

Knowledge Management

Guy St. Clair

SMR International, New York, New York, U.S.A.

INTRODUCTION

Knowledge Management (KM) is a management practice that uses an organization's intellectual capital to enable the enterprise to achieve its organizational mission. In those enterprises and organizations in which a decision has been made to invoke KM as the organization's management philosophy (or as an essential component of the organization's overall management methodology), the corporate culture is one that recognizes that the organization's primary asset is the knowledge of its people.

The accepted operational attributes associated with KM are innovation, collaboration, and knowledge development/knowledge sharing. These attributes are the consequence of an enterprise or organizational framework that is built on:

- excellence in information management, including the development and implementation of a sophisticated system for identifying, capturing, and organizing essential information, and the infrastructure to support this system;
- excellence in strategic (performance-centered) learning and attention to the convergence of organizational learning and enterprise management; and
- attention to the establishment of the organization's social communities through the creation of a social infrastructure built on a foundation of trust and concentration on relationship building.

Intellectual capital is the knowledge that comes from the developed and accumulated experience, service, and products of the organization's employees, at all employment levels. This knowledge can be explicit (that is, captured in a format which can be manually or electronically documented and/or manipulated, as required), tacit (that is, not captured or recorded, but available through the social interactions of those who have it and those who need to access it), or both. When an organization establishes and commits to KM as its management methodology, the organization can be said to be using its collective intellect to accomplish its strategic objectives.

The purpose of KM, as a management practice, is to establish, maintain, and sustain an organizational environment in which employees achieve their highest levels of

productivity, resulting in the successful achievement of the organizational mission. There are, of course, two kinds of knowledge required in the workplace. For knowledge workers (defined as employees who produce, organize, or use information in their work), the classic goal is to "know *what*," that is, to add to their body of knowledge so that they can work more successfully. The term can also be used (but often is not) in the context of what is sometimes referred to as "know-how." In this context, workers—who might not necessarily be "knowledge workers" as defined here—learn from each other, or from more experienced coworkers, as has been evidenced through the ages in apprenticeships, crafts guilds, and similar arrangements in which "know-how" is passed on (as with factory workers, say) from one employee to another.

In all cases, the goal of KM is to improve the quality, efficiency, and consistency of the work that those employees perform, and the objective is to enable the organization to apply the same standards of asset management to explicit and tacit knowledge as to other organizational assets.

HISTORY

There is, among some observers, a tendency to dismiss KM as "just another management fad" (and that is a phrase heard repeatedly from uninformed—or threatened—enterprise stakeholders). For those in the management community seriously interested in achieving the organizational results described, a minimum amount of attention to understanding what KM is (and how it can be used in the enterprise), and a modicum of open-mindedness to innovation will produce an awareness that will serve them well. In seeking to understand the fundamentals of KM, a brief look at how it came to be, both in information services and in management practice in general, can be useful.

In fact, the techniques and results-oriented management perspectives associated with KM have been practiced within the information services community for many years. Practitioners in specialist librarianship see themselves as knowledge workers whose role is to utilize those techniques and provide those results, and the special librarian is formally defined as "a knowledge professional



who provides focused information and service to a specialized clientele having an impact on their success, mission, and goals.” The definition continues by noting that the term “special librarian” is used interchangeably with the term “information professional,” and describes these knowledge workers as “information professionals who work in corporations, media, finance, science, research, government, academe, museums, trade associations, non-profit organizations, and nontraditional enterprises.”^[1]

This definition of information professional applies to all specialized librarianship and, for our purposes, its emphasis on variety and diversity clearly positions specialist librarians as different. Not only are specialist librarians different from other librarians and information professionals, they are different from one another, and these differences, within this branch of information services management, are so pronounced that it is sometimes a challenge to identify what it is that unites specialist librarians. What that is, of course, is knowledge management, as defined here, and the benefits that KM provides to the organization or enterprise that employs the specialist librarian.

