Role of Knowledge Management Systems (KMS) in Multinational Organization: An Overview

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ABSTRACT: The aim of every organization is to achieve its set goals and objectives as well as secure competitive advantage over its competitors. However, these cannot be achieved or actualized if staff or workers act independently and do not share ideas. Today and prominent businesses are becoming more aware that the knowledge of their employees is one of their primary assets. Sometimes organizational decisions cannot be effectively made with information alone; there is need for knowledge application. Value of Knowledge for an organization is described in detail. An effective Knowledge Management System can give a company the competitive edge it needs to be successful, and, for that reason, knowledge Management projects should be high priority. This means that for any organization to be competitive in today’s global world there is need for combination or pooling together of ideas by employees in order to achieve teamwork; this is in support of the saying that ‘two good heads are better than one’. In this paper authors have tried to cover different aspects of Knowledge Management Systems (KMS) and its role in Multinational Corporations. The relevance of KMS for organizations finds mention in this paper. Key concepts like Knowledge Creation and Knowledge Sharing are also described. This paper has tried to explain the process of knowledge creation with the help of case examples.

Keywords: Knowledge Management, KMS, Knowledge Creation, Knowledge Sharing

I. 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 systems, 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.

Since organizational knowledge is one of the important assets of the organization, it needs to be managed like other assets, hence the need for knowledge Management System. Knowledge management systems ‘collect all relevant knowledge and experience in the firm and make it available whenever and wherever it is needed to support business processes and management decisions’. Knowledge here could be referred to as the understanding that a person has gained through education, experience, discovery, intuition and insight or a combination of instincts, ideas, rules and procedures that guide actions and decisions. It is an intangible asset that is unique and can be used to achieve long-term strategic benefits or advantage. This is because knowledge has more competitive significance than physical assets in a multinational organization that relies on unique competencies and methods; also, unlike other physical assets of an organization, knowledge is not subject to the law of diminishing returns as the physical assets, but increases in value as people share it. Knowledge can be in a form that can be stated, codified or written and understandable by everyone (explicit) or in a form that cannot be expressed easily and unconsciously applied but understood by individuals (implicit or tacit).

Managing this knowledge is difficult tasks. KMS 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. A
KMS can be further defined as “a class of information systems applied to managing individual and organizational knowledge processes and flows. They are ICT-based systems, developed and used to support and enhance the organizational processes of knowledge creation, storage/retrieval, transfer, and application” [1].

II. KNOWLEDGE MANAGEMENT

Knowledge management is a formal process of determining what information a company has that can benefit others in the organization and making the information easily available for use by those who need it. The process includes formal procedures to collect such information as lessons learned during a project’s execution and the best practices occurring throughout the organization, a well established infrastructure, networks for transferring knowledge between employees, and tools to facilitate the process. Once the process captures the organization’s knowledge, the real power occurs when the users utilizing the information use it by putting the shared into action. [2]

Knowledge Management is about building organizational intelligence by enabling people to improve the way they work in capturing, sharing and using knowledge. It involves using the ideas and experience of employees, customers and suppliers to improve the organizations’ performance. Building on what works well leads to better practice, strategy and policy [4]. “Knowledge Management promotes an integrated approach to identifying capturing, retrieving, sharing, and evaluating enterprises information assets. These information assets may include databases, documents, policies procedures as well as the un-captured tacit expertise and experience stored in individual’s heads.”[5]

Knowledge Management in several industries is still young and each company and industry has its own knowledge assets. Knowledge Management 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. Knowledge Management 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 or 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 Knowledge Management 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 [3].

