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The Emerging Community of Knowledge Practice

By Debra M. Amidon

Conventional wisdom tells us that most companies capitalize on only a small fraction of their knowledge assets. But where are these wellsprings of knowledge and innovation located? Where do we find these sources of tremendous hidden wealth? John Seely Brown, the insightful director of **Xerox Corp.'s Palo Alto Research Center (PARC)** suggests we begin by examining what he calls "communities of practice".

"At the simplest level, they are a small group of people who've worked together over a period of time... not a team, not a task force, not necessarily an authorized or identified group," explains Brown. "They are peers in the execution of 'real work.' What holds them together is a common sense of purpose and a real need to know what the other knows."

Brown and the leaders at the **Institute for Research on Learning (IRL)**, a PARC spin-off, have been describing communities of practice for many years. Likely an outgrowth of the quality circles and the evolution of networked/learning organizations, this concept represents a way of making explicit a company's untapped brainpower, creativity and potential. These communities can become centers of expertise which can be highly leveraged in an organization prepared to capitalize upon economic change and unexpected business opportunities.

After years of research in a variety of industries and on several continents, some modern managerial principles are emerging. It doesn't matter where companies begin (e.g., quality, reengineering, benchmarking, systems thinking, learning networks, restructuring, etc.) But there needs to be one compelling force which binds the entire organization together—one that creates a common language and shared purpose. Leadership must come from the top-down, bottom-up and middle-out. In other words, everyone has ownership.

For many organizations, the binding force has been one of change management. It's certainly true that the only constant today is the accelerating rate of change. Many CEOs have been successful in mobilizing their organizations to accept and even embrace change as a way of doing business. The way they phrase the challenge is inspiring and people are encouraged—and even rewarded—for doing things differently.

More often than not, however, change management strategies have been met with covert tactics which undermine long-term progress. Moreover, people are not inclined to share their ideas and expertise with others if they feel that their own jobs are in jeopardy. In 1996, a New York Times

survey reported that only 20% of workers cooperate with others more than they have in the past. This comes at precisely the same time when collaboration across multiple boundaries is fundamental to business success. Employees often provide managers what they want to hear, not necessarily the solutions which could provide breakthrough results.

How do you set in motion the processes and practices which will bring about extraordinary growth in the uncertain future? The answer is in innovation strategy, not change management.

Imagine for a moment that you are the recipient of these words: YOU must change. You MUST change. You must CHANGE! The normal reaction is one of being in jeopardy, feelings of inadequacy and resistance to the degree of change necessary.

But the reaction is quite different when the driving organizational imperative is innovation. People generally react to calls for innovation with genuine enthusiasm. They begin to seize on a vision of real progress and think about how their competencies can be applied to their objectives.

The difference between these two words—change and innovate—may seem insignificant. However, if you are seeking the binding force to catapult your organization forward, which would you choose? It is the difference between being hit over the head with a hammer or having the wind put at your back. It is the difference between being threatened or inspired.

Convergence of Perspective

As the focus of the corporation begins to shift from change to innovation, we will witness the transformation of every function and sector of the economy. If you were to attend the professional meeting of one function or discipline and not know the sponsoring organization, you may be hard pressed to determine the primary focus. The programs—and even many of the presenters—are extremely similar. There is a realization—and respect for—alternative paradigms which did not exist only a decade ago. Many of these professions appear to have one agenda in common: to understand and optimize the learning capacity of an enterprise in order to enable a more optimal creation and application of new knowledge (i.e. the process of innovation).

The traditional view of communities of practice is defined as evolving learning networks which develop over time and create added value through a shared mission. They may be perceived as professional societies (in fact, new societies and organizations have evolved from them) or they may represent collections of people who transcend any individual discipline, society or profession.

If the future belongs to those who are able to transform boundaries, then participants in these communities of practice may represent the leadership of tomorrow. There are at least ten of these functional areas—traditional and new—which are contributing to the emerging community of knowledge practice. Among them: Finance; Human Resources; Quality; Information Technology; R&D; Engineering; Manufacturing;

Marketing/Planning; Sales/Services; Alliances/Joint ventures.

