
Knowledge Management and its Utilisation : an Overview

Partha Bhattacharya

Pravin Kumar Chaudhury

Abstract

The paper has tried to cover different aspects of Knowledge Management(KM) and its applications. The relevance of KM for organizations finds mention in this paper. The paper states that KM is a cross-disciplinary domain. Value of knowledge for an organization is described in detail. The importance of Librarians & Information professionals in managing the KM of organizations is described. Knowledge creation and knowledge sharing is described. The challenges facing KM is mentioned. The paper has profiled the different types of knowledge management initiatives with examples.

Keywords : Knowledge Management Initiatives (KM); Knowledge sharing; Knowledge-based assets

0. Introduction

Knowledge and Knowledge management are concepts, which are debated extensively by managers, analyst and academicians. Managers ask for more information to support decisions. This led to the use of IT (Information Technology) to build transaction support system, management information systems and data warehouses resulting in too much information, which has neither helped the managers nor provided any value to the organizations. Data leads to information, but what organizations were really looking for was knowledge

When we refer to knowledge, most of us mainly tend to think of codified and documented knowledge like patents, databases, manuals, white papers etc. With this “explicit knowledge” is important, what is even more important and value adding from the perspective of competitive advantage is the “ tacit knowledge” which is embedded in the minds of the people. The tacit knowledge is intuitive, contextual, linked to experience, past memories and difficult to codify, document and communicate. It is estimated that this tacit knowledge constitutes between 70 and 80% of all knowledge in an organization and is difficult to identify, quantify, and convert into real value, unless a structured approach is adopted to manage knowledge.

Unfortunately, there is no universal definition of Knowledge Management (KM), just as there's no agreement as to what constitutes knowledge in the first place. For this reason, it's best to think of KM in the broadest context. KM is the process through which organizations generate value from their intellectual and knowledge-based assets. It is the practice of harnessing and exploiting intellectual capital to gain competitive advantage and customer commitment through efficiency, innovation and faster and more effective decision-making. 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. It is important to note that the definition says nothing about technology, while KM is often facilitated by IT; technology by itself is not KM.

Knowledge management is a cross-disciplinary domain. Library professionals are already ushered into knowledge management activities and practices and the paradigm shift that is taking place whereby libraries are getting transformed into knowledge management centers. KM will inject new blood into the library culture. The main contents include: mutual trust, Open exchange, studying, sharing and developing

knowledge operations mechanism of libraries, enjoying the KM process. Customer's delight ness, staff's quality and enrichment as well as an all-round improvement of library starting from house keeping activities to knowledge marketing will become important objectives of KM in Business and Management Libraries.

Managing this knowledge is a difficult task. Knowledge management (KM) is all about managing organization's knowledge effectively by sharing and having a systematic activity for creation of knowledge and exploiting it for the market and benefit of the organization. KM techniques and processes provide such a structured approach to explicate a significant part of this tactic knowledge document in knowledge repositories and also share in teams, through intensive dialogue and discussions. KM refers to the critical issues of organizational adaptation, survival and competence against discontinuous environmental change.[5]

1. What is KM

KM practice in several industries is still young and each company and industry has its own key knowledge assets. As a result, we lack successful and generic models to emulate. However, KM depends on the knowledge i.e., the way the company or an institution serves and treats its customers, employees, the economies of its business and the people it hires. The most important point is, how the company or the institution uses and reuses the information that is generated with these interactions with their customers, employees and other stake holders.

KM mainly focuses on one of the many possible type of knowledge that resides in an organization or institution. That is the knowledge that employees or researchers learn from doing an organization's work, knowledge here is different from book knowledge or from lists of regulations or databases of customer information. Examples of knowledge include: what an organization has learned about introducing new product or service, reducing material costs on capital projects, decreasing the project time in developing a product or service. The key of KM lies here. That is, employees using the earlier organization knowledge to reduce their learning curve and as a result improve subsequent work process. The same thing could also apply to research institutions. The learning could be from its research processes and implementation and how the bottlenecks-whether process related, team dynamics or administrative-were overcome.[7]

2. Knowledge-based assets

Not all information is valuable. Therefore, it is up to individual companies to decide what information qualifies as intellectual and knowledge-based assets. In general, however intellectual and knowledge-based assets fall into one of two categories: explicit or tacit. Included among the former are assets such as patents, trademarks, business plans, customer lists, marketing lists etc. Normally explicit knowledge consists of anything that can be documented, archived and codified, often with the help of IT. The concept of tacit knowledge or know-how in people's mind is difficult to grasp. The challenge inherent with tacit knowledge is figuring out how to recognise, generate, share and manage this knowledge. While IT in the form of E-mail, groupware, instant messaging and related technologies can help facilitate the dissemination of tacit knowledge; identifying tacit knowledge in the first place is a major hurdle for most organizations.[6]

3. The Need for KM

There is sufficient evidence of many companies who have benefited from KM initiatives. Based on these experiences, KM experts argue that, for organizations and institutes to be successful and competitive today, they need to continually engage in 2 activities :

1. Find effective way to translate the institution's ongoing experience into knowledge (By taxonomically structuring the knowledge and by building enterprise-wide vocabulary thru keywords, which facilitates effective retrieval)
2. Transferring and leveraging companies and institutions knowledge across time and space (Thru Internet technologies) while transferring knowledge for better leverage, it is necessary to consider the following key issues:-
 - Find a method for transferring the knowledge to a group or individual who can reuse it.
 - Translate what has been learned into a form that others can use.
 - The receiving team or individual adapts the knowledge for use in a particular context.
 - The iterative process where the receiving team or individual takes action on a new task by using the organizational or the institutional knowledge, and again this experience goes into KM as a future learning [7]

4. Organization's perspective in KM

Lessons are learnt but not shared. Knowledge gained through failure is often under valued. Events that caused a delay in the project completion are often under valued. Events that caused a delay in the project completion are often forgotten. One tends to repeat past mistakes due to lack of knowledge or the inaccessibility of learning from failures.[5]

Organizations often do not know what they already know. In the knowledge-based economy, survival depends on the best possible response to a multitude of challenges, primarily using the knowledge gained through past experience. Due to lack of sharing culture and facilitation, best practices of a group do not get embedded into the organization's procedure. Very often, individuals who have valuable information are not tracked in the organization and this knowledge stays with them with no benefit to the organization.

5. Knowledge creation

Knowledge creation revolves around the activities that result in conversion of knowledge. The process of conversion involves creation of tacit knowledge through informal sharing, moving from tacit knowledge to explicit, enhancing explicit content by combining codified knowledge and using explicit knowledge to create new tacit knowledge through thinking and sharing.[5]

6. Knowledge sharing

Sharing knowledge requires a different kind of environment, a unique combination of human and information system to reduce the knowledge gap. Knowledge sharing requires different set of tools and mind-set that appreciates the following:

1. Knowledge/ Learning is by people i.e., it is a human activity
2. Thinking creates knowledge
3. Knowledge is created as it gets used and is dynamic. It moves through Organization and Communities in many ways.[5]

7. Technologies that can support KM

KM tools run the gamut from standard, off-the-shelf E-mail packages to sophisticated collaboration tools designed specifically to support community building and identity. Generally, tools fall into one or more of

the following categories: knowledge repositories, expertise access tools, E-learning applications, discussion and chat technologies and search and data mining tools.[3]

8. IT for K.M.

1. Connecting people to people by providing collaboration tools- that ideally built on existing e-mail or intranet systems and introduce workflows, Intranet systems and introduce workflows, Intranets would offer a way for the community to store and share their documents.
2. Connect people to information through knowledge Centres. These Centers will be a place to search, place to query etc. Online training courses can be offered through this forum.
3. With Internet and electronic information librarians are converted to cybrarians. Teamed up with knowledge managers and subject experts, cybrarians can guide employees to Internet sites that contain useful information.