As early as 1916, only seven years after the founding of the Special Libraries Association, *Special Libraries* editor Dr. John A. Lapp defined the purpose of the special library as being “to put knowledge to work.” As it happens, the phraseology carried just the right “tone” and went on to become the association’s motto, used throughout its history and continuing in use into the twenty-first century.^[2] Anticipating KM, the phrase captured what specialist librarians thought of themselves as doing, long before Thomas Stewart identified the management of an organization’s intellectual capital as a valuable corporate function.^[3]

The general development of KM (as opposed to its history within the information services community) has been well described in two important sources. Amrit Tiwana has produced a valuable chronology that describes how, in Tiwana’s words, KM had been coming “since the 1950s.” Noting that management leaders like Peter Drucker had long recognized that “strategy driven by knowledge” helps an organization become, in Drucker’s words, “purposefully opportunistic,” and that Drucker had pointed out that the most valuable assets of the twenty-first century company would be its knowledge and its knowledge workers, Tiwana asserted that Drucker, “like many others,” had seen this coming for over 50 years.^[4] Tiwana’s chronology depicts precisely how this happened, as this summary demonstrates:

- In the 1950s, such management “tools” as management by objectives (MBO) and program evaluation and review technique (PERT) enabled the management focus to shift to distributed expertise and knowledge.

- In the 1960s, centralization and decentralization management activities moved tacit knowledge into the organizational management picture.
- In the 1970s, such concepts as strategic planning and the Experience Curve recognized “cultural specificity” in organizations.
- In the 1980s, attention to total quality management (TQM) and the corporate culture meant that learning, unlearning, and experience are taken into account in the practice of management.
- In the 1990s, attention to core competencies, the Learning Organization, reengineering, and the like set the stage for the emergence of KM.
- In the 2000s, the KM “philosophy” came into general acceptance and use, built on the management of intellectual capital, enterprise integration, and the development of the knowledge-sharing culture within organizations.^[4]

Development of KM as an intellectual and managerial philosophy/practice is further described in the work of Patrick H. Sullivan, who saw what he referred to as “three distinctly different origins of what has become the intellectual capital management movement:”

The first was in Japan with the groundbreaking work of Hiroyuki Itarni, who studied the effect of invisible assets on the management of Japanese corporations. The second was the work of a disparate set of economists seeking a different view or theory of the firm. The views of these economists (Penrose, Rumelt, Wemerfelt, and others) were coalesced by David Teece of the University of California at Berkeley in a seminal 1986 article on technology commercialization. Finally, the work of Karl-Erik Sveiby in Sweden, published originally in Swedish, addressed the human capital dimension of intellectual capital and, in so doing, provided a rich and tantalizing view of the potential for valuing the enterprise based upon the competencies and knowledge of its employees.^[5]

As Sullivan documented in his historical essay, the work continued with the emergence of “a new view of business strategy that emphasized resource efficiency rather than the generally accepted competitive forces. . . . The resources-based perspective focuses on strategies for exploiting existing firm-specific assets. Since some of the firm’s assets are intellectual, it follows that issues such as skills acquisition, the management of knowledge and know-how, and learning become fundamental strategic issues.”^[5]

By the mid-1990s, KM had become very much like a management discipline, as Eric Berkman has acknowledged. Berkman notes that KM “came to the fore” around 1994. “It sprang,” he wrote, “from grassroots organizations of business professionals who gathered to discuss the



potential benefits of knowledge sharing. In the early days, there were no conferences, but you had to qualify to come to the meetings. The requirements were simple: Prepare a case study you are willing to share.’^[6]

By this time, the list of people involved in KM and helping to spread the news of its value throughout the academic and management communities had grown exponentially. It suddenly became clear, by the end of the last decade of the twentieth century, that KM was, indeed, being taken seriously among those who seek new and better ways to manage. Leaders emerged, and names such as those Sullivan identified in his work (particularly that of Karl-Erik Sveiby) became recognized in the enterprise/organizational management community. Others, like Hubert St. Onge and Sullivan himself, also became known and found themselves frequently referred to and/or asked to speak to management groups about KM and how it can be applied in specific situations. Thomas Davenport and Laurence Prusak, among others, wrote important books about KM, influencing many managers and scholars. Conferences, seminars, and workshops proliferated, and a large contingent of trade shows designed to demonstrate KM products were highly in evidence by the beginning of the new century.

