Chapter 3

Knowledge Management and its possible areas of application in corporate world

3.1 Introduction

Corporate institutions, especially commercial businesses and firms are the producer of a very large proportion of the literature on KM and organizational learning. Many organizations in the corporate sector look to KM as a solution to the new challenges of the information age. Knowledge and information are becoming crucial core assets for any businesses, who have to learn to handle these assets in new ways. Traditional accounting and monitoring systems designed to deal with tangible inputs and outputs are no longer adequate. Instead, organizations now find that they have to share information internally more efficiently and learn to adapt more quickly to external circumstances in order to retain their competitive advantage. In response to this situation, the ‘first generation’ of KM strategies aimed to improve knowledge sharing within organizations. The first generation of KM was very focused on information technology and systems; technical tools were used to collect and codify existing knowledge in order to make the organization run more smoothly.

A ‘second generation’ of KM strategies has now emerged, which focuses more on organizational processes and the creation of new
knowledge in order to keep the organization one step ahead of its competitors. For example, the most successful organizations are shifting from strategies based on prediction to strategies based on anticipation of surprises. They are shifting from management based on compliance to management based on self-control and self-organization. They are also shifting from utilization of already known knowledge to the creation of new knowledge, from pure ‘technology’ KM applications to also include ‘process’ applications.

When and how these shifts should be undertaken depends on the type of organization in question. Accenture’s (2002) presentation of a typology of work settings distinguishes between four different types of organizations – ‘process’, ‘systems’, ‘network’ and ‘competence’ – based on the different levels of interdependence and complexity that are required in different work situations. For example, the ‘competence’ model describes a workplace that is highly reliant on individual expertise (low level of interdependence) in order to carry out evaluation and judgment-oriented work (high level of interpretation). The ‘network’ model denotes a workplace that depends on fluid deployment of flexible teams (high level of interdependence) in order to improvise and meet new challenges as they arise (high level of interpretation). Different work settings require different ways of handling and processing information to create the necessary knowledge.
3.2 Knowledge Management

Knowledge management is a process that consists of identifying, capturing, processing and transferring information and knowledge of organization. Organizations have intellectual assets which has wide and sometimes catalyst knowledge. KM is managing not only the organizational knowledge but knowledge that exists with its employees. Knowledge management is accepted and taught in disciplines such as Management, Business and administration, Information System, Library and Information Science, Computer Science. Having understood the importance of KM, organizations have adopted it with open arms for framing their business strategies and for effectiveness of business.

a. Definition

Following are the well-known definitions of the Knowledge Management:

"Knowledge Management is the discipline of enabling individuals, teams and entire organizations to collectively and systematically create, share and apply knowledge, to better achieve their objectives" Ron Young, CEO/CKO Knowledge Associates International, UK.

"Knowledge management will deliver outstanding collaboration and partnership working. It will ensure the region maximizes the value of its information and knowledge assets and it will help its citizens to use
their creativity and skills better, leading to improved effectiveness and
greater innovation”. West Midlands Regional Observatory, UK.

R. Gregory Wenig (1998) defines KM from organizational perspective. According to his definition, Knowledge Management for the organization consists of activities focused on the organization gaining knowledge from its own experience and from the experience of others, and on the judicious application of that knowledge to fulfill the mission of the organization.

In short, Knowledge management is a process to create, share and apply the organizational knowledge from their intellectual to achieve organizations goal.

b. **Types of Knowledge**

Knowledge can be divided into two basic types, Tacit Knowledge and Explicit Knowledge.

**Explicit Knowledge:**

As defined by Brown and Duguid (1998), Explicit Knowledge is formalized and codified and is sometimes referred to as know-what. This type of knowledge is very easy to store, retrieve and modify documents and information. This knowledge can be accessed by third person also. In simple words, we can say that explicit knowledge is information which was in written form or codified form.
Tacit Knowledge:

Tacit knowledge is information which is stored in the person’s mind. This covers technical elements like skills, know-how, and also covers experiences, practices and values.