9. Value of Knowledge

Knowledge is not the same thing as a knowledge worker. And just as there is a difference between the knowledge that exists in a KM system and knowledge that exists in the mind of the knowledge worker, there is also a difference between the kind of knowledge that exists in the mind of the knowledge worker and that, which exists within a community of knowledge workers. This distinction makes it easier to account for knowledge assets. A knowledge worker is an asset that appreciates over time. Knowledge itself is more often a depreciating asset. Patents, for example, lose their value if not converted into product or licensed quickly. A sales lead become worthless if the contact chooses a competitor's product or leaves the customer's firm for another job.[3]

10. Benefits of Organizations from KM

Some benefits of KM correlate directly to bottom line savings, while others are more difficult to quantify. In today's information driven economy, firms uncover the most opportunities- and ultimately, derive the most value from intellectual rather than physical assets. To get the most value from an organization's intellectual assets, KM practitioners maintain that knowledge must be shared and serve as the foundation for collaboration. Yet better collaboration is not an end in itself; without an overarching business context, KM is meaningless at best and harmful at worst. Consequently, an effective KM program should help an organization do one or more of the following:

(i) Foster innovation by encouraging the free flow of ideas and thoughts; (ii) Improve customer service by streamlining response time; (iii) Boost revenues by getting products and services to market faster; (iv) Enhance employee retention rates by recognizing the value of employee's knowledge and rewarding them for it; (v) Streamline operations and reduce costs by eliminating redundant or unnecessary processes.

These are the most prevalent examples. A creative approach to KM can result in improved efficiency, higher productivity and increased revenues in practically any business function.[3]

11. Challenges of KM

- 11.1 Getting employees on Board: The major problems that occur in KM usually result because companies ignore the people and cultural issues. In an environment where an individual's

knowledge is valued and rewarded, establishing a culture that recognises tacit knowledge and encourage employees to share it is critical. The need to sell the KM concept to employees shouldn't be underestimated; after all, in many cases employees are being asked to surrender their knowledge and experience the very traits that make them valuable as individuals. One way companies motivate employees to participate in KM is by creating an incentive programme. However, then there's the danger that employees will participate solely to earn incentives, without regard to the quality or relevance of the information they contribute. Ideally, participation in KM should be its own reward. If KM doesn't make life easier for employees, it will fail.

- 11.2 Allowing Technology to Dictate KM: KM is not a technology-based concept. Organisation should not get duped by software vendors touting their all-inclusive KM solutions. The fact is that companies that implement a centralized database system, electronic message board, web portal or any other collaborative tool in the hope that they have established a KM program are wasting both their time and money.

While technologies can support KM, it's not the starting point of a KM. Make KM decisions based on who (people), what (knowledge) and why (business objectives). Save the how (technology) for last.

- 11.3 Not having a specific business goal: A KM programme should not be divorced from a business goal. While sharing best practices is a commendable idea, there must be an underlying business reason to do so. Without a solid business case, KM is a futile exercise.
- 11.4 KM is not static: As with many physical assets, the value of knowledge can erode over time. Since knowledge can get stale fast, the contents in a KM programme should be constantly updated, amended and deleted. What is more, the relevance of knowledge at any given time changes, as do the skills of employees. Therefore, there is no endpoint to a KM programme. Like product development, marketing and R&D, KM is a constantly evolving business practice.[3]

12. Different types of Knowledge Management Initiatives

Knowledge Management initiatives are taken by organizations and practitioners' worldwide, which reveal how these companies create value from their intangible assets. The initiatives are in the external structure, the internal structure and the competence of the people.

Examples of these initiatives are as follows :

- 12.1 *External Structure initiatives:* Gain Information and Knowledge from Customers, Example: Netscape, USA, Close links via the Net to opinion leaders among customers, who are encouraged to report problems enable it to create new generations of software at a fast pace.
- 12.2 *Internal Structure Initiatives:* Build Knowledge Sharing Culture, Example: 3M, USA. With 60,000 products of their own innovation process, this company has an organization that balances between creativity and conservatism. 3M's values encourage learning and risk taking, but managers are required to link continuous learning to revenues.
- 12.3 *Competence Initiatives:* Create Careers based on Knowledge Management. Examples; IBM USA and most Japanese large companies. Dual careers, Employees are encouraged to switch between professional and managerial jobs, in order to gain more holistic knowledge about the company.[3]

13. Knowledge Management Initiatives in India

The KM Initiatives has started in different sectors of the economy. They may be categorized as follows:

- (i) Initiatives at the Corporate level;
- (ii) Initiatives at the R& D level;
- (iii) Initiatives at the NGO level;
- (iv) Financial Institution level initiatives
- (v) Initiatives at the Academic Institution level

A few examples of the above-mentioned categories are as follows:

13.1 Initiatives at the Corporate level

13.1.1 Infosys Knowledge shop

As far as an Indian organization is concerned, knowledge management as it is known today, has been practiced by Infosys way before the term was coined. They started off with a body of knowledge (BOK)- a set of documents that captures in a structured form, the experiences and insights of the people that worked on different projects. Today their body of knowledge (BOK) covers not only issues relating to software development and tools, but also fields like travel tips, loans, leave along with other Infy Intranet web applications, online library catalogue, HR as well as Admin issues at the knowledge shop. [2]

13.1.2 TCS

Tata Consultancy Service has developed its knowledge management solution from its intranet. The company slowly developed all its internal processes and gathered a lot of information. Considering its multi locational operations, it decided to consolidate on the company-wide knowledge to make it available across all its branches. This led to the idea of developing a knowledge repository on top of all intranets. TCS has built its knowledge management system using a Lotus Domino Server. TCS's knowledge management solution was conceptualized sometime in 1995. It has taken them an equivalent of 25 man-years to complete this project.[2]

13.1.3 ONGC

Oil & Natural Gas Corporation has set up a task force to implement knowledge management system and practices. A pilot project has already been set up to explore and experiment, expand and support and institutionalize KM. The most important issues for companies here is to ensure that they focus the synergy of data and information processing capacity of IT and the creative and innovative capacity of their human members. Advanced information technologies can increasingly accomplish programmable tasks traditionally done by humans. If a procedure can be programmed, it can be delegated to IT in one form or another. The information & control systems in organizations are intended to achieve the 'programming' for optimization and efficiency. The human brain is required to ensure checks and balances needed to continuously update the organizational processes so that such "Programmes" are in alignment with the dynastically changing external environment.[2]

13.2 R&D level initiatives

13.2.1 National Aerospace Laboratories (NAL)

National Aerospace Laboratories has already taken the steps to create the basic infrastructure required for KM systems, including the establishment of a campus-wide communication network, development of a super computer based on parallel computing techniques, and creation of facilities for providing advanced information services to the research scientists and engineers.[2]

13.2.2 IGCAR

In Indira Gandhi Centre for Atomic Research, Kalpakam the IT scenario covers a wide range of computer facilities including a campus-wide network. KM applications of the center cover hospital management, walkthrough, purchase management, material management, Library management & services and Training [2]

13.3 Financial Institution level Initiatives:

13.3.1 ICICI Knowledge Park

ICICI is trying out the concept of developing a "Knowledge Network" that would enable collaboration between "research and industry". It would be operated on the principles of a "non-profit" organization; the project envisages development of 10 blocks of laboratories in five phases. The park has taken up a unique project called "Knowledge Network", which in phases will have components such as database of networked institutions, online access to libraries and databases, facilities for negotiation and project execution, and information on the park tenants. To begin with work has started on a "virtual library" project, which will be completed in three years. This will be a database of scientists, experts and key research institutions in India. A search engine will enable seamless access into member institutions. If a tenant of the park has a problem, knowledge network can help find a solution. It could well be in the way to becoming a preferred destination to conduct 'business driven research' or 'collaboration between research and industry' where the finest scientific minds will come together to drive business.[2]

13.3.2 Export-Import Bank of India

They have established a KM system; which has helped them in solving loan related problems. EXIM Bank has established a learning culture system. They have established an expert system.[6].

13.4 Initiatives at the NGO Level:

13.4.1 TERI

The Energy and Resource Institute has developed a comprehensive knowledge management system to organize its research outcomes centrally and provide a single window access to research outcomes centrally and provide a single window access to researchers as a gateway at their desktops that provide facility to browse and search various forms of digital resources.

13.5 Initiatives at the Academic Institution level:

13.5.1 IITB

IIT Bombay has established knowledge Management systems, which encompasses the Thesis/Dissertation of IIT B, entire library catalog, databases etc.[4]

14. Knowledge Management in Libraries

The objective of KM in Libraries is to promote Knowledge Innovation. Knowledge innovation is the core of the knowledge economy society. As basis for collection, processing, storage and distribution of knowledge and information, libraries represent an indispensable link in the scientific system chain, an important link in the knowledge innovation. Secondly, libraries take part in scientific research process directly. The library work is a component of knowledge innovation. Thirdly, libraries must pay attention to diffusion and conversion of knowledge. They act as bridge for turning the results of knowledge innovation into realistic productive forces. KM in libraries is to promote relationship in and between libraries, between library and user, to strengthen knowledge Internet working and quicken knowledge flow. In the knowledge economy era, libraries will carry out research on development and application of information resources, construction of virtual libraries, protection of intellectual property rights in the electronic era etc., thus founding the base for knowledge innovation.[1,2]

15. Observations

From the discussion above the paper has drawn the following observations:

- Tacit knowledge represents the attempts of the organizations to maximize the capabilities of their people by capturing their expertise and turning it into a corporate asset
- KM decision should be based on the business objectives of the organization
- KM for corporate is mainly for getting competitive edge over rival companies
- KM in India is at a nascent stage of development with very few organizations are taking it seriously.

16. Conclusion

One of the key concept of knowledge management is learning. Learning is a complex dynamic process of interacting with many sources of information in meaningful ways to construct new knowing and understanding. Knowledge management enables a learning community to learn more effectively. Knowledge management is very important to an organization. Mission, conception, change and performance are four dimensions of knowledge management, which define the value of an organization. The most important area of knowledge management is the concept of tacit knowledge. Unlike most other management tools, knowledge management encloses every individual in the organization cutting across departments, functions and business units. The paper has tried to cover different aspects of Knowledge Management. It has been observed that KM for corporate is mainly for getting competitive advantages over the rival companies. In developed countries this culture is running for quite some time where as in developing countries especially in India it is slowly picking up. A KM initiative in different sectors of the economy in India is mentioned. Corporate in India such as TCS, ONGC, Infosys etc have established their in-house knowledge management systems. Different types of KM initiatives such as external structure initiatives, internal structure initiatives and competence initiatives with examples find mention in the paper. The paper has touched upon the challenges of Knowledge management.

17. References

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About Authors



Mr. Partha Bhattacharya is Executive Consultant (Information & Documentation) at Foundation For Innovation & Technology Transfer, FITT/IIT, New Delhi-110 016, India and holds MSc in Applied Geology and Associateship in Information Science from INSDOC. He is the Coordinator of the National Centre for Publications on CD-ROM, (NCPC), at FITT. He has contributed over 15 Papers and received the 4th place in International Paper Contest by ASIST. His current area of Interest includes Digital Library Initiatives in India & IPR issues in Digital Environment.
E-mail: arjun30@yahoo.com



Mr. Pravin Kumar Choudhury is Librarian at Sri Sringeri Sharada Institute of Management, Vasant Vihar, New Delhi-110 057, India and holds M.Sc(Zoology), Associateship in Information Science from INSDOC and PGDPM. He is also the Business Manager & Editor of Inhouse Journal "Sreshtha" and contributed around ten papers in various Journals & Conference Proceedings.
E-mail: pravin_choudhary2002@yahoo.com