ISSUES RELATED TO DESCRIPTORS, INTERPRETATIONS, AND CONTEXT

From its inception, the acceptance of KM as a viable and legitimate management methodology has been characterized by variations in its definitions, and by the usual tension that accompanies any new (or newly restored) management technique. For example, once the subject of KM comes up, particularly among academics or those in the management community who are inclined to think along “academic” lines, the discussion soon turns to identifying and debating the differences between *information* and *knowledge*. Inevitably, the discussion leads to someone’s saying something like, “Knowledge cannot be managed. Only information can be managed,” which is, of course, true. Nevertheless, the *concept* of managing knowledge, within an organizational framework in order to support organizational success, is attractive. Certainly the term “knowledge management” provides a workable and useful (if somewhat inaccurate) shorthand for those with management responsibility, as they attempt to identify and utilize management techniques—and seek an appropriate management philosophy—for accomplishing the organizational mission. This acceptance is recognized by those who are involved in the KM effort, as noted by Laurence Prusak. When an interviewer commented to Prusak that he and Tom Davenport (who with

Prusak is considered one of the first to recognize the importance of KM to the management community) are known to have wished they could “take back” the term “knowledge management,” Prusak replied, not surprisingly, “Yes. It is really working with knowledge. You can’t manage knowledge, per se. It is not a thing that is manageable. You can’t manage love or honor or patriotism or piety. It is clearly working with knowledge, but the words got there and there it is.’^[7]

Others, too, have recognized that to put up too much of a battle is probably fruitless, for the term has come into the language of management. Pragmatically speaking, the phraseology is not going away.

DEFINITIONS

In fact, Prusak and Davenport came up with their own definition of knowledge that fits suitably in the organizational/enterprise management arena:

Knowledge is a fluid mix of framed experiences, values, contextual information, expert insight, and grounded institution that provides an environment and framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes imbedded not only in documents or repositories but also in organizational routines, processes, practices, and norms.^[8]

At the same time that attention was given to knowledge as it is found in the organizational management environment, much attention also was given to the related concept of *intellectual capital* (defined earlier, for the purposes of this essay). Obviously that term could be substituted, in many situations, for enterprise or organizational knowledge as described by Davenport and Prusak. Characterized by Thomas Stewart (the *Fortune magazine* writer who early on distinguished KM as an important organizational activity) as “the sum of everything everybody in a company knows that gives it a competitive edge...’^[9] intellectual capital is now recognized as an important—if not the *most important*—organizational asset.

As for defining KM itself (as opposed to defining *knowledge*), the literature supplies many definitions, all of which seem to approach some version of the opening paragraphs of this essay. Of course it is impossible to present all of these in a short essay, but the following selection can provide the reader with enough elements to be useful.

the management of organizational knowledge for creating business value and generating a competitive advantage.

...An effective knowledge management strategy is...a well-balanced mix of technology, cultural change, new systems, and business focus that is perfectly in step with the company's business strategy.^[4]

the systematic process of identifying, capturing, and transferring information and knowledge people can use to create, compete, and improve.^[10]

the identification, creation, collection, integration, and delivery of information to best leverage decision-making and effectiveness.^[11]

[a technique that] incorporates systematic processes of finding, selecting, organizing, and presenting information in a way that improves an employee's comprehension and use of business assets.^[12-14]

Putting all of this together, it can be seen that KM is an overall organizational management methodology for making relevant information available quickly and easily for people to use productively. In practical terms, KM is best thought of as a way of doing business, a management methodology that is used to help an organization or an enterprise manage both explicit and tacit information in ways that promote its reuse and the creation of new knowledge. Or put another way, it is a management style for making relevant information readily available or for the creation of new knowledge, so that users can make timely valid decisions. Within the larger management community, KM is recognized as a management approach that leads to the establishment of an atmosphere or milieu, a *culture* if you will. It is an environment in which the development and sharing of knowledge—at all levels within the organization and including all levels of knowledge—is accepted as the essential element for the achievement of the organizational or community mission.

Within this context, one definition that is suitable moves comfortably from what KM *is* to what its practitioners—knowledge managers—*do*. In some enterprises, the move to KM has led to the establishment of staff positions specifically associated with the role of knowledge in the organization. These staff members, known as knowledge managers, are engaged to identify, organize, and make available for dissemination as needed the organization's tacit and explicit knowledge; to ensure that it is exploited for the full advantage of the organization; and, not incidentally, for the creation, development, and exploitation of new knowledge. In the workplace, that advantage is specifically achieved as the organization manages both internal and external knowledge for its own purposes and, in one well-known practice (and not surprisingly), applies KM as it pursues its competitive intelligence goals.

The acceptance of the value of organizational knowledge has also led, inevitably, to the establishment of a senior management position with organizational responsibility for an enterprise-wide KM overview. The titles for these positions vary, but they generally are some combination “Chief Knowledge Officer” (CKO). In a knowledge-centric competition-focused enterprise, the CKO has responsibility for ensuring that the company's commitment to knowledge management contributes to the successful achievement of the company's mission. The CKO has responsibilities in corporate management, in the design and/or implementation of the organization's strategic (performance-centered) learning, and—in most enterprises in which there is a CKO—in serving as the organization's knowledge spokesperson. The duties of these managers, within this structure, can be listed:

Corporate Management

- Leads the corporate KM strategy, creating and selling the KM vision, and helping other organizational leaders drive the company in the desired direction.
- Promotes an organizational culture that facilitates tacit and explicit knowledge development and knowledge sharing; recognizes and promotes enterprise-wide knowledge development/knowledge sharing contributors.
- Champions the development of a KM budget and serves as an advocate for keeping KM resources available.
- Evaluates the effectiveness of KM projects and their contribution to the corporate mission; benchmarks with other organizations (public and private).
- Develops strategies, in cooperation with the established training and development operation, to facilitate training and education for knowledge workers.
- Champions cross-organizational communities of practice.
- Establishes relationships with related leaders: Human Resources, Organizational Learning, information technology (IT), company librarians/records managers/archivists, etc.

Corporate/Organizational Learning

- Develops common definitions to facilitate an enterprise-wide understanding of knowledge concepts.
- Educates the leadership and employees about KM and its benefits to the successful achievement of the company's mission.
- Defines roles, skill-sets, and career opportunities of knowledge workers.



Corporate Knowledge Spokesperson

- Leads the KM effort among the company's leadership, employees, customers suppliers, and other information/knowledge stakeholders.
- Creates opportunities to bring the company's KM "message" to the wider corporate/scholarly community.
- Authors books, scholarly papers, popular articles, electronic documents, etc., describing the company's KM success.
- Speaks, appears on panels, etc. for professional conferences, etc.

WHY KM IN THE ORGANIZATIONAL MANAGEMENT ENVIRONMENT?

With this background, it is not difficult to see why KM has become a useful activity in the organizational management environment. Information has always been a critical resource in the workplace, and the recognition of its importance has grown significantly in the last third of the twentieth century—the much discussed "information age." During that same time, though, the techniques for the management of information were fairly well established, through the work of information scientists and others. The result has been that at the beginning of the twenty-first century, no one seriously argues that the management of information and information use is an unimportant or "fringe" activity. Employees and other stakeholders in the modern organizational enterprise live and work in an information-intense environment.

At the same time, though, the workplace changed, for with the development of techniques for the successful management of information, the organizational environment was changing from being an *information-centric* workplace to being a *knowledge-centric* one. It became a workplace in which worker productivity (that is, *knowledge* worker productivity) is based on different criteria and different standards than those used in the past.

This is an area that has been explored often, most usefully by Peter F. Drucker in his excellent guide to management in the new century. In the book, particularly in the section labeled "Knowledge Worker Productivity," Drucker offers a convenient and skillful checklist that can be usefully adapted for those who have management responsibility in the knowledge-centric organization or enterprise:

- Knowledge worker productivity demands that we ask the question: "*What is the work?*"
- Knowledge worker productivity demands that we impose the responsibility for their productivity on

the individual knowledge workers themselves. Knowledge workers *have* to manage themselves. They have to have *autonomy*.

- Continuing innovation has to be part of the work, the task, and the responsibility of knowledge workers.
- Knowledge work requires continuous learning on the part of the knowledge worker, but equally continuous teaching on the part of the knowledge worker.
- Productivity of the knowledge worker is not-at least not primarily—a matter of *quantity* of output. *Quality* is at least as important.
- Knowledge worker productivity requires that the knowledge worker is both seen and treated as an "asset" rather than as a "cost." It requires that the knowledge worker *want* to work for the organization in preference to all other opportunities.^[15]

In the new century, it must be remembered that few knowledge workers are interested in information for its own sake. What people require for their work is *knowledge*, and what was known as the "information age" has become, in effect, the "knowledge age," and few any longer seek information qua information. Instead, what knowledge workers do with information, once it has been identified, is to take it and codify it, analyze it, interpret it, and *use* it to learn something new (and, ideally, they then *share* what they have learned with others who can use it). In the modern organizational environment, workers have gone from seeking information to seeking knowledge.