Converging Communities

- Finance
- Quality
- R&D
- Manufacturing
- Sales/Services
- Human Resources
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New networks are forming daily with the enabling communications technology for intranets and cyberspace. As employees at every level begin to discover that there is more value in creating and applying new ideas than there is in clutching to successes of the past, these collections of expertise will proliferate and grow more influential.

For our purpose, we will use a simplified description of mission for the community of knowledge practice: harnessing complementary competencies with a shared purpose toward a common strategic vision. Let us take a cursory view of each of these dimensions and the recent changes which characterize their individual evolution. It is the collective changes which constitute the fundamental transformation underway. Hardly a function, discipline, sector or industry organization is not affected in some significant way.

Finance: The name of the game is performance. All organizations are struggling to deliver more with few resources—financial, human and technical. Unfortunately, conventional performance measures are inadequate. Existing data typically doesn't take into account an enterprise's intangible assets, such as knowledge capital, social capital, learning capital and the like.

The profession is responding, however. We are beginning to see efforts to account for intangibles—and such efforts will gain credibility over time. In an environment where market values can exceed book values by multiples of ten or more, there is a tremendous need to make intangibles tangible. The key challenge today's financial professional faces has become one of accounting for the flow of ideas, knowledge and innovation practices.

Human Resources: HR professionals have focused on people. Initially, it was a matter of ensuring that the right people with the right skills were in the right position at the right time to guarantee business success. But, managing such an intricate process of individual and corporate development is not small task. When it was realized that such expertise was necessary in order to create competitive advantage, executive leadership took notice of the challenge to be addressed.

What has emerged is a new focus on learning, leadership, the role of corporate culture and the value of cross-boundary interaction. The behavioral implications of business success became paramount with the emergence of networked organizations, cross-cultural diversity and the new style of management which was less hierarchical and more process-driven.

Response in the profession has been one of research in the learning process, institutes for human dynamics, centers for leadership development, career development tools and a dedication to values, behavior and results. In each of these areas, it has been the contribution from other functions and/or disciplines which has enhanced the capability of the human resource function itself.

Quality: The (re)discovery of the importance of quality in products and services has provided all organizations—profit and not-for-profit—an enterprise-wide common agenda. Originating in the manufacturing community, the value of quality circles, statistical process control and just-in-time methodologies swiftly spread through organizations. Industry pressures and new forms of recognition, such as the Baldrige Award, provided incentives to reach carefully defined standards.

The concept of benchmarking best practices is a major contribution to the field. Executives began to look across industry boundaries for examples of exemplary processes. What began as a manufacturing focus quickly spread through every organization within the enterprise as well as the links with suppliers. The quality process transformed into the innovation process in which reduced cycle-time, organizational change, market positioning and customer interaction were essential.

Information Technology: Perhaps no function has undergone more radical transformation than those responsible for technical infrastructure. The profession has witnessed an explosion in advancements of technology as well as growing responsibilities within the organization.

Internally, former information technology managers are finding themselves cast as knowledge managers. Their technical responsibilities are miniscule in comparison to their need to understand business strategy, learning mechanisms and the overall organizational infrastructure. For many companies, what has emerged is a network of professionals with varied backgrounds who share a common purpose in the organization and beyond.

R&D / Technology Transfer: The function which previously maintained primary authority for innovation was the R&D community. Whether discussing invention or innovation, the research officers held the responsibility. As the distinction between invention and the full commercialization process occurred, some progressive managers assumed responsibilities which reflected both research and business development—the vertical and horizontal responsibilities for the entire innovation process.

The technology transfer specialty was developed to optimize the flow of technology into and within the corporation. Once it was clear that the process could not be left to serendipity, the field of knowledge management emerged as a new discipline with its own professional societies, advanced degree programs and the founding of national and international centers for research and commercialization, bridging the diverse—but common—needs of government, industry and academe.

Ultimately, these processes of innovation will operate as self-managing systems and virtual learning networks which ensure continuous economic

growth at every level. The agenda is one of transformation, not transfer.

Engineering: Cross-functional management may have been first demonstrated in initiatives such as concurrent engineering and simultaneous development processes. Review of these progressive management approaches reveals that they may be innovation initiatives by another name. In order to effectively develop products, engineering managers realized that there was knowledge resident within the other sectors which was required for success. Most of the product development costs can be avoided if the information is known from the beginning and built into the design phase.