III. Knowledge Management System

[6]Knowledge Management System (KM System) refers to a (generally generated via or through to an IT based program/department or section) system for managing knowledge in organizations for supporting creation, capture, storage and dissemination of information. It can comprise a part (neither necessary nor sufficient) of a Knowledge Management initiative. The idea of a KM system is to enable employees to have ready access to the organization's documented base of facts, sources of information, and solutions. For example a typical claim justifying the creation of a KM system might run something like this: an engineer could know the metallurgical composition of an alloy that reduces sound in gear systems. Sharing this information organization wide can lead to more effective engine design and it could also lead to ideas for new or improved equipment. A KMS refers to a class of Information System that is applied to managing organizational knowledge. It is IT-based systems, developed to support and enhance the organizational processes of knowledge creation, storage/retrieval, transfer and application [7].It is important to keep in mind that IT is only one important aspect of a KMS, and it also relies on human skills for success. Computers merely organize what the skills are and where in the company they may be found; simply having a KMS does not alone ensure success.

An important success-factor is getting all the employees to use KMS, but very often this is not the case. For the KMS to be effective, people in the company must both donate information to the system and receive information from it. The tendency for employees to refrain from using the knowledge that is available to them results in poor performance, called the ‘knowing-doing gap’. There are several reasons for not using KMS; the most dominant is the tendency for employees to be afraid of expressing their ideas or of seeking ideas from others. [8]

Therefore, what knowledge management systems do is to provide collaborative capabilities, using groupware to facilitate sharing of explicit and implicit knowledge among employees. It is also meant to change people’s behavior to make their experience and expertise available to others. These systems involve a process that helps organizations identify, select, organize, disseminate and transfer important information and expertise that are part of the organizational memory that typically resides within the organization in an unstructured manner.

The main objective of knowledge management system is to identify knowledge and explicate it in a way that it can be shared in a formal manner, and thus reusing it. It helps in transferring the intellectual assets of the firm to value processes such as innovation and knowledge acquisition. It is meant to improve the organization’s ability to executive its core processes more efficiently by capturing intellectual assets for the tangible benefit of the organisation.KMS also aim at codifying
knowledge(assuming search engines and other schemes), and providing organized ways to find people who possess the required knowledge.

It is poised towards determining what knowledge the organization has, as well as acquiring the knowledge that is lacking for the purpose of providing collaborative capabilities and facilitates sharing of explicit and implicit knowledge among employees. KMS enhances knowledge creation through learning, knowledge sharing and communication through collaboration as well as knowledge capture and explication, use and reuse, access and archiving. It is meant to transform information and intellectual assets process and operations of the business. It also aims at leveraging knowledge strategic to business to accelerate growth and innovation as well as using knowledge to provide a competitive advantage for the business. These systems also capture knowledge about how problems can be solved in order to promote organizational learning, leading to further knowledge creation. In doing this, intellects that are in the form of tacit knowledge in individuals, groups within the organization and other areas are transferred to value processes that lead to innovation, knowledge creation and replenishment of the organization’s core values. Knowledge management systems also capture knowledge in an external repository, identify needed knowledge and help in matching and exchanging knowledge.

Some technologies that support this system are: email, document management, search engines, enterprise information portal, data warehouse, groupware, workflow management and web-based training. KMS are also meant to provide collaborative capabilities, using groupware to facilitate sharing of explicit knowledge among employees; its activities or processes are supported by software such as Wincite, grapeVine and Knowledge X.

IV. RELEVANCE OF KMS IN MULTINATIONAL ORGANIZATION

KMS systems deal with information (although Knowledge Management as a discipline may extend beyond the information centric aspect of any system) so they are a class of information system and may build on, or utilize other information sources. The role of KMS is integral part of a multinational organization because of the following reasons:-

1. Purpose: a KMS will have an explicit Knowledge Management objective of some type such as collaboration, sharing good practice or the like.

2. Context: One perspective on KMS would see knowledge is information that is meaningfully organized, accumulated and embedded in a context of creation and application.

3. Processes: KMS are developed to support and enhance knowledge-intensive processes, tasks or projects of e.g., creation, construction, identification, capturing, acquisition, selection, valuation, organization, linking, structuring, formalization, visualization, transfer, distribution, retention, maintenance, refinement, revision, evolution, accessing, retrieval and last but not least the application of knowledge, also called the knowledge life cycle.