The route to that knowledge not only utilizes KM as a management practice, it also incorporates organizational learning, or as it is referred to in some companies, "strategic (performance-centered) learning." Learning, training, and development are all part of a knowledge-transfer application in the organizational environment that permits knowledge workers to transform information into knowledge and to use it for organizational purposes. In the business community, Michael Miller has identified five factors that lead to building a business case for a formal knowledge management/organizational learning operation:

- the competitive marketplace;
- the convergence of financial service;
- mergers and acquisitions;
- the mobile work force; and
- the changing employment contract.^[16]

Related to this changing employment contract is its requirement that employees react differently than they did in the past to the organization's customers. With respect to information services, the customers, too, are experiencing changes in *their* workplace, and their perceptions

and expectations of what quality information delivery should be have changed. If organizations are to succeed in servicing their customers, those changes must be recognized, and approaches and programs for delivering information must be adjusted to meet the customers' new and different perceptions and expectations. Knowledge management provides the framework for doing that, and the move toward KM makes sense in most enterprises because of its emphasis on the customer (whether internal or external). In the modern, well-managed organization, much attention is given to "client relationship management (CRM)," but whether the methodology is called "customer service" or "client relationship management," KM provides customers with *better* service.

KM COMPONENTS

The components of KM are popularly identified as "people, process, and technology." There is, as can be seen from the Brown and Duguid quotation referenced earlier, considerable tension among the various departments in organizations and enterprises where the responsibility for "people," "processes," and "technology" do not overlap. In fact, the tension can sometimes be described as almost hostile, as can be seen from some of the comments of some of those who write about KM in the organizational management environment. Obviously without the advantages of technology (it is not referred to as "*enabling* technology" for nothing), KM would not have evolved as a management philosophy and practice. On the other hand, as Cheryl Lamb notes, with respect to KM success, "it is the people and processes supported by appropriate technologies that deliver real results."^[17]

Sadly, in some organizations, it seems that the "KM = IT" formula has been accepted as fact, as Eric Berkman has pointed out:

Knowledge management revolves around the concept that one of the most valuable corporate assets is the experience and expertise floating around inside employees' heads. In order to manage this intellectual capital, executives must devise a way to capture and share that knowledge with coworkers. If done right, KM is supposed to create a more collaborative environment, cut down on duplication of effort and encourage knowledge sharing—saving time and money in the process. The problem is, in many cases KM devolved into a purely technical process, resulting in expensive software implementations sitting unused by oblivious, fearful, or resentful employees.^[6]

Such a bleak scenario can be avoided, if the components of KM are identified and understood by enter-

prise decision makers early on, as the organization moves to becoming a knowledge-centric enterprise. There is not agreement on which components precisely create a KM management practice, but Cheryl Lamb, in the essay cited above, makes a useful and workable attempt as she identifies what she calls the four "key components" to the organizational knowledge "backbone:"

- Organization of knowledge using a normalized taxonomy that enhances the goals of an organization.
- Availability of information/knowledge when and where it is needed through high-end intelligent access.
- Ability to connect knowledge with the people who created it (pairing knowledge with experts).
- Publication of knowledge so it can be reused and further shared.^[17]

Beyond these, which Lamb refers to as "the human element" (and for which she requires, correctly, a collaborative environment encompassing facilitation, navigation, and validation), other KM elements evolve, and a KM initiative (for any organization) will include the following, probably in this order:

- Defining KM (as practiced in the company or offered to the company's customers, if it is a consulting company);
- Identifying what knowledge is critical for organizational success;
- Identifying the customer need (again, determining whether the process is to be for internal or external customers, or both);
- Analyzing the identified need (the information/knowledge audit);
- Inventory of knowledge already existing in the organization;
- Analysis of knowledge already existing in the organization;
- Provisioning/program design, including attention to processes, and incorporating both tacit and explicit knowledge;
- Implementation; and
- Utilization.