3.3 Attentive Activities of Knowledge Management

There are mainly four activities of KM as elaborated below:

- Imaging systems, databases, workflow technologies are considered as the contemporary technologies of KM which support the externalization is capturing knowledge in an external repository and also to discover similar knowledge by organizing some productive structure.

- Internalization is such a process that identifies the captured knowledge usually explicit, relevant to a particular user’s needs involves mapping a particular problem and condition.

- Intermediation is associated to such a method for matching a knowledge seeker with the best source of knowledge (generally implied) by keeping track on the experience and interest of individuals and group of individuals as well. The workflow, groupware, document management systems and intranets are amongst many technologies by which the process becomes possible.
• The knowledge exchanged amongst the concerned persons applies on above three processes. This is possibly the KM element that is most tricky to mechanize because it relies on human cognition to identify where and how knowledge to be used.

3.4 Knowledge Management Process

According to the model proposed by Nonaka and Takeuchi (1997), the base of information/data occurs in the individual dimension as tacit knowledge, and through social interaction, it becomes open knowledge to other individuals, to groups, to business and in the limit to other organizations. Crossan et al. (1999) pleads that organizational learning is recognized through some defined processes, namely, perception interpretation, incorporation and institutionalization, and that they occur within the individual, group and organization. The organizational KM process should certainly mull over the individual learning process. (Wilson et al., 2007).

As explained in the above cited para, the foundation of knowledge is a method and knowledge is a planned organizational asset. KM becomes one of the strategic pillars of organizations that seek to generate value for its stakeholders. Thus, structuring the process of managing this asset of organizations becomes inevitable for effectiveness in cost
reduction and better use of existing knowledge, and also for the efficiency in mounting revenue and creating new knowledge.

According to Probst et al. (2002), KM is divided into the following key processes:

- defining the objects of the knowledge;
- identifying the knowledge;
- acquiring the knowledge;
- developing the knowledge;
- distributing the knowledge;
- using the knowledge;
- retaining the knowledge; and
- assessing the knowledge.

Nevertheless, defining the goals of and assessing the knowledge are tactical steps which, respectively, kick off and finish off the operating cycle of KM, which commences with knowledge acquisition up to knowledge preservation.

For Davenport and Prusak (1998), KM consists of a process of construction, distribution and usage of knowledge aiming to attain the organization’s goals. Similarly, Stewart (1998) suggests that KM is characterized by four processes: invention, organization, enlargement and circulation.
3.5 Benefits of a Knowledge Management System for corporate world

Knowledge Management is based on the idea that an organization’s most valuable resource is the knowledge of its people. This is not a new concept, but most of the organizations have been managing their human resources very vigilantly from last few years. Then, every now and then the question arises - what is new in this concept? It is the apparent focus on knowledge. This focus is being driven by the accelerated rate of change in today’s organizations and in society as a whole. KM recognizes that today nearly all jobs involve “knowledge work” and so all staffs are “knowledge workers” to some degree or another – meaning that their job depends more on their knowledge than their skills. This means that creating, sharing and using knowledge are among the most important activities of nearly every person in every organization.

The major benefits of the knowledge management are listed below:

- Enhance the development of competence, operational efficiency and productivity, resulting in and business process improvement.
- Provide the right information, to the right people, at the right time to make the right decisions.
- Connect with people by setting up collaborative methods.
- Enhance teamwork, collaboration and coordination among staff member or group.
• Share, transfer and capture knowledge and experience.
• Development of new knowledge in response to problems and opportunities.
• Imbibe a sense of priority for learning.
• Improve organizational growth and innovation through proper application of knowledge.
• Creates a knowledge sharing culture among employees.
• Minimize rework caused by utilization of poor methods.
• Facilitates capturing knowledge of employees who are leaving the organization.
• Employees can access experts’ knowledge when needed, without being dependent on the availability of that expert.

3.6 Knowledge Management: Tools and Techniques

Knowledge management tools are divided into two main categories i.e. 1) Traditional method tools and 2) ICT based tools.