4. Participants: Users can play the roles of active, involved participants in knowledge networks and communities fostered by KMS, although this is not necessarily the case. KMS designs are held to reflect that knowledge is developed collectively and that the “distribution” of knowledge leads to its continuous change, reconstruction and application in different contexts, by different participants with differing backgrounds and experiences.

5. Instruments: KMS support KM instruments, e.g., the capture, creation and sharing of the codifiable aspects of experience, the creation of corporate knowledge directories, taxonomies or ontologies, expertise locators, skill management systems, collaborative filtering and handling of interests used to connect people, the creation and fostering of communities or knowledge networks.

6. Sharing of valuable organizational information throughout organizational hierarchy.

7. Can avoid re-inventing the wheel, reducing redundant work.

8. May reduce training time for new employees

9. Retention of Intellectual Property after the employee leaves if such knowledge can be codified.

10. Time management

A KMS offers integrated services to deploy KM instruments for networks of participants, i.e. active knowledge workers, in knowledge-intensive business processes along the entire knowledge life cycle. KMS can be used for a wide range of cooperative, collaborative, adhocracy and hierarchy communities, virtual organizations, societies and other virtual networks, to manage media contents; activities, interactions and work-flows purposes; projects; works, networks, departments, privileges, roles, participants and other active users in order to extract and generate new knowledge and to enhance, leverage and transfer in new outcomes of knowledge providing new services using new formats and interfaces and different communication channels.

The term KMS can be associated to Open Source Software, and Open Standards, Open Protocols and Open Knowledge licenses, initiatives and policies.

V. KNOWLEDGE CREATION

The ability to create new knowledge is often at the heart of the organization’s competitive advantage. Knowledge creation according to the Nonaka's SECI model is about continuous transfer, combination, and conversion of the different types of knowledge, as users practice, interact, and learn. Cook and Brown [9] distinguish between knowledge and knowing, and suggest that knowledge creation is a product of the interplay between them. The shift in condition between the possession of knowledge and the act of knowing - something that comes about through practice, action, and interaction - is the driving force...
in the creation of new knowledge. Furthermore, in order for this interplay to be most fruitful, it is important to support unstructured work environments in areas where creativity and innovation are important.

Knowledge sharing and knowledge creation thus go hand in hand. Knowledge is created through practice, collaboration, interaction, and education, as the different knowledge types are shared and converted. Beyond this, knowledge creation is also supported by relevant information and data which can improve decisions and serve as building blocks in the creation of new knowledge.

Knowledge Discovery Systems are used to create or discover knowledge. Knowledge Discovery Systems support the process of developing new tacit or explicit knowledge from data and information or from the synthesis of prior knowledge. These systems support two KM sub-processes associated with knowledge discovery: combination, enabling the discovery of new explicit knowledge; and socialization, enabling the discovery of new tacit knowledge.

Thus mechanisms and technologies can support knowledge discovery systems by facilitating combination or socialization. Mechanisms that facilitate combination include collaborative problem solving, joining decision making, and collaborative creations of documents. For example, at the senior management level, new explicit knowledge is created by sharing documents and information related to midrange concepts (e.g. products concepts) augmented with grand concepts (e.g. corporate vision) to produce new knowledge about both areas. This newly created knowledge could be, for example, a better understanding of products and a corporate vision [10]. Mechanisms that facilitate socialization include apprenticeships, employee rotation across areas, conferences, brainstorming retreats, cooperative projects across departments, and initiation process for new employees. For example, Honda “sets up brainining storming camps (tama dashi kai)-informal meetings for detailed discussions to solve difficult problems in development projects” [11]

Technologies facilitating combination include knowledge discovery systems, databases, and Web-based access to data. According to Nonaka and Takeuchi [11, P.67],”reconfiguration of existing information through sorting adding, combining, and categorizing of explicit knowledge can lead to new knowledge.” Repositories of information, best practices and lessons learned also facilitate combination. Technologies can also facilitate socialization, albeit to less extent than they can facilitate combination. Some of the technologies for facilitating socialization include video-conferencing and electronic support for communities of practice.