As can be seen from this list of components, innovation and collaboration are essential elements in any organizational move toward a KM philosophy/practice for the enterprise. In fact, the collaborative workplace has been identified as so important that there are some, like Edward M. Marshall, who are convinced that enterprise management in the future will be built on a collaborative framework. Such a point of view has significant implications for those organizations in which senior management is beginning to think about embarking on a



KM “journey.” As he defines collaboration “a principle-based process of working together, which produces trust, integrity, and breakthrough results by building true consensus, ownership, an alignment in all aspects of the operation. . . .” Marshall points out that, put another way, collaboration is simply “the way people naturally want to work. . . .” The idea is so important, in Marshall’s way of thinking about the organization, that he sees collaboration as playing a critical role, perhaps even more critical than is being anticipated. “Collaboration,” Marshall asserts, “is the premier candidate to replace hierarchy as the organizing principle for leading and managing the twenty-first-century workplace.”^[18]

STRATEGIC LEARNING IN THE KNOWLEDGE-CENTRIC ORGANIZATION

These components, variously described, provide a neat segue for looking at the role of corporate culture and how what is being referred to in some organizations as strategic (performance-centered) learning, or organizational learning, is incorporated into the KM practice. For KM to be a success, attention must be given to the design and implementation of serious learning, training, and development programs. Strategic learning is defined as the successful achievement of skills, competencies, knowledge, behaviors, and/or other outcomes required for excellence in workplace performance.^[19] In other words, what is learned is application based, and it must relate directly to how it will be used. In the knowledge-centric enterprise, in which KM is the established management philosophy/practice, Knowledge Development/Knowledge Sharing (KD/KS) is “. . . a framework for learning that embodies the highest objectives of knowledge management, and combines them with the basic principles of the learning organization and the teaching organization. . . Knowledge Development/Knowledge Sharing builds on the assumption that all learning stakeholders accept their responsibility to develop, to learn, and to share both tacit and explicit knowledge within the enterprise. The concept of KD/KS exists for the benefit of the organizational enterprise with which the learning stakeholders are affiliated and which provides support for their learning endeavors, and for the growth and development of these stakeholders as lifelong learners.”^[19]

As developed in the knowledge-centric enterprise, there are very distinct attributes to strategic (performance-centered) learning. As noted, it combines knowledge development with knowledge sharing. It provides training/learning that is specific to the workplace. Leading from that, it focuses on applications. Learning

for the sake of learning is not dismissed, of course, but in the KM environment, learning is related to doing something. This learning, based on knowledge development and knowledge sharing, is specifically and directly didactic.

TANGIBLE AND MEASURABLE BENEFITS

While conventional wisdom generally would not be expected to allow for the measurement of intangible benefits in the knowledge-centric workplace, in fact metrics are being developed and are coming more and more into use. The International Federation of Accountants, for example, provides introductory documentation about “The Measurement and Management of Intellectual Capital” in its “Standards and Guidelines.” Likewise, the U.S. Securities and Exchange Commission has offered symposia and provided information about dealing with intangible assets.

Amrit Tiwana has identified three possible approaches to the measurement of KM success in organizations: benchmarking, the House of Quality/quality function deployment (QFD) method, and the balanced scorecard approach.^[4] Benchmarking, applied in the business community with considerable success, is defined by Tiwana as “an undertaking of companies that aim to emulate the ways things are done best, anywhere within or outside their firm, industry, or sector.” House of Quality/QFD, developed by J. Hauser and L. Clausing in the late 1980s, is a methodology that has been successfully adapted, as Tiwana notes, to link customer needs to business processes and internal decisions.^[20] The balanced scorecard provides a technique to “maintain a balance between long-term and short-term objectives, financial and nonfinancial measures, lagging and leading indicators, and between internal and external perspectives.”^[21]

For the measurement of KM success in the information/knowledge services community, Frank H. Portugal has identified four approaches, including the traditional (but difficult, in matters having to do with information/knowledge services) return-on-investment and cost-benefit analysis.^[22]

These can be used, of course, in any situation where the workplace profile has been developed and work processes defined (in terms of KM and its application in the enterprise), but Portugal’s other methodologies will probably be more useful in most information/knowledge services situations. These are:

- Knowledge Value-Added: used to evaluate the relative amounts of knowledge—an intangible asset—embedded in corporate subprocesses.

- Intranet Team Forums: uses the passage of key information and communications through a channel that can track discussion, either in chronological order or by individual topics (threaded discussions).
- Intellectual Capital Valuation: tracks the growth of the intangible assets of a corporation.^[22]

Certainly other metrics for information/knowledge value may be identified as well, and these, too, when appropriate, should be considered for use in any organization or enterprise considering the move to a knowledge-centric environment.

CONCLUSION

As a management philosophy and practice, KM's future will be determined by its effect in the workplace. Surely knowledge, as an organizational asset, will continue to be recognized as the framework through which organizational success is achieved. Whether knowledge, per se, will continue to be singled out and dealt with as an individual or "stand-alone" asset cannot be predicted, for knowledge is—by its very nature—something that "relates" to something else. How important knowledge is in the enterprise—in *any* enterprise—must, of necessity, be based on the importance of the thing it relates to. Knowledge for its own sake, especially in enterprise management, is valued of course, but what the workplace values with respect to knowledge is the end product, what the knowledge leads *to*.

Nevertheless, there are signs that KM will continue to be a valuable activity. For one thing, for most knowledge workers, the early years of the twenty-first century are an age of specialization; these employees are, by and large, in the *expertise* business. In the knowledge-centric environment, KM leads to better management and better productivity because it enables knowledge workers to share and to benefit from sharing their expertise. Most knowledge workers are *specialists*, and the environments in which they work require that their specialties, as such, be known about and that their expertise be shared, when appropriate, with others throughout the enterprise and (again when appropriate) with stakeholders throughout the enterprise *realm*, with all who are affiliated with it. KM is the environment in which this sharing of expertise flourishes.

Related to this sharing, and to *how* workers share knowledge, most managers now agree (in principle, if not always in practice) that the future of business management is expected to build on collaboration, as Edward Marshall has suggested. That collaboration takes on structure when the organization's leaders seek to refocus the organization as a "learning organization," as

promulgated by Peter Senge and those who have followed his lead:

...superior performance depends on superior learning... The impulse to learn is at its heart an impulse to be generative, to expand our capability... In the learning organization, leaders are responsible for building organizations where people are continually expanding their capabilities to shape their future.^[23]

The structure is completed, in the knowledge-centric organization, as that learning organization is broadened, logically enough, into the "teaching organization" as advanced by Noel Tichy and Eli Cohen:

The concepts underlying learning organizations are valuable. But to succeed in a highly competitive global marketplace, companies need to be able to change quickly; their people must be able to acquire and assimilate new knowledge and skills rapidly. Though learning is a necessary competency, it's not sufficient to assure marketplace success...

Teaching organizations share with learning organizations the goal that everyone continually acquire new knowledge and skills. But to that they add the more critical goal that everyone pass their learning on to others.^[24]

Collaboration, learning, and teaching are the very fundamentals of KM, and when they are combined in the knowledge-centric enterprise, the organization's strength is, indeed, in the knowledge of its people.

So it would seem that KM, once developed, will be institutional and "forever." Perhaps not, for the organization's greatest challenge is going to be the continued evolution of the knowledge-sharing environment simply because, as has been demonstrated time and again in the organizational management environment, human beings do not, by and large, take fondly to change. Nevertheless, it has been proved that such attributes as sharing, working harder, embracing change, and building a more collaborative workplace make for better work, and that, in the final analysis, is what the enterprise requires of its workers and of its managers.

As such, the enterprise and its leaders may simply find themselves "absorbing" KM into managerial construct, much as happened with total quality management (TQM) and competency-based management, two very important management directions that were given much attention in the latter years of the twentieth century. In fact, Tom Davenport has been known to take such a position, when asked to make predictions about KM and its future. In the article from Eric Berkman, quoted earlier in another context, Berkman noted that it is Davenport's idea that KM will—as happened with TQM—be absorbed into



management practice in general, and will eventually be just a part of the general management methodology utilized by organizations and enterprises:

There are real business reasons—like increased productivity, worker collaboration, and shorter product development cycles—to keep track of who knows what. Thus, experts predict that KM practices won't go away; rather, they may become embedded in other disciplines, such as customer relationship management or enterprise resource planning. As long as the process lives on, it's really a victory for KM's legitimacy. Tom Davenport... likens KM to total quality management, which was all the rage in the early 1990s. Although TQM isn't mentioned much these days, it has become incorporated into the way we think about business, he says. "It would actually be a sign of success if knowledge management got embedded into other things," says Davenport, who has written extensively about the subject. "I'd certainly have no problems with its going into CRM and business intelligence."^[6]

Others, too, have commented that KM might simply be part of a larger management construct, as an element that has been separated and given attention for a few years (perhaps to ensure that we "get it right"?). Once KM's legitimacy as an integral and critical component of that management construct has been established and incorporated in the practice of management in general, it will probably cease to be the center of attention and emphasis it currently is.

Was that what Lloyd Baird and John Henderson were discovering when they were writing their book? Perhaps, for their experience was just that, discovering that KM is, indeed, not a stand-alone or "separate" activity—it's just what leaders do:

During the process of putting this book together, we were overtaken by the e-business wave. Soon that wave will pass; the next wave is already forming. Knowledge management will no longer be a specialized field but rather the responsibility of leaders.^[25]

If this "direction," as it might be labeled, is realized, then the future of KM is assured. Its utilization and its integration into management practice can only result in better work, and that, in the final analysis, is why management—as a philosophy and as a practice—exists in the first place.

REFERENCES

1. Special Libraries Association. A Visionary Framework for the Future. In *The Strategic Plan of the Special Libraries Association*; Special Libraries Association: Washington, DC, 1997.
2. Special Libraries Association. Historical Highlights. In *Who's Who in Special Libraries, 1999–2000*; Special Libraries Association: Washington, DC, 1999; 19.
3. Stewart, T. Welcome to the revolution. *Fortune* **December 13, 1993**, 66 ff.
4. Tiwana, A. *The Knowledge Management Toolkit*; Prentice Hall PTR: Upper Saddle River, NJ, USA, 2000; pp. 5, 8, 9, 148, 420–438.
5. Sullivan, P.H. *Value-driven Intellectual Capital; How to Convert Intangible Corporate Assets into Market Value*; Wiley: New York, NY, USA, 2000; 238–244.
6. Berkman, E. Knowledge management: When bad things happen to good ideas. *Darwin Mag.* **2001**, (www.darwinmag.com).
7. De Cagna, J. A word to the wise: Don't dismiss social capital—an interview with Larry Prusak. *Inf. Outlook* **2001**, 5 (5), 40.
8. Davenport, T.H.; Prusak, L. *Working Knowledge: How Organizations Manage What They Know*; Harvard Business School Press: Boston, MA, USA, 1998; 5.
9. Stewart, T.A. *Intellectual Capital: The New Wealth of Organizations*; Doubleday: New York, 1997.
10. American Productivity and Quality Center: Houston, TX.
11. www.gcn.com/vol19_no4/dod/1349-1.html.
12. http://www.microsoft.com/exchange/community/lotus_km.asp [1998, December 20].
13. <http://www.microsoft.com/mcsp/coreso.htm> [1998, December 20].
14. *The Social Life of Information*; Brown, J.S., Duguid, P., Eds.; Harvard Business School Press: Boston, MA, USA, 2000.
15. Drucker, P.F. *Management Challenges for the 21st Century*; HarperBusiness: New York, 1999, p. 142.
16. Miller, M.; Title, T.K. *The 2001 Knowledge Management/Organizational Learning Conference: Convergence, Applications, and Infrastructure*; The Conference Board: New York, 2001.
17. Lamb, C. Creating a collaborative environment: The human element. *Inf. Outlook* **2001**, 5 (5), 23.
18. Marshall, E.M. *Transforming the Way We Work: The Power of the Collaborative Workplace*; American Management Association: New York, 1995, p. 4.
19. St. Clair, G. *Beyond Degrees: Professional Learning for Knowledge Services*; K.G. Saur: London, 2003.
20. Hauser, J.; Clausing, L. The house of quality. *Harvard Bus. Rev.* **1988**, 3, 63–73.
21. Kaplan, R.; Norton, D. *Translating Strategy Into Action: The Balanced Scorecard*; Harvard Business School Press: Boston, MA, USA, 1996.
22. Portugal, F.H. *Valuating Information Intangibles: Measuring the Bottom Line Contribution of Librarians and Information Professionals*; Special Libraries Association: Washington, DC, 2000; x–xii.
23. Senge, P.M. The leader's new work: Building learning organizations. *Sloan Manage. Rev.* **1990**, 32 (1), 7, 8.
24. Tichy, N.M.; Cohen, E. The teaching organization. *Train. Dev.* **1998**, 52 (7), 27–33.
25. Baird, L.; Henderson, J.C. *The Knowledge Engine: How to Create Fast Cycles of Knowledge-to-Performance and Performance-to-Knowledge*; Barrett Koehler: San Francisco, 2001; ix.