal communities outside of the workplace identify and fund some formal roles and responsibilities to ensure that the community functions effectively. In the work environment, the same analogy holds true. Many of the companies that we looked at found it valuable to either elect or appoint individuals to specific roles to help guide the community and its activities. Some of these roles could include a community leader/facilitator, who was responsible for ensuring the overall community vibrancy and effectiveness; a content manager (or managers), who were responsible for ensuring that the explicit knowledge was continually updated and organized; and events personnel, who created the venues and situations where individuals could connect face-to-face. Other roles could include individuals responsible for communication, both within and across communities, and people responsible for community education and skill development.

Communities of practice

'Market' the community and its success stories.

A community can only be valuable to an individual if the individual knows the community exists. Effective communities tend to spend time and resources letting practitioners know about the potential resources they can offer to practitioners. This is especially true in distributed organizations, where individuals may rarely meet others who do similar kinds of activities or functions. Training classes, newsletters and company wide repositories can be useful in spreading the word and letting people know about the availability of community resources. Also, communities need to be active in demonstrating their success stories. Since the measurement systems in many organizations find it difficult to track the benefits associated with the sharing and reuse of intellectual capital, the community itself often needs to take the lead in identifying and broadcasting its successes. This is often necessary to not only attract new members, but to secure and maintain support and funding from the more formal organization.

To get a quick picture of how intellectual capital management is impacting your organization today, ask yourself these questions:

- How does the reuse of intellectual capital factor into our operational processes, corporate learning initiatives and even product pricing strategies?
- To what extent do customer-facing employees feel they bring the capabilities of the entire organization to bear when meeting customer needs? How often do they feel isolated and left on their own to search for answers?
- What specific actions are we taking to reduce the learning curve for new employees and helping get them “plugged” into the organization quickly? How do they find appropriate mentors?
- How current, accurate and widely used is the content in our intellectual capital repositories? How do we know?
- Who maintains our intellectual capital databases? Are these “content managers” knowledgeable practitioners of the subject matter?
- Are communities of practice already active within our organization? In what areas?
- Have they “emerged” out of common interests and roles or were they established by more formal means?
- How would a prospective member learn about a community and get involved?
- How is the formal organization contributing to the success of those communities that have strategic impact?



Connecting the pieces

To take advantage of a firm's intellectual capital, organizations need to do more than simply employ technology. Rather, they need to focus on building the appropriate connections, relationships and context that allow knowledge to flow between those who have it and those who require it. Communities of practice help foster an environment where knowledge can be created, shared and most importantly, used to improve effectiveness, efficiency and innovation. Communities help bring together people, their knowledge of day-to-day work practices, and their artifacts and tools to solve problems and address customer needs.

Technology can play an important role in creating virtual places where communities can meet, organize and exchange knowledge. When developed and supported appropriately, these communities of practice can serve as conduits for effective creation and dissemination of intellectual capital – and can help drive a greater return on knowledge management investments.

At IBM, we understand the complexity of managing intellectual capital in today's competitive business environment. We're constantly learning ourselves – through our Knowledge and Content Management consultants' work with clients, our multi-client collaborative research through the IBM Institute for Knowledge Management (IKM), as well as practical experiences from a variety of communities within IBM.

For more information about knowledge and content management, visit our Web site at ibm.com/services/kcm/KM_Consulting.html or contact us at insights@us.ibm.com to discuss how we might help you establish a complete intellectual capital management strategy that incorporates both the social and technological aspects of knowledge management. To browse through other resources for business executives, please visit our Web site:

ibm.com/services/insights

About the authors

Eric Lesser is an Executive Consultant with the Institute for Knowledge Management, a consortium of companies founded by IBM and Lotus that is focused on realizing tangible value from knowledge management. Within the Institute, Eric has been involved in research projects addressing communities, customer knowledge and knowledge strategy. Eric has also consulted to numerous companies in the legal, financial services, government and manufacturing industries on a range of knowledge management issues. He is the editor and co-editor of two recent books, *Knowledge and Social Capital, Foundations and Applications* and *Knowledge and Communities (Resources for the Knowledge-Based Economy)*, both published by Butterworth Heinemann and the author of numerous articles on the subject of communities and knowledge management. Eric can be contacted via e-mail at elesser@us.ibm.com.

Kathryn Everest is a Knowledge Management Consultant with IBM Canada's Business Innovation Services. Kathryn works with leading organizations to help them understand the critical role knowledge plays in the successful deployment of a business strategy, and then works with these organizations to develop strategies to exploit knowledge that leads to measurable business results. Kathryn has worked with organizations in a number of industries including: pharmaceutical, legal, government, insurance, manufacturing, education and utilities. Kathryn speaks regularly at conferences on such topics as understanding knowledge management, the strategic use of knowledge, and developing a knowledge-sharing culture. She can be e-mailed at everestk@ca.ibm.com.

References

Lesser, Eric L., and others. *Knowledge and Social Capital, Foundations and Applications*. Butterworth-Heinemann Ltd., 2000.

Lesser, Eric L., and others. *Knowledge and Communities (Resources for the Knowledge-Based Economy)*. Butterworth-Heinemann Ltd., 2000.

This article was originally published in Ivey Business Journal, March/April, 2001, Volume 65, Number 4. For more information, visit their Web site at <http://www.ivey.uwo.ca/IBJ/>.



© Copyright IBM Corporation 2001

IBM Global Services
Route 100
Somers, NY 10589
U.S.A.

Produced in the United States of America
04-01

All Rights Reserved

IBM, the IBM logo and the e-business logo are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both.

Other company, product and service names may be trademarks or service marks of others.

References in this publication to IBM products and services do not imply that IBM intends to make them available in all countries in which IBM operates.