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IS THERE A FUTURE FOR KNOWLEDGE MANAGEMENT?

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ABSTRACT

Many are questioning whether KM has any chance to become a viable tool with real business applications and impact on organizations work. Others believe that knowledge is the real engine of wealth generation and hence KM is the central driver of organizational competitiveness. Facts collected from a wide range of corporations show that KM is facing serious challenges. In this paper we analyze the reasons for which KM has gained a dubious reputation among business executives and explain why the only way to leveraging knowledge is through attention to the best source of tacit knowledge – people. Finally we provide some insights about how the human component can funnel knowledge to a level where actual work is performed.

Keywords: Knowledge Management, Shareability, Human Element, Social Factor

INTRODUCTION

Knowledge management is a prerequisite for competition. It is the critical element for innovation. Theories elaborated in the 1980s by economists such as Romer [18], predicted the shift to a new era in which knowledge is the primary source of wealth. Labor, land, and capital are no longer enough to generate wealth. In the same time, Drucker [7] introduced the concept of knowledge worker and translated it into business practices.

The term KM was coined in 1986 as a core business competency practiced in most corporations, especially in knowledge intensive industries such as software and pharmaceuticals industries. Expectations were high, mainly because people believed that a new

economic era requires new business concepts. During the last decade, KM has had its ups and downs. The last few years have been particularly tough. Since 2001, IT budgets have been reduced drastically by the recession.

Although, KM should not be considered as another IT application, it is still perceived as such. Consequently, KM practitioners had to abandon most of their projects. KM became a luxury that cannot be afforded in difficult economic times. Does it mean that KM is useless? Most people inside the industry, without going so far in their conclusions need to see and hear more about success stories. KM has gained dubious reputation because of too many failing projects. Nonetheless, most agree that KM can provide both strategic and tactical business advantages.

Increasing productivity, fostering worker collaboration, reducing product development cycles and

providing customized services are good business reasons to keep track of who knows what. However, the path toward achieving those advantages is still unclear. What is clear now is that good managerial skills, high-quality software engineers, and an efficient project team not always equal success.

In this paper, we start by analyzing the roots of KM criticisms that may explain some of the confusion and KM failures. Then, we explain why the main value of KM resides in managing tacit knowledge.

A CRITIQUE OF KM

We cannot envision clearly the future of KM without answering the question what is knowledge? This question is still challenging in spite of its simplicity. As a matter of fact, many prominent scholars, philosophers, and business gurus from ancient history till now tried to answer it to no avail. What makes things even more complicated is that defining knowledge is not enough; managers need to know how the organization of work will be transformed, how to achieve increased returns and finally how to sustain competitiveness with a source of wealth that is infinite, and not constrained by scarcity Kelly [10].

Beyond Technocratic practice

In the following KM definitions, it is important to note that these definitions say nothing about technology; while KM is often facilitated by IT. Technology by itself is not KM.

- "Knowledge is the only meaningful economics resource of the post capitalist or knowledge society" [7]
- "KM deals with capturing knowledge gained by individuals and spreading it to others in the organisation." [14]
- "The systematic management of the processes by which knowledge is created, identified, gathered, shared and applied" [15]
- "KM enables your company to cultivate and share new ideas, and it must focus your company's brainpower on what's really important" [16]

- "We don't know what KM is but the paradox is that a large number of companies seem to be doing it!" [2]

Larry Prusak, executive director of IBM's Institute for Knowledge Management, has observed 220 KM implementations at least half have been "deeply suboptimized" because it was easier and faster to just buy technology than think through the strategic issues. He cites a global financial services company that spent six years and nearly \$1 billion on a KM project to improve the productivity of its financial planners. It was purely a technological exercise and the company has gained almost no return on investment.

Consider Japan's industrial growth in the 1960s compared to today's production of Lexus and Camry vehicles, among others. Technology alone did not do the trick. Products were initially not differentiated from competitors. When Toyota began to focus on quality, reliability, and dependability at a competitive price, it actually took on the U.S. market. American car manufacturers began to rethink their way of building cars to compete in a new way of doing business. In this paper, we address factors that address the growth and potential of knowledge management.