As a profession, engineering addressed the issues of availability of knowledge and know-how in a future workforce. The National Academy of Engineering and societies in the engineering professions (e.g. the American Association of Engineering Education, IEEE, ACM, et al) created the National Congress on Engineering Education, the first of its kind to identify the key issues in the profession and potential strategies. The task forces provided opportunities across functional, sector and industry boundaries leading to a greater understanding of one another's' competencies.

Manufacturing: The integration of technology-push and market-pull (i.e. supply/demand, needs/seeds) ultimately come together in the manufacturing function—or the translation phase of the process of innovation. With intensified global competition and the proliferation of companies which excelled at commercializing technology, the production aspects of goods and services became paramount.

Previously relegated to third-class citizenry in the corporate world—and in the professional schema—manufacturing engineers were put to the test. Not only were they able to display their prowess with statistical analysis, they were the first to embrace the quality agenda. This enabled them to provide corporate leadership in team-building as well as with customer interaction. The Next Generation Manufacturing (NGM) Project, coordinated through the Agility Forum, even includes an imperative paper for the innovation process.

Marketing/Planning: If R&D has historically been responsible for innovation in the invention phase of the process, Marketing has been responsible for the commercialization phase. In this respect, business development has been the domain of market research professionals. With markets forming and reforming at a blistering pace, the role has increased over time.

The new orientation is one of leveraging competencies to meet the unarticulated needs of customers and unserved markets. Marketing professionals have realized the value of innovating with the customer as a way to differentiate themselves from the competition and leverage distinct competencies.

This shift has been from a focus on plans to the enterprise-wide innovation process itself. This revised charter, together with the uncertainties of the economy, demands knowledge from all functions, business units and geographies in order to develop an effective enterprise

leadership strategy. There is a new appreciation of competitive intelligence—and in some instances, collaborative intelligence. How does one develop a rationale and business plan for a market that doesn't exist today but is likely to form overnight? Traditional mechanisms and metrics will not suffice.

Sales/Services: The services sector has become the fastest growing sector of economies around the world as a percentage of GNP. At the same time, the services function within the manufacturing sector has become an integral part of the innovation system since such professionals are the closest to the customer. However, sales and service personnel increasingly rely upon knowledge and expertise from several other functional competencies (e.g. R&D, engineering, manufacturing, et al) in the organization in order to make the sale.

As modern concepts of customer partnering (and new technologies that enhance relationships) evolve, the role of the sales and service function will change dramatically. Instead of being at the end of the value-chain, they will be portrayed as the lead agents for learning from the customers and feeding that insight back through the innovation processes of the company.

Alliances/Joint Ventures: The newest function in the innovation spectrum, managers of corporate alliances have been established as a necessity in an era of collaborative strategy. No longer can organizations manage the economic dynamics alone. There are many who believe that in the future, markets will revolve around sets of competing alliances.

A respect for complementary competencies must exist within and throughout the strategic business network in order to optimize results. The dynamics of the marketplace are likely to place a premium on the successful exchange of expertise across corporate borders (e.g. outsourcing, joint marketing, shared distribution systems, etc.)

Transcending Boundaries

This is the rich expertise available as you chart an innovation course forward. All that is left to do is bring together those diverse perspectives and leverage the complementary expertise of your leadership team.

Innovation strategy may be the one way to create a simple solution amidst all the complexity. Every function has undergone dramatic change over the past few years—as a function, as a profession and as a collection of expertise across traditional boundaries. Each has learned from the other and contributed to their body of knowledge. Individual communities of practice have evolved on virtually every topic imaginable. It is this cross-boundary sharing and learning which is accelerating the momentum of progress. This is precisely the reason that the knowledge movement is fundamental—not a fad.

Only a few years ago, the fortresses between the functions were often impenetrable. Today, we see the emergence of the collaborative enterprise (as well as cross industry collaboration)—marshalling the talents of people throughout the organization to create and move ideas.

They have discovered the value of their complementary competencies and how they contribute to the whole. They are all active participants in this rapidly maturing community of knowledge practice.

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