MECHANISMS TO DISCOVER OR CREATE TACIT KNOWLEDGE THROUGH Socialization is the synthesis of tacit knowledge across individuals, usually through joining activities instead of written or verbal instructions. Socialization enables the discovery of tacit knowledge through joint activities between masters and apprentices, or among researchers at an academic conference. Many Japanese companies, for example, Honda, encourage socialization through “brain storming camps” to resolve problems faced in research and development (R&D) projects [11].The format of these meetings is outside the workplace. The idea is to encourage participants to meet outside their normal work environment, perhaps at a resort, where they are able to discuss their problems in an informal and relaxed environment. These meetings serve not only as a medium for creativity to flourish but also as a way for sharing knowledge discovery is a common practice at many organizations, pursued either by accident or on purpose. Simple discussions over lunch among friends discussing their daily problems often lead to knowledge discovery. Cocktail napkins have been known to contain descriptions of critical new ideas. Organizations interested in fostering discovery of knowledge take steps to formalize this socialization among their employees. This process promotes innovation and creativity, which in turn leads to advances in knowledge.

CASE EXAMPLE: CREATIVE BRAINSTORMING [12]

Westinghouse Electric Corp. was a major manufacturer of home appliances before White Consolidated Industries, acquired the product line in 1974(Now called White Westinghouse).Once upon a time, they built washing machines that stood on four small metal legs on each corner at the bottom of the boxlike structure that we commonly recognize as a washing machine. The legs were fitted with built-in screws to stabilize the machine during operation and avoid vibrations. These small legs protruded from the basic boxlike design of the washing machine. Unfortunately, when these appliances were shipped in boxes; their movement (and often dropping of the boxes from trucks) caused these small legs to bend. Bent legs destabilized the washing machine and caused annoying as well as damaging vibrations when the machine was in operation. This resulted in significant warranty expenses to Westinghouse when a serviceman had to be called to fix bent legs.

The manager of engineering at the product division that built the washing machines was told to solve the problem. He assembled his best design engineers and told them to go into a room and not come out until they had a solution. The lore goes that the engineers labored night and day for 3 days and finally emerged from the room proudly, with a new design that greatly strengthened the legs by adding steel thickness and additional bracing. The manager looked at the solution and saw that this would add significant cost to the product, which was deemed unacceptable. The leader of the group, angry that their 3 days of captivity had gone for naught screamed, “What do you want us to do, stand on our heads?” Immediately, another member of the group, one who apparently had gotten some sleep the night before, immediately said,” I’ve got it! We ship the washing machines upside down.” They proceeded to do an analysis of whether the top of the box could withstand the shocks and whether there were any components that would be damaged by the upside-down shipment. They found out there were none. The problem was solved without adding any cost to the product.
This case example shows that the engineering task force was solving the wrong problem. The problem was in the shipment of the washing machines, not in their design. The legs were well designed for their purpose. There was no need to design term for anything else. Furthermore, it shows how seemingly silly ideas can become realistic and provide a way to solve the problem in unintended way. This, of course, is new knowledge.

**METHODS OF CAPTURING TACIT KNOWLEDGE IN VARIOUS LITERATURES**

Previously knowledge capturing was mainly carried out in oral forms and to know and receive the knowledge, required the presence of intended invidivuals. Book publishing for example, is the main step in coding and dissemination knowledge. But the structure of the book prevents the transfer of past experiences and no interaction can be seen with it. Today successful capturing of tacit knowledge is done through conversations, institutes, and other social interactions. Information technologies are also utilized to drastically facilitate the capturing of tacit knowledge. Some methods and techniques which are published in the literature for capturing tacit knowledge are listed below:

- Structure conversation with the experts [25].
- Storytelling [26].
- Learning through conversation [27].
- Learning through observation and making films [28].
- Networks for sharing knowledge [29].
- Special meetings for lessons learned [30][31]
- Learning in virtual places [32].
- Making experts take part in education process [33].
- Creating situations for working together (tutor-pupil) [34].