3.6.1. Traditional method tools

Traditional tools for knowledge management are given below:

3.6.1.1. Brainstorming

Brainstorming is a technique in which group efforts are made to find solutions for a specific problem.
3.6.1.2. Learning and Idea Capture

Learning and Idea Capture tool is used to find better techniques, tools, and methods systematically for a specific problem. It guides how to do the things.

3.6.1.3. Peer Assist

Peer assist is nothing but learning before doing. The aim of peer assist is to learn from the project and from each other members.

3.6.1.4. Learning Reviews

Learning Reviews is a technique which is used by a specific project team to support team and individuals during the project.

3.6.1.5. After Action Review

After action review is a technique to evaluate learned lessons after completion of a project. It is learning from project success and failures.

3.6.1.6. Storytelling

Storytelling is a very powerful way to share and transfer of tacit knowledge which develops human relationship and creates learning environment.

3.6.1.7. Collaborative Physical Workspace

Physical workspace is a place where the people actually work. The design of physical workspaces would be very comfort to share or create knowledge with other people.
3.6.1.8. APO Knowledge Management Assessment Tool

The APO (Asian Productivity Organization) KM Assessment Tool is based on the APO KM Framework. There are seven elements identified in the framework which are, KM Leadership, Process, People, Technology, Knowledge Processes, Learning and Innovation and KM Outcomes. There are 42 questions from seven elements and the maximum score of these questions is 210 points.

3.6.1.9. Knowledge Cafe

Knowledge Cafe is a technique for group discussion. The topic for discussion is decided in advance.

3.6.1.10. Community of Practice

Social scientists Dr. Etienne Wenger (1998) and his team have introduced the concept of Communities of Practice. Three elements are played a very crucial role to design Community of Practice which is The Domain, The Community and The Practice.

3.6.1.11. Taxonomy

Taxonomy is a classification system which classifies information, Knowledge and documents.
3.6.2. ICT based tools

The information and communication technology has played a very important role in KM. To obtain a goal oriented result, it is necessary of application of these ICT based tools for KM. These tools are given below:

3.6.2.1. Groupware systems & KM 2.0

Groupware systems and KM 2.0 tools are combinations of three tools such as communication tools, conferencing tools and collaborative management tools.

3.6.2.3. The intranet and extranet

The main function of the intranet and extranet is to share knowledge and supporting functions are dissemination, searching, managing, networking and recording of knowledge.

3.6.2.4. Data warehousing, data mining, and OLAP

Data warehouses is a storage of information, data mining tools are used to search stored data and Online Analytical Processing System (OLAP) helps to user to extract and view data from different points of view.

3.6.2.5. Decision Support Systems

Decision Support Systems tool is a combination of various tools such as Data warehousing, data mining, OLAP, and Groupware systems.
This system has three criteria, namely, compatibility, understandability, and effectiveness.

3.6.2.6. Artificial intelligence tools

Artificial intelligence tools are used for the knowledge acquisition, knowledge representation and knowledge discovery.

There are some other ICT based tools such as content management systems, document management systems, simulation tools, semantic networks, document libraries leading to a document management system, knowledge bases, blogs, social network services, Voice and Voice-over-Internet Protocol (VOIP), advanced search tools, building knowledge clusters, expert locator, collaborative virtual workspaces and Microsoft SharePoint.

Above stated KM’s traditional method tools and ICT based tools are used to implementation of KM but there are some other elements which are very important for KM. The KM tool selection and implementation process go through the below elements:
1. **Identification**: This aspect covers employee’s databank, seminars, workshops, interviews, literatures, colleagues, reports, reviews, case studies, brainstorm, suppliers, clients etc.

2. **Capturing**: In this section the personal web page, exit interview, knowledge discovery in database will be captured.

3. **Storing the knowledge**: This KM aspect storing the knowledge in project database, hard copy database, filling cabinet, training material, libraries, websites, intranet level, repository etc.

4. **Mapping**: This KM aspect mapping the knowledge using the different techniques such as visual thinking networking, mind mapping and brainstorming etc.

5. **Sharing/Dissemination**: This KM aspect sharing and disseminates the processed knowledge using various techniques such as conferences, workshops and seminars, intranet, trainings, web publishing, publishing
the knowledge through activity board and periodicals, bulletin, get
together functions and so on.