The roots of confusion

The definition of knowledge, its nature, and its usage are unclear. The consensus that organizations have to become knowledge-centric is still mild. In spite of their investments and initiatives, organizations are not yet able to grab the benefits of KM. Much of the confusion concerning how to do business in the knowledge era would be eliminated if we had a better understanding of the difference between information and knowledge. Failing to understand this difference will lead companies to major strategic mistakes. The key element in the knowledge economy is the tacit knowledge that has the potential to dynamically grow.

One perspective of today's KM foundation is shown in Figure 1. In KM design, the first step is to automate routine tasks that can be handled with minimum effort by technology. This allows the knowledge manager to concentrate on higher-order decision-making or decide on the knowledge needed to do creative work. Creativity is the driver of innovation resulting in a new product or improved service over time. Knowledge for creative work comes from knowledge repositories and other sources.

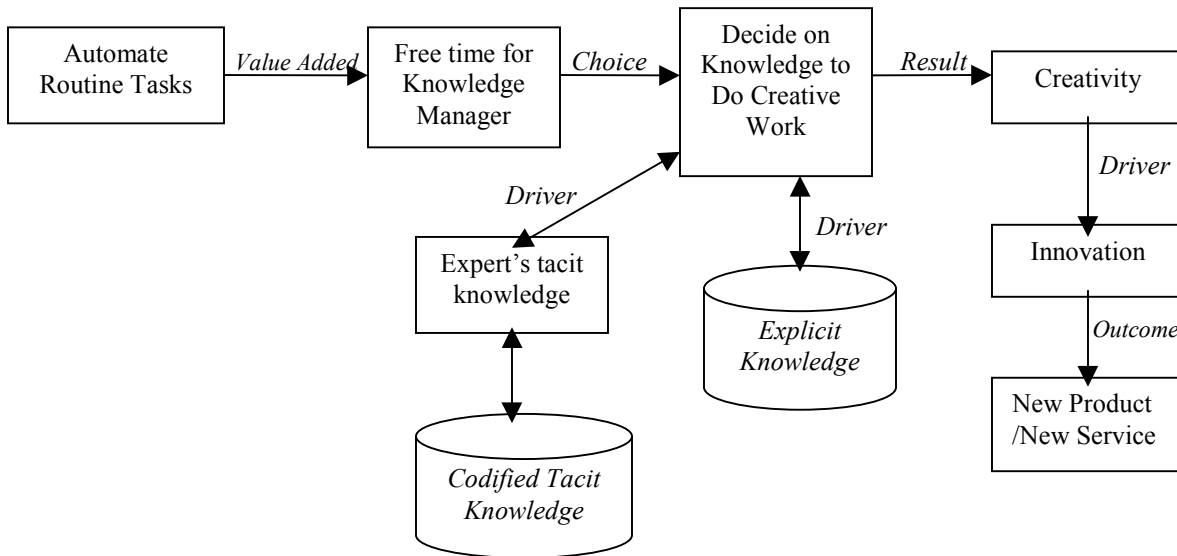


Figure 1. Today's Knowledge Foundation

As we see it, KM is the process that allows organizations to generate value from their intellectual and knowledge-based assets. Most often, generating value from such assets involves sharing them among employees, departments, and even with other companies in an effort to devise best practices. This approach is widely accepted. Although coherent and focused, it does not provide a vision nor a strategy to build a knowledge centric enterprise.

With these ideas in mind, today's knowledge manager wants to know the reality of tomorrow, not just the reality of today. In a strategic sense, knowledge management in the next 5 to 10 years is likely to be shaped by initiatives that we don't know for certain. Learning from KM failures, executives dissatisfaction and confusion is a necessity for KM to remain a core competency needed to transform organizations work and business competitiveness.

What we now know is this: Knowledge management is a prerequisite for competition. It is the critical element for innovation. The only value KM can add is the efficient management of tacit knowledge. In other words, the success of KM will depend on its ability to find new concepts for managing knowledge workers rather than focusing on managing knowledge which remains a nebulous notion. In the following sections we will discuss in more details the importance of the shareability, the human and the social factors and their impact on putting KM on new tracks.

THE SHAREABILITY FACTOR

From various consulting and research experiences, we found the greatest factor in knowledge management is the sharing of tacit knowledge. The stumbling block is not so much availability but willingness to share with others. Tacit knowledge can be captured and stored before it is shared. Unfortunately, because knowledge tends to become richer (not leaner) over time, it must be kept up to date, which in itself is a problem. Also, the key is not availability of tacit knowledge, but how it is used. This is a major parting point from knowledge-based systems, per se.

Another component of the shareability factor is organizational control. In traditional business, authority and power are assigned to each managerial position. It means that sharing knowledge requests decentralized intelligence to empower knowledge workers to function more quickly and effectively. It also means transplanting vast volumes of decision making to lower levels. The problem is the farther down the line intelligence is communicated, the more "diluted" knowledge becomes. When it reaches the intended level, you often end up with content, not context. It is like going to a museum to view the paintings. They are nothing more than artifacts containing basic information

about their composition or age. It is up to the visitor's imagination to draw conclusions about their prominence.

We could easily see that shareability is more than mere availability of repositories or warehouses where the burden is on the knowledge worker to find the relevant expertise and decide how to use it. To achieve context, knowledge management must shift emphasis to cultivating expertise. The shift is fraught with two key misconceptions.

Misconception 1. Generalizing expertise will reach a wide audience; this is often not true. Consider this scenario:

The authors recall a consulting assignment, involving a \$200,000 hardware installation for a small bank. The vendor was known for giving no discount on the product, service, or support. Sensing that the order could go to a competing bidder, the sales representative came up with the offer of writing the installation under a 6-month testing, which meant no charge. Instead of giving the client the 20 percent discount that was refused by headquarters, the value of the 6-month period of use was worth the discount when considering the interest saved on the \$200,000 at 10 percent for 6 months, plus savings on maintenance and support, to be worth \$20,000. The sales rep drafted this indirect discount so that other sales reps could apply the same, with no reference to the customer or to the plan as a direct discount. The list was then posted on the KM portal available only to sales reps under the heading "one-time discount procedure for sales exceeding \$200,000." Consider also this example reported by L. Prusak [17]. He cites Nynex, the telecom company that has since merged with Bell Atlantic to form Verizon. The company, says Prusak, wasted tens of millions of dollars trying to build a system that would store the expert knowledge of its most valuable employees. The trouble was, the systems couldn't reproduce the problem-solving processes of its experts. "[Nynex] didn't think through what an expert knows and why they're experts in the first place," says Prusak.

Misconception 2. The more knowledge is available, the more likely individuals will find what they need to solve a business problem.

Humans in general do not have the patience to surf or scan hundreds of documents to locate the desired item. Also, as more documents are stored in a repository, the number of dated documents also increases. This means finding a way to filter useless documents would be required at a high cost, which is difficult to justify [13].

Another problem with knowledge search is that knowledge workers do not always know how to search effectively for the right document to meet

specific needs. With an ever-increasing number of knowledge repositories, there is an inevitable increase in the number of "hits." This is where frustration sets in, and people want to find an easy and a quick way out.

One way to address this problem is for a team of company experts to identify a repository content that provides the most value to the business in general. They could apply the '20/80' rule, where the top 20 percent of the content will satisfy 80 percent of the queries or problems. In addition, an online environment would continuously purge old documents through filtering. Technology may be employed to filter out the waste and organize existing resources based on value, frequency of use, and so forth. This helps ensure targeted knowledge to authorized users.

THE HUMAN ELEMENT

During the 1990s when we were designing and implementing knowledge-based systems, people did not show much interest contributing to a knowledge base. This was especially true with top performers. One thought that makes sense is that since knowledge is something they own, why would they want to share it? In addition, they do not know what should and should not be shared. Even then, not everything people share is necessarily valuable.

To promote knowledge contribution, it is important for experts to be treated as experts. This means recognition and appreciation of the contributions they make, for the way they think, and how they explain things. Experts are not the most humble people or the easiest to know. In fact, many experts with whom we have worked over the years tend to be moody, picky, perfectionists, and restless when asked to extend sessions or repeat something they have already explained. Yet, there is a powerful emotion attached to being recognized as an expert.

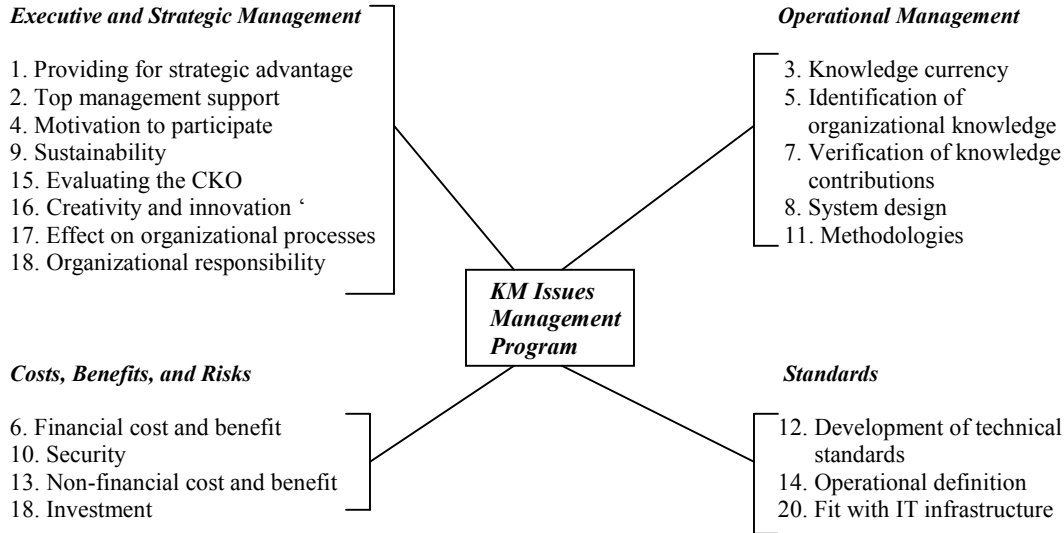
This brings up important issues in knowledge management. King et al. [11] conducted a study to identify important knowledge management issues and how they should be managed. Table 1 summarizes the top 20 KM issues as reported by survey respondents. The issues were factor analyzed into four groups: Executive and strategic management; operational management; costs, benefit, and risks issues; and standards in KM technology and communication networks. These issues and their respective grouping are predicted to represent the basis for effective management in the future.

THERE IS A LOT MORE TO KNOW

We know knowledge managers think ahead. They focus on strategizing for tomorrow's business and how to use technology to leverage resources. Based on the

authors' experience and existing literature, several trends are worth noting:

Table 1. KM Issues



Numbers reflect priority ranking of each issue

SOURCE: King, W. R., Marks, P. V., and McCoy, Scott. "The Most Important Issues In Knowledge Management." *Communications of the ACM*. September 2002, p. 95.

We deduce that today's knowledge organization faces an investment choice as it considers knowledge management applications. The ingredients in such applications are technology and content. Our preference is to employ technology to provide knowledge managers direct access to a lower volume of high quality content tailored to the exacting needs of the solicitor. Sophisticated indexing, for example, goes a long way toward providing the knowledge needed at the time needed, and in the proper format. Experts should be interviewed and their new or updated knowledge captured on a regular basis to ensure quality and dependability of the knowledge repository. This means knowledge management must be managed and leveraged; this can only be achieved when paying attention to the best source of tacit knowledge—people.

- Knowledge is productive only when it is captured in people's minds. Because most knowledge is acquired on the job, through training, and in interaction with people, it

behooves every organization to nurture and invest in the skill level of employees so that they become more productive in present and future jobs. With proper incentives and benefits, this is the kind of investment that promotes loyalty and discourages defection [9].

- More and more companies are discovering that leveraging knowledge is best served through decentralized intelligence. This means empowerment of knowledge workers and funneling tacit and explicit knowledge to the level where the actual work is performed. This type of decentralization is expected to make organizations more responsive to a changing environment, where the time for decision-making is measured in seconds, not hours. Companies that have human knowledge updated regularly will find greater opportunities for

creativity and innovation through the unique ideas that inevitably result.

- Creativity being the driving force behind knowledge work, it becomes an essential driver for innovation. The key is not so much the amount of knowledge available, but how knowledge is used. This is a major parting point from knowledge automation systems. Creativity is breaking loose from the traditional way of doing business. Recruitment and compensation strategies are being revised to address the creativity imperative. Aspiring candidates with potential will be highly sought. Technology will continue to take over routine and redundant work, freeing knowledge workers to concentrate on human insight and foresight [6].
- Knowledge management is expected to be an entry requirement for competitive advantage and the future will belong to innovators, not copycats. This, of course, will be expensive: Recruiting intelligence is not cheap or easy. The pressure will increase on human resource managers and recruiters to scout for the right sources of talent and secure a continuing stream of candidates to support the long-term needs of the corporation.
- Corporate capital continues to be regarded as the enabler of the enterprise, especially when it comes to funding new projects, equipment, and technology. However, the trend is toward using corporate knowledge in a global competitive market. Knowledge management requires action, foresight, and focused strategic planning [1].

THE SOCIAL FACTOR

There is a general view that knowledge management is passive--facts and heuristics that can be stored, retrieved, and transferred with little concern for the context in which it will be used. Most of the writings and practice in knowledge management seem to focus on the content of knowledge management systems, overlooking how knowledge is presented or communicated. Fortunately, the fact remains that knowledge management is more than getting the right

information to the right person at the right time. Managing knowledge occurs within a complex structured social context. That is, there must be social and human factors in the creation and exchange of knowledge [4, 19].

In the field of computer-supported cooperative work (CSCW), knowledge work was found to involve communication among communities of people and the social practices that occur in a particular context. For example, Orr studied the practices of photocopier technicians and found that their technical knowledge was socially distributed across the technicians of the firm and disseminated by storytelling, by memos, and graphic sketches. Another study by Olsen brought up a variety of social factors that affect communication of knowledge among coworkers and illustrated how greater shared background helps in establishing common grounds for knowledge sharing [13]. The rate of motivation also happens to be a factor in knowledge sharing. Failure of motivation was reported to be a major factor adversely affecting the adoption of groupware in most cases.

In a nutshell, it is important to note that knowledge management is not just a bunch of isolated facts stored in documents, knowledge bases, or repositories. It is shaped by social and human factors that require the involvement of the knowledge contributor and the knowledge recipient. Communication takes place when individuals or groups are turned on by personal and social motivators that encourage the sharing of experiences and consensus in problem-solving. The true picture of knowledge is one where people voluntarily explore, use, and adopt knowledge for the good of the project and in the best interest of the firm. Such a knowledge community is people who know one another. They use storytelling, war stories, and other forms of narrative to enrich professional relationships, using specific techniques. This type of exchange is bound to building social capital, cooperation, coordination, trust, and solidarity among professional peers. Cultural, organizational, and political factors also influence knowledge transfer and knowledge exchange.

When all said and done, we still have to worry about how companies view knowledge management. Some emphasize intellectual capital; some focus on technology; others associate different views of knowledge with personality types. Dueck did a major study when he found that a person's temperament is a major influence on how that person views knowledge management [8]. He found that "corporate guardians" (caretakers, caregivers) are concerned with security of knowledge to ensure that no knowledge is lost. Everyone in the organization uses the same technology and speaks the same language for solidarity and unity in front of the customer. The other group consists of the "utilitarian rationals," who live for

their work and focus on competence and the need to see daily improvements. They are not always sensitive to interpersonal exchange. They need databases and hate soft knowledge.

For knowledge management to be established in an organization, the so-called guardians will try to set standards. But, some professionals are likely to resist, because they view the “right” knowledge management approach as a function of a person’s temperament.

In the final analysis, we feel that the future of KM depends on the right approach to this emerging field—a unification of technological, social, human, and organizational elements that lead to economic value. Each element and temperament has to be part of the mix, the exchange, or the approach. The behaviorists have to accept the use of technology for storing and disseminating knowledge; the technologists have to understand that “tacit knowledge” and expertise are the foundations of knowledge management. The inner personalities of the experts must also blend with those in technology to make things happen. It is the future of the organization, not its past or present, that is the goal of knowledge management.

ONE FINAL NOTE

We have been undergoing dynamic and somewhat turbulent change in the business environment. Malhotra referred to it as the world of “re-everything,” tantamount to performing maintenance on a passenger train while the train is moving at top speed. What used to be predictable and programmable is becoming less relevant to survival. The question is how does a company manage a business that has the capability of questioning its executives’ logic and revising their heuristics in real time as the business senses dynamic changes in the product or the environment? The concept of strategy and advance planning has shifted from predicting the future to what to do in the event of a surprise on a daily basis.

With the return on intangible assets becoming more prominent, there is a pronounced shift from the “brick and mortar” to the “click and mortar,” as seen in e-commerce, e-business, supply chain management, customer relation management, and the value chain for most companies worldwide. One may speculate that tomorrow’s firms may far exceed the current logic of e-technologies as business becomes interlocked with learning and digital storefronts along the Internet—the information highway.

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