**TECHNOLOGIES TO DISCOVER OR CREATE NEW EXPPLICIT KNOWLEDGE THROUGH DATA MINING (DM)/KNOWLEDGE DISCOVERY IN DATABASES (KDD)**

Knowledge Discovery technologies can be very powerful for organizations wishing to obtain an advantage over their competition. Knowledge Discovery in Databases (KDD) is the process of finding and interpreting patterns from data, involving the application of algorithms to interpret the patterns generated by these algorithms [13]. Another name for KDD is data mining. Although the majority of the practitioners use KDD and DM interchangeably, for some, KDD is defined to involve the whole process of knowledge discovery including the application of DM techniques.

Recent proliferation of electronic commerce (e-commerce) applications, providing reams of hard data ready for analysis, presents us with an excellent opportunity to make profitable use of these techniques. The increasing availability of computing power and integrated DM software tools, which are easier than ever to use, have contributed to the increasing popularity of DM applications to business. Many success stories have been published in the literature describing how DM techniques have been used to create new knowledge. I have described below some of the more mature or specifically relevant applications of DM to KM for business. Over the last decade, DM techniques have been applied across business problems [14] [15] [16] [17] which are as follows:-

1. **In Marketing.** Predictive DM techniques, like artificial neural networks (ANNs), have been used for target marketing including market segmentation. This allows the marketing departments using this approach to segment customers according to basic demographic characteristics, such as gender, age, and group, as well as their purchasing patterns. These techniques have also been used to improve direct marketing campaigns, through an understanding of which customers are likely to respond to new products based on their previous consumer behavior.

2. **In Retail.** DM methods have likewise been used for sales forecasting. These, take into consideration multiple market variables, such as customers profiling based on their purchasing habits. Techniques like market basket analysis also help uncover which products are likely to be purchased together.

3. **In Banking.** Trading and financial forecasting have also proved to be excellent applications for DM techniques. These are used to determine derivative securities pricing, futures price forecasting, and stock performance. **Inferential DM techniques** have also been successful in developing scoring systems to identify credit risk and fraud. An area of recent interest is attempting to model the relationships between corporate strategy, financial health, and corporate performance.

4. **In Insurance.** DM techniques have been used for segmenting customer groups to determine premium pricing and to predict claim frequencies. Clustering techniques have also been applied to detecting claim fraud and to aid in customer retention.

5. **In Telecommunications.** Predictive DM techniques, like neural networks, have been used mostly to attempt to reduce “churn,” that is, to predict when customers may be lost through attrition to a competitor. In addition; predictive techniques can be used to predict the conditions that may cause a customer to return. Finally, market basket analysis has been used to identify which telecommunications products are customers likely to purchase together.

6. **In Operations Management.** Neural networks have been used for planning and scheduling, project management, and quality control.

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CASE EXAMPLE: FILLING UP THE GROCERY CART AT SAFEWAY [18]

Safeway Stores is one of Britain’s leading food grocers, employing around 90,000 staff and owning more than 500 stores across Britain. Because the penetration of personal computers (PCs) in Britain is lower than in the United States (U.S.), IBM developed an application for Britain’s Safeway Stores that enables customers to prepare their shopping lists on a personal digital assistant (PDA) and transmit their orders to the store for subsequent pickup without having to walk the aisles of the market. Shoppers quickly jumped on the convenience, which removes the marketer from the opportunity to suggest via attractive displays the spontaneous purchase of additional products that invariably fill up the shopping cart.