In addition to above KM tools, Knowledge for Health (K4Health) Project has identified various tools of KM as per the usage and function of the tool. This Project is run by USAID (United States Agency for International Development). These tools are very important and also advance in technology. The list is given in Table-3.1:

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<th>Criteria</th>
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<td>Remote meetings</td>
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<td>Huddle</td>
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Table: 3.1

KM’s ICT based tools and traditional method tools both are very important to collect, catalogue, organize, and share the knowledge in different forms and different types of media.

3.7 Knowledge Management Technologies

For an effective KMS, organization should use the key technologies such as communication and collaboration technologies which are in form of internet or intranet and also to use the mobile technologies to communicate, capture, internalize and organize the knowledge. Organization can decide and select a set of technologies from the above based on the KM framework and goal of the organization. Following are the points and technologies:

- Knowledge Portals are gateway to information. Knowledge portals are providing the access of information to the user.
• **Knowledge Profiles** are part of knowledge portal. Knowledge worker can create and update the knowledge profile via knowledge portal.

• **Collaborative workspaces** become successful when the shared work will be used by the organizational team and it will become knowledge repositories.

• **Urgent requests** and requirements can be solved by the KM technologies by providing right knowledge or knowledge expert with right solutions of the problems.

• **Knowledge Server and services** are most important to create and facilitate the knowledge services through knowledge network or knowledge domain within the organization. Centralized knowledge server enables the knowledge services.

• **Knowledge Banks** are transferring the knowledge effectively using the multimedia technologies.

An improper selection of KM Technology invites a bolt from the blue in the twinkling of an eye and eventually leads an organization towards taking reckless decisions which ultimately produces vague, reluctant and disappointing result. That is why it is rightly said by the prominent thinkers that the suitable selection of KM technology also tests the competence and acumen of the top management of an organization.
3.8 Knowledge Management in Organizations

As per the Figure 2 given in below, indicates that KM processes has the direct and effective influence in improving organizational processes, such as modernism, mutual decision-making and individual and collective learning. These enhanced organizational processes produce intermediate outcomes like improved decisions, modest organizational behaviors, long-lasting products, contented services and cordial relationships with all who have associated with the organization like customers, suppliers and business partner as well. Eventually, these all factors, in turn, escort to superior organizational performance.

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<tr>
<th>KM Processes</th>
<th>Organizational Processes</th>
<th>Intermediate</th>
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<td>− Transfer</td>
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Figure 2: KM in an organization

(1) The Knowledge Management Processes Cycle

As per the Figure 3 given in below, is a process cycle model of KM. Such cycle models furnish a helpful way to systematize one’s thinking about KM processes which have countless phase models that point up the relationships of the key processes of KM, ranging from
Davenport and Prusak’s 3-stage model (“Generate, Codify/Coordinate, Transfer”) to Ward and Aurum’s (2004) 7-stage (“Create, Acquire, Identify, Adapt, Organize, Distribute, Apply”).

The cycle model of the KM process which has been shown in the figure 3 is undoubtedly valuable in the situation where the generally acknowledged terminology of KM is used to make use of alternative paths in order to make important distinctions. It may please be noted that the different activities mentioned as bullet-points are for illustration only and not essentially definitional.
Figure 3: KM Process Model
The model of figure 3 reveals that the initiation of the KM cycle involves two things viz. either the foundation or the attainment of knowledge by an organization involving development of new knowledge or replacement of existing knowledge with new ideas/thoughts. By and large, the key focus of this is on knowledge formation within the boundary of the firm or in concurrence with partners.

The four modes of knowledge formation under “Creation” refer to Nonaka’s (1997) are as elaborated below:

Socialization - the conversion of unspoken knowledge through social interaction and shared experiences to new unstated knowledge.

- Externalization – conversion of implied knowledge to new precise knowledge
- Internalization – by designing of new inferred knowledge from open knowledge and
- Combination – formation of new defined knowledge on synthesizing, categorizing, and merging of existing precise knowledge.

As said by Huber (1991), in contrast to knowledge creation, knowledge attainment involves many factors like search for, recognition of,
and absorption of potentially priceless knowledge, frequently comes outside the institute.

The points stated under “Acquisition” demonstrate some processes for obtaining knowledge from external sources –

- searching - as on the Internet
- sourcing - selecting the source to use
- grafting - adding an individual who possesses desired knowledge to the organization.

After new knowledge is shaped or gained, KM mechanisms should be in place to prepare it to be entered into the organization’s memory in a manner that maximizes its impact and long-term reusability. Knowledge enhancement mention to the processes and mechanisms that are used to choose, filter, and optimize knowledge for inclusion in various storage media.

Under “Refinement” in the figure 3 placed above, the bullet points suggest that tacit, or hidden knowledge must be explicated, codified, structured into an suitable format and evaluated according to a set of criteria for inclusion into the organization’s prescribed memory. Of course, explicit knowledge needs only to be formatted, evaluated, and selected.
Of the different actions that are concerned in doing so, “culling” refers to identifying the most momentous exemplars in an rising collection; “organizing” refers to identifying periodic themes and linking individual knowledge items to the themes and “distilling” is creating a sum up or set of pointers (McDonald and Ackerman, 1997).

Organizational memory covers the knowledge acquired and retained in the electronic repositories form in minds of the group or team that which is embedded in the business process, products and services and also in relationship with various customers, partners and suppliers who are directly associated with the performance of an organization. (Cross and Baird, 2000). As revealed in the figure, to have the intense organizational impact, the acquired knowledge should usually be transferred or shared as they are ends of continuum. Transfer covers the attentive and meaningful communication of knowledge from a sender to a known receiver. Sharing is less-attentive distribution such as through a repository, to people who are often unknown to the contributor.

Once transferring or sharing process of knowledge is done effectively with others, it may be utilized through elaboration, combination and precision for mutual problem solving while facilitating collective / individual learning and innovation. It may also be ingrained in the practices,
systems, products and relationships of the organization through the construction of knowledge-intensive organizational capabilities (Levitt and March, 1988).

At the end (right-side) of the cycle in Figure 3 it clearly indicates that knowledge having an intensive impact on organizational performance. The academicians sometimes do not understand that organizational performance improvement is what KM is finally all about.

(2) **Strategies of Knowledge Management**

Most organizations put emphasis mostly on one or the other of two largely distinct KM strategies – “codification” or “personalization” (Hansen et al., 1999).

Codification is principally implemented in the shape of electronic document systems that codify and hoard knowledge and consent its easy spreading and re-use. While, personalization focuses on growing networks to make possible people-to people knowledge transfer and sharing. It is based on “expert economics” – bridging individual expertise to others with less expertise that may employ it to further the organization’s goals.

Earl (2001) has described various KM strategies at a more detailed level. Author has developed these empirically through observations in
several companies. They are listed below in groups that show up their confidence on either the codification or a personalization approach.

Codification-oriented sub-strategies of Earl are listed below:

1. Systems (formation and improvement of knowledge repositories and on stimulating people to make the content available)

2. Process (developing and using repeatable processes that are supported with knowledge from previously conducted processes)

3. Commercial (the proper management of intellectual assets such as patents, trademarks, etc.)

4. Strategic (the enlargement of “knowledge capabilities” that can shape the establishment of competitive strategy)

   Personalization Sub-Strategies – Earl’s personalization-oriented sub-strategies are:

5. Cartographic (To connect the affecting people, making knowledge directories or chart and networks)

6. Organizational (furnishing groupware and intranets to assist communities for practice)

7. Social (socialization is not only a tool of knowledge creation and exchange but also it emphasizes the furnishing of physical “places” to facilitate discussions)
It has been largely observed that many organizations use a mixture of both the strategies as per their requirements while others focus on only one of these strategies or sub-strategies.

(3) **The Organization of KM**

KM is implemented in many different ways in all most all the prominent organizations to taste the defined goal of the organization. Now and then, it is seen that the KM function is headed by a Chief Knowledge Officer (CKO). The CKO may escort a KM department when the organization’s KM strategy is definite. But when the situations are complex, a varied set of KM strategies being implemented, the cultural differences that are innate in different strategies recommend that it is very difficult for a single department to organize KM the way it is to be managed. In such instances, the various KM groups of the organization have to work collectively to reach to the eventual goal of the organization.

(4) **Extra-organizational Knowledge Management**

It has been observed that KM is being conducted across organizations specially with partners, suppliers and customers who have the direct impact
on the organization’s overall performance. Obviously, such KM activities rely on communications networks and systems.

“Value supply chain” in inter-organizational networks are in regular usage to ease the big retailers where copious inventories are involved like the Wal-Mart to have the direct conversation with suppliers to guarantee that inventories are always of preferred levels on retail shelves, in retail stockrooms and in warehouses and they must be delivered according to a predetermined schedule. These systems operate on an “automatic” basis that is made feasible by the knowledge that is implanted in the software by the participating partners.

The well-known Linux software development project is a perfect example of the successful utilization of a loose network of volunteer knowledge creators. It operates with two parallel structures – one which represents the current “approved” version of the system and the other in which enhancements are continuously being developed and tested (Lee and Cole, 2003).
### 3.9 Knowledge management implementation strategies in corporate world

<table>
<thead>
<tr>
<th>Assess</th>
<th>Plan/Design</th>
<th>Build</th>
<th>Deliver</th>
<th>Operate/Monitor</th>
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<tbody>
<tr>
<td>Review the current business strategy, goals and objectives</td>
<td>Define knowledge sharing processes and policies</td>
<td>Create knowledge sharing processes and policies</td>
<td>Implement knowledge sharing policies and procedures</td>
<td>Implement KM report card to track success and effectiveness of knowledge sharing</td>
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<tr>
<td>Assess the current state KM practices and business requirements</td>
<td>Define a roadmap and strategy, vision and success metrics</td>
<td>Establish strategic relationship</td>
<td>Implement knowledge sharing performance metrics</td>
<td>Evaluate performance data</td>
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<tr>
<td>Review existing knowledge sharing culture including communications and supporting change mechanisms</td>
<td>Establish KM governance model and core team</td>
<td>Develop KM success metrics, and performance goals</td>
<td>Deliver communications, change and training plans</td>
<td>Evaluate and update knowledge sharing network, processes and technology as per the requirement</td>
</tr>
<tr>
<td>Assess existing knowledge sharing tools and technology</td>
<td>Design KM knowledge network roles and assign responsibilities</td>
<td>Integrate knowledge sharing roles and responsibilities into current jobs</td>
<td>Launch knowledge sharing tools and technology</td>
<td>Introduce knowledge auditing system</td>
</tr>
<tr>
<td>Determine desired KM vision and scope</td>
<td>Define communication, change and training strategy</td>
<td>Deploy Knowledge Network</td>
<td>Implement knowledge management awareness programme</td>
<td>Implement opportunities to collaborate using feedback system</td>
</tr>
<tr>
<td>Design taxonomy and metadata</td>
<td>Develop communication, change and training plans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Determine tools, technology, security, regulatory and access requirements</td>
<td>Build taxonomy and metadata</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design tools and technology</td>
<td>Capture new and existing data</td>
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</table>
Implementing, integrating a professional strategy and devising is another establishment of knowledge infrastructure. The real point of knowledge management strategy is to create an environment for leveraging the organization’s rational asset into a joint platform, making this knowledge actionable. Knowledge management is about action, and not just about collection and consolidation of the data.

The primary step is to build up sophisticated scenarios for current aggressive environments and then second step is to demonstrate idyllic successful companies with respect to the upcoming scenarios. At the same time, the continuous assessment of the advantages and base knowledge which are imperative characteristics of the above referred steps are really required in such flourishing organizations.

Once the identifications of the knowledge needed in the organization to be successful is done, the next step is to make out the individuals inside the organization who require the knowledge or have the capability to gain the contemporary knowledge. To determine and understand current and potential customers, suppliers and markets, proper identification of the external sources is very important.

The source of intellectual capital may not reside within the organization but it can be leveraged elsewhere. The action for the
organization is to copy its efforts on those of a conceptually an idyllic company and a balanced plan in maintaining and acquiring the required knowledge are the two major elements of the business tactic for such an ideal company. It is the proper time to develop the system, once the knowledge strategy introduced and the same is set. It is suggested by many prominent KKO (Key Knowledge Officer) that by performing a SWOT analysis, knowledge assets could be analyzed in relation to their support of business strategy. The output of the SWOT analysis undeniably helps the top management of the organization to know that KM has tactical value.

The following are seven steps by which a KM methodology is being generally implemented:

1 Pointing out the problem: It is clearly seen in the last many years that corporate knowledge is usually found in unapproachable systems. The easy access and technological barriers protecting this knowledge lead users to believe that there is a lack of knowledge and such gap should be identified as early as possible.

2 Preparing for change: This refers to change in terms of business efforts, especially in how the business is operated.

3 Creating the team: Most organizations that succeeded with the flying colours in implementation KM have formed a corporate level KM team
charged with. This team is made responsible for implementing a pilot project under the dynamic supervision of Chief Knowledge Officer who can lead the collective efforts of a team.

4 Mapping out the knowledge: Identify what the knowledge is, where it is, who has it, and who needs it. Once we get the answers of those questions, it becomes little bit easy to mapping out the knowledge and also to identify relevant technologies that can be used to execute the KMS in the entire organization.

5 Creating a feedback mechanism: An effective feedback system should be formed to indicate management how the system is used and should report any difficulty to the concerned official immediately as and when it occurs.

6 Defining the building blocks for a KMS: The knowledge retrieval systems, knowledge contribution and collection processes, a knowledge directory and content management and knowledge repository could be the part of base structure of a feasible KMS.

7 Integrating prevailing information systems to contribute and capture knowledge in an apposite format.

Primarily a prototyping process should be used, starting with a small group in a pilot program. Once it confirms success, then other members of
the organization should request for access and this way the stem could be expanded.

The followings are the decisive strategies for successful implementation of KM based on adoption of KM fruitfully.

1. To set up a KM methodology: This could be based on the Intellectual Capital Management (ICM) methodology adopted by IBM global services. The critical basics of ICM are a vision that values evaluating, sharing and reusing knowledge; processes for efficiently gathering, structuring and distributing intellectual capital; a competency community of practice consisting of knowledge workers in a core competency area; technology that enable companywide knowledge sharing and incentives to hearten scholarly contribution and reuse.

2. Designate a point-person: Appoint a chief knowledge officer to endorse and supervise the KM activities in the company.

3. To make powerful the knowledge workers: It is known truth that knowledge originates from its people who own it. Thus it is needless to state here that empowering and supporting knowledge workers in the KMS is a critical factor in getting success since they would be in decisive position.
4. To manage customer-centric knowledge: An organization can toughen its position in an aggressive environment not only by emphasizing customer satisfaction but also by focusing on both learning about and learning from their customers.

5. To manage core competencies: Core competencies can differ among firms based on unique benefits they intend to provide to their customers by effectively combining human capital, intellectual and intangible assets, processes and technologies in the firm. Hence, it may not be easily possible by any organization to replicate the core competencies blindly.

6. To encourage alliance and innovation: Developing a suitable motivational structure for innovation also pays significant result in creation of high potential amid individuals.

7. To put learning gained from the best practices in the organization: By recording and sharing the best practices, an organization can avert reinvention. But in the modern era, the web-based approaches are gradually becoming norms.

8. To enlarge knowledge sourcing: To survive in the highly competitive environment, it now becomes very difficult for any developing organization with old outdated knowledge system.
Therefore, by using the different media like intranet, internet and extranet effectively, the successful retrieval of most recent information is possible which could spread the value-added knowledge.

9. To join communities of expertise internally: To pick the utmost benefits of KM, organizations can set up relationship by using accurate virtual communities and teams through electronic libraries between internal and external communities.

10. To report the measured worth of knowledