

Knowledge Management in the Networked Era: levels of action and key questions

This article examines the state of the practice of knowledge management and highlights the key issues related to this discipline in two different levels: strategic and tactical levels. The tactical level is further divided into Organizational, HR management and Information Technology sub-levels. The authors argue that anyone who consults in knowledge management needs to be: flexible, sensitive to different points of view, and must look at knowledge management as an exploratory journey rather than as a set destination.

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There is nothing new, however, about knowledge resources playing a pivotal role in economic and human development. We are living, however, in a rapidly changing environment where the proactive management of knowledge must play a fundamental role for business growth. It has not always been this way. In a not too distant past, the challenge was simply to produce more products and services, better, faster, and cheaper. A firm's location and access to cheap labor, natural resources and financial capital were of greater concern (in terms of competitive advantage) than was the management of knowledge.

The most important carrier of knowledge is man himself, as an individual or a group. Other dominant forms of knowledge sources are material hosts: hardware, software, documents, products and services. Unlike knowledge acquired through material hosts, organizational knowledge is not

easily defined. A great deal of organizational knowledge is not codified in blueprints, documents systems or patents: it resides in people's heads. Indeed, the true competitive advantage of companies is often incredibly hard to emulate because it resides in the collective tacit knowledge that employees hold together. Employees' collective tacit knowledge includes a shared set of values, communication patterns and organizational routines that are heavily anchored on their joint experience.

Whatever its form or format, companies are increasingly realizing that the knowledge resource has become the key to establishing enduring, self-reinforcing competitive advantages. This realization, coupled with major advances in information technology, has led to the emergence of Knowledge Management (KM) as a discipline or an explicit concern for many organizations. Knowledge management, in its most current sense, may

generally be thought of as the effort to improve human and organizational performance. In practical terms, it means ensuring that those within an organization have access to the knowledge of the organization when, where and in the form that they need it.

This is not to say that KM is a complete novelty: the racks of clay tablets buried in the ruins of ancient Mesopotamian cities also can be considered to have been a form of KM effort. Indeed, as far as we can look back, organizations always had to choose a set of core competencies and knowledge base to compete (even knowledge on how to sustaining the support of kings and queens!). Today, however, we are experiencing unprecedented challenges in terms of knowledge management. The challenges are driven by three forces in particular: the enormous volumes of information that are currently being created, stored and distributed; the tremendous speed with which knowledge content is changing; and, the ongoing transformation of the workplace. Increasingly, in order to survive, organizations require automated systems that can bring the right source of knowledge or information to the user - wherever that person is located - in a virtually instantaneous manner.

New communication means are required to meet these demands. Many recent technological advances, such as the Internet, aim to address the increasing scalability requirements and to expand the bandwidth of distance communication.

Knowledge Management (KM) in the Networked Era has a lot to do with using the power of the Internet to bring the sources of knowledge (codified or tacit) closer to where they are needed. In this respect, KM is about supporting and improving “meaningful connections” between knowledge sources regardless of their format.

The Internet is now playing a central role in this acceleration and increased communication. Less than a decade ago, for example, it would have been prohibitive for a multinational company to link thousands of employees around the world via a corporate network. Today, due to the ubiquity and pervasiveness of the Internet, this is now an affordable and relatively simple task.

Given that employees carry in their heads most of an organizational knowledge it is no surprise to see a large deal of overlapping between KM and management of Human Capital. Indeed, we often see the KM initiatives being spearheaded by the HR departments (the other common found leading function is IT) since in the knowledge-based enterprise, employees and collaborators are seen much more like an asset or source of revenues than as a line of cost. Best practices in Human Capital management are also frequently related to company performance. For instance, McKinsey & Company's research of 6,900 managers of 56 large and midsize companies in the US showed that companies scoring in the top quintile of Talent Management practices outperform their industry's

mean return by 22 percentage points (Axelrod, Handfield e Welsh, 2001).

Human capital definitions that focus on human skill and knowledge acquisition are far too narrow. Human capital needs to take into account the human strategies required to make the connection between the critical aspects of the business strategy and the human performance strategies that will help realize business goals. Organizations concerned about human capital need to understand their business environment, technology trends, workforce trends and demographics that will have a direct bearing on the workforce and its management practices. It's also useful to look at human capital management from the life cycle perspective of employees at any company from hiring, training, career evolution, mobility, evaluation, compensation and termination.

There are many aspects of human capital that need to be taken into account: Talent Management deals with managing the workforce - providing the right people (employees or independent contractors, a fast growing portion of the workforce population - Tapscott, Ticoll e Lowy, 2000) with the right competencies at the right time for the right cost. Talent management entails implementing programs that help realign the human asset with the business environment and that respond to external workforce and workplace trends. Also, developing integrated performance management approaches is needed in order to define, measure and motivate human

capital with programs rewarding not only performance, but also skill acquisition, knowledge creation and knowledge sharing. This is achieved through implementing and monitoring appropriate incentive, recognition and measurement initiatives against business objectives.

The web is already playing an important role in the management of human capital. Hiring is probably one of the areas that has been mostly affected by web-based solutions. It's certainly creating a more efficient job market. Companies can tap into a much wider skills pool and, likewise, individuals are able now to more easily find job opportunities especially beyond their geographies. Although, we do not know of any research that has studied the effects of this greater allocation efficiency, we suspect that it has likely increased the productivity of the workforce. In fact, online recruiting is clearly one of the successful stories of the new generation of online businesses (In 2000, only 3 Dot Com decided or were able to afford TV ads during the fabled and extremely expensive SuperBowl game. Two of the three were online recruiting companies: Monster.com and Hotjobs.com). In the case of large corporations, this also means improved mobility for knowledge workers. It's no surprise then that large corporations such as Nortel and Bank of Montreal are licensing the online recruiting engine from TMP Worldwide (owner of Monster.ca) to recruit externally and internally. It involves posting jobs and creating a database of online resumes for more easily matching needs with skills and experience.

Not all connections, human capital and knowledge, however, are equally accessible, valuable or strategic. Consequently, KM should be closely linked with an organization's corporate/business strategy. Unfortunately, various surveys (Zack, 1999) completed in the late nineties with hundreds of companies from the US and Europe, demonstrated that this link is rarely established in most KM efforts. This brings us to suggest that KM necessarily involves two intertwined levels of action: strategic and tactical.

Strategic Level: This is a more analytical level of action that should have a top management perspective. It should be focused on determining what types of knowledge will provide a competitive edge and how the organization will acquire, develop or maintain such knowledge advantages. Typical questions related to the strategic level include the following:

- How does a company decide where to compete? What knowledge base will it use to compete? Does the company already have the required knowledge base or must it be acquired?
- How should a company's existing knowledge and intangible assets be mapped? Which of its assets are truly relevant for gaining/maintaining its competitive advantage?
- Will the company pursue an aggressive and innovative knowledge strategy or will it take a more tactical and conservative ("follower") strategy?

- What are the most important areas or processes where knowledge is created and used in the organization?
 - In these critical areas or processes does strategic knowledge reside predominantly in people's heads or is it documented? Are the most relevant documents comprised of unstructured or structured data?
 - Where can the key expertise and skills be found that are related to the company's core competencies?
- What are the organization's sources of external knowledge? How can they be acquired? At what speed?
 - How can people with the necessary competencies, skills and attitude be attracted, selected, and retained?
 - Which alliances should be prioritized? How can the company be made more open to external knowledge? How can the flow of knowledge, insights and ideas coming from clients, partners, suppliers and the community at large be captured and amplified?
- How can knowledge be put to use and increase profit?
- What kind of new business opportunities can the existing knowledge be applied towards?
- How can an organization protect its most unique intellectual capital? Where does it reside? With a few individuals? In the collective working practices? Is it mostly documented?

- How should the organization avoid the loss of strategic knowledge when a few individuals or groups leave?

- How should the organization prevent competitors and other external parties from copying or having access to proprietary knowledge (e.g. through the use of trade secrets, patents or copyrights)?

Tactical Level: Once the key decisions and strategies are formulated, companies need to implement organizational processes, HR policies and IT infrastructures that will support the chosen strategic directions. Typical questions and issues related to the tactical level include the following:

Organizational and HR management issues:

- How can an organization improve knowledge sharing and knowledge reuse?

- How do organizations change the common practice of controlling information as a key strategy for building power?

- What level of employee participation in decision-making is required? Which employees will participate in what decisions?

- What kind of formal and periodical knowledge-transfer mechanisms should be implemented (e.g. meetings, project “post-mortems,” status reports, offsites, etc.)?

- How can the organization create socialization opportunities for employees to informally share relevant information and experiences?

- How should knowledge sharing be encouraged and rewarded? How can knowledge hoarding be discouraged?

- How can an organization increase the speed and quality of knowledge generated internally?

- How can a balance between team and individual work, and between multi-disciplinary work and individual specialization be achieved and maintained?

- How can the process of making employees’ tacit knowledge explicit be facilitated and encouraged?

- How can a company’s collective knowledge be made accessible to employees when they need it?

- What kind of organizational structure will provide the best balance between knowledge creation, knowledge application and knowledge dissemination?

- How should job descriptions be changed to support the KM effort?

- Should dedicated KM-related positions be created?

- How can the organization foster the development of mentor-apprentice relationships?

- How can the organization promote a set of values and attitudes that lead to more innovation, risk-taking and knowledge creation?

- What systems, policies and processes should be implemented to support behaviours related to stimulating creativity and learning?

- What kind of employees should be hired and promoted? What kind of training should they be provided?
- Which management practices point to more employee empowerment through knowledge?
- How can the organization make sure that ideas are not ignored, but instead turned into valuable new products and services?
- What should an organization do to uncover existing knowledge (tacit and explicit) and put it to use?
 - How will inputs (information and knowledge flows coming from outside the organization) play an important part for knowledge creation and reuse in areas or processes that are strategic?

Information technology (IT) issues:

- How can IT be used to help automate the monitoring of relevant external information and improve the inflow of knowledge from the outside?
 - How can IT be used to transform data into valuable information (e.g. through data mining)?
 - How can IT be used to reduce time devoted to menial activities?
 - How can the investments in information and communication technology be used to improve decision-making and not simply to accelerate the flow of information?
 - How can IT increase access to information and at the same time reduce “information overload”?
- How can IT be used to increase the conversion of tacit knowledge into explicit knowledge?
 - How can IT be used to improve the reuse of (tacit or explicit) knowledge where it can have the most impact?
 - How can IT be employed to support collaborative work?
 - How can IT help to better serve customers?

This set of issues, although quite long, it is only a partial list and highlights that Knowledge management is still an emerging practice. There are many different interpretations as to what knowledge management means and how to best address the emerging questions about effectively using its potential power. A person's particular point of view is influenced by his or her work experience, as well as his or her professional education and training and functional responsibilities within a large organization. However, anyone participating in the field of knowledge management should understand that:

- Knowledge management is an emerging discipline;
- There is industry-standard definition of knowledge management, nor is there universal framework with which to align different professionals;
- It is important to understand that managing knowledge is not a new concept - just

newly framed and enabled by new technologies, media, devices, and techniques;

- It will take time for these new capabilities to fully evolve and for their opportunities and effects to be fully understood;
- Most efforts to link investments in KM with financial results have been anecdotal at best.

As industry experience is gained, and academics continue to research this field, there will be increased understanding, and in time – alignment. Today, however, this is not the case. Anyone who consults in knowledge management needs to be: flexible, sensitive to different points of view, and must look at knowledge management as an exploratory journey rather than as a set destination. It is a frontier of great potential value, most of which is unrealized, and much of which is currently hard to measure.

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