To provide for a means to suggest the purchase of additional products, Safeway turned to the use of DM as a means to recommend additional purchases to its clients. The idea of personalizing the recommendations was based on the prior successful implementations of such systems, which work by filtering a set of items (e.g. grocery products) through a personal profile. This filtering may be content based, which recommends based on what a person has liked in the past. Alternatively, the filtering may be collaborative, which recommends items that other people, similar to the one at hand, have liked in the past[19]. Safeway Shoppers Construct a shopping list via the PDA and electronic mail (e-mail) it to the grocer’s server. Shoppers select products from lists residing in the personal catalog, the store’s recommendations, and special promotions. Safeway customers are clustered based on their prior purchasing behavior, and a list of most popular products is generated to represent the preferred product purchases for the customers in each cluster. The recommender system at Safeway then ranks this list of products according to computed affinities with each customer to produce a list of 10 to 20 highest-ranking products. When customers synchronize with the store server, they are presented with the recommended list, which in fact contains products that were not previously purchased by the customer. Results demonstrated that using the recommender resulted in 25% of the orders including something from the recommendation list, and a 1.8% increase in revenue. The study demonstrates that DM can help improve the understanding of customer’s preferences, and thereby boost the revenue of the business.

VI. KNOWLEDGE SHARING

It was in the mid 1990’s, when the world of business recognized the importance of continuous innovations and intensive knowledge sharing. New management concepts such as performance, innovation and knowledge management increasingly emerged. This will undoubtedly determine the future success or failure of multinational enterprises, facing unpredictable market situations.

Since business has moved towards a knowledge-driven economy, innovation and new knowledge creation become key factors for success within any industry. With the rise of the web and multimedia technologies, companies have become able to capture, store, organize, share and apply an enormous amount of information. Nowadays, important knowledge and expertise, which was captured in the heads of the employees in former times, should be attainable at any time and any place around the world. But is it like that in reality? First of all knowledge management is a social process between individuals committed to constantly communicate explicit knowledge. Successful knowledge sharing cannot be based on technical instruments and databases. It is more a question of corporate culture. Successful and effective knowledge sharing can only be realized by people with a great corporate understanding, values, culture and leadership in order to avoid a culture of knowledge hoarding among the different departments or business units. In intercultural context knowledge has got more dimensions and it is more subtle. People from different cultural backgrounds are shaped by different understandings of knowledge and its communication. Because of that the approach for an effective intercultural knowledge management effort has been observed from different point of views. Only a very sensitive approach with the intention of deeply embedding it into the long-term strategy of the company can guarantee lasting success.

Today’s multinational enterprises face new challenges. Since the beginning of the Internet Revolution in the early 1990s geographical barriers have become more or less unimportant. At the same time the globalization process has moved on and international markets have been more and more deregulated. As a consequence international trade and business multiplied world-wide. The time to market for new products decreased while the need to respond to new market conditions quickly increased. The main sources of competitive advantage - efficiency and quality - are replaced by knowledge and innovation. Companies will have to provide continuous innovation in order to compete successfully in a global Marketplace.

As we are aware that information is a must for managers these days. Importance of information can be realized if some decisions, which are, must take at a particular time but managers are not able to take because of not receiving the information at proper time. Not receiving problems is because of non-availability of information. So corporate should have such information management resources and knowledge human resources must be preserved. For better handling and managing the information so that a corporate can succeed in long term they will have to implement Knowledge Management Systems in their companies. Integrating knowledge management into the business infrastructure. The measurement of knowledge and
its processes is in its formative stage. As knowledge management becomes more mainstream, it should increase in prominence and accountability.

Today the industry relies on knowledge sharing and collaboration between its employees and amongst subsidiary companies to remain competitive in an ever changing, market driven environment. Practice has changed from workers supplying labor to workers supplying knowledge. Technology improvements and investments in automation have provided companies the platform to generate, codify, harness and exploit knowledge as a means of improving organizational performance.

**EXPLICIT KNOWLEDGE AND KNOWLEDGE SHARING**

Successful explicit knowledge sharing is determined by the following criteria [20]:

- **Articulation:** The ability of the user to define what he needs.
- **Awareness:** Awareness of the knowledge available. The provider is encouraged to make use of directories, maps, corporate yellow pages, etc.
- **Access:** Access to the knowledge.
- **Guidance:** Knowledge managers are often considered key in the build-up of a knowledge sharing system [21] [22]. They must help define the areas of expertise of the members of the firm, guide their contributions, assist users, and be responsible for the language used in publications and other communication material. This is so as to avoid an information/knowledge overload.
- **Completeness:** Access to both centrally managed and self-published knowledge. The former is often more scrutinized but takes longer to publish and is not as hands-on (and potentially relevant). Self-published information on the other hand runs the risk of not being as reliable.

Knowledge Management Systems have proved extremely useful in aiding or performing many of these functions. Knowledge Management Systems known as Content management systems are used to update, distribute, tag, and otherwise manage content. They may include a wide range of functions, including web content management and systems. They may be used to:

- Import and create documents and multimedia material.
- Identify key users and their roles.
- Assign roles and responsibilities to different instances of content categories or types.
- Define workflow tasks. Content managers can be alerted when changes in content are made.
- Track and manage multiple versions of content.
- Publish content to a repository to support access. Increasingly, the repository is a part of the system, incorporating search and retrieval.

Another type of KMS known as Document management systems use numerous advanced indexing, searching, and retrieval mechanisms (e.g. using meta data or content from the actual document) to facilitate explicit knowledge sharing. All in all, Information Technology in form of KMS is a very useful tool in the management of explicit knowledge and information. This is not to say that humans no longer play a part. They certainly do, and knowledge and content managers are instrumental in ensuring that the knowledge is relevant, up to date, and presented correctly.

**TACIT KNOWLEDGE SHARING**

Sharing tacit knowledge requires socialization. This can take many different forms. Davenport & Prusak [21] outline a few relevant factors:

- **Informal networks**, which involve the day to day interaction between people within work environments are considered very important.
- Unlike the formalized structure of the firm, these networks span functions and hierarchies. They are therefore difficult to identify and monitor.
- Management should support these networks by providing the means for communication. Japanese firms have created talk rooms where employees can engage in unstructured, unmonitored discussions. A specific location is useful but not mandatory - this process also occurs in cafeterias etc. Management must simply provide the means for employees to foster informal networks and “trade” tacit knowledge.
- Management must also understand the value of chaos. This refers to the value of unstructured work practices that encourage experimentation and social interaction. Within a more chaotic environment, individuals are given the freedom to solve problems creatively and, in so doing, must tap into and evolve their social networks. This is closely linked to the notion of theory in use vs. espoused theory. The value of less structured work environments is also well known within innovation management.

Codification of tacit knowledge is difficult and sometimes outright impossible. There will often be a resulting knowledge loss [20], [21]. Often, it is much more reasonable to simply externalize the sources of tacit knowledge rather than the knowledge itself [21]. This means that often it is better for experts to externalize what they know rather than how they know it. The main role of KM then becomes making sure that experts can be found so that tacit knowledge can be passed on through practice, mentoring, and networking (socialization), and that the firm supports and encourages the networking that is necessary for these functions to occur.

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To share tacit knowledge requires a culture conducive to this type of sharing. Furthermore, knowledge managers (generalists that understand the types of knowledge that exist in the communities) must be used to locate and translate knowledge elements, thus facilitating their integration into other communities. This endeavor is very much about people and managing organizational culture change. IT oriented approaches often place undue focus on externalization [24] Due to the context specific nature of tacit knowledge, and due to the fact that much of it cannot be codified, externalization should sometimes not be attempted. In this context, Information Technology as KM System is perhaps best as an expertise locater. However, in some cases Information Technology or KM System can be of some limited use as a forum for externalization of tacit knowledge. For example, groupware systems that support brainstorming can help in the codification process [23].

While Information Technology or KM System is crucial for information management, it is important not to confuse information with knowledge. Using IT to move tacit knowledge is difficult since knowledge represents the shared understanding and the sense making that is deeply rooted in the social practice of the community. The focus for the successful sharing of tacit knowledge must be on social interaction, problem solving, mentoring, and teaching. The role of Information Technology or KM System for tacit knowledge sharing can thus be summarized as follows:

- As an expert finder: To locate the source of the tacit knowledge through systems like corporate yellow pages.
- As providing limited support in the socialization of tacit knowledge: If KM Systems support varied, formal and informal forms of communication then they can help tacit knowledge sharing by supporting teams, projects, communities, etc. Functions like being able to attach notes to documents, or video conferencing can support work environments over long distances to some degree
- As providing limited support in the externalization of tacit knowledge: Through groupware applications that support the codification process, discussion forums etc. However, not only is this aspect limited, but externalization itself is only rarely feasible.

VII. CONCLUSION

Knowledge Management enables a learning community to learn more effectively. Knowledge Management and Knowledge Management Systems are very important for any multinational organization. In this paper we have tried to study the different aspects of Knowledge Management Systems and relevance of KMS in multinational organization. Key concepts of Knowledge Management are knowledge learning, knowledge creation or knowledge discovery and knowledge sharing. All these concepts are complex in nature. The most important area of Knowledge Management is Tacit Knowledge. Unlike most other management tools, knowledge management encloses every individual in the organization cutting across departments, functions and business units. In order to make these concepts easy Knowledge Management systems are being used by multinational corporations. Knowledge Management Systems helps organizations in creation of knowledge repositories, improving knowledge access, enhancing the knowledge environment and managing knowledge as an asset. In this paper we have described that how Knowledge Management System is an integral part of Knowledge Management process as it helps in knowledge creation & knowledge sharing. The paper also describes that how Tacit & Explicit knowledge is shared by using different types of knowledge management systems e.g. document management system and content management system and also the role of Information Technology is sharing of both Tacit & Explicit knowledge has been described. We have discussed two methods for knowledge creation i.e. 1. Mechanisms to Discover or Create Tacit Knowledge through socialization process and 2. Technologies to Discover or Create New Explicit Knowledge through Data Mining (DM)/Knowledge Discovery in Databases (KDD). This paper has tried to explain the process of knowledge creation with the help of two cases of different multinational organizations. Thus we can say that KMS is Social/Structural mechanisms (e.g., mentoring and retreats, etc.) for promoting knowledge sharing and Leading-edge information technologies (e.g., Web-based conferencing) to support KM mechanisms. Knowledge management systems (KMS) are the synergy between social/structural mechanisms and latest IT technologies.

VIII. REFERENCES


Irm Becerra- Fernandez, Avelino Gonzalez, Rajiv Sabherwal, Knowledge Management: Challenges, Solutions, and Technologies, First Impression , 2009, Published by Dorling Kindersley(India) Pvt.Ltd., New Delhi, a licensees of Pearson Education in South Asia,Chapter-13,Page:273


Irm Becerra-Fernandez,Avelino Gonzalez,Rajiv Sabherwal, Knowledge Management: Challenges, Solutions, and Technologies, First Impression , 2009, Published by Dorling Kindersley(India) Pvt.Ltd., New Delhim licensees of Pearson Education in South Asia,Chapter-13,Page:273


Abtahi H and Salavati A(2006),Knowledge Management in organization,Peyvand Publication Tehran,Iran.

Dalkir K(2005),Knowledge Management in Theory and Practice, McGill University.


Rading A and Latifi M H(2005), Knowledge Management: Success in International Economics Based on Information. Samt Publication.


Arastoopur S (2008),"Extraction and Organization of the Tacit and Explicit Knowledge in Organizations; An Operational Approach by Two Steps in Knowledge Management Process", First Knowledge Management Conference in Iran.

Jafari M H (2006),"Documentation of Managers’ Experiences with Knowledge Management Aspect”, Education and Research Institute.

Srivihok A (2006),"Framework of Knowledge Capture in Improving Intellectual Capital for Organizations in ASIA and Europe”, Department of Computer Science, Kasetsart University avaible at anongnart.s@ku.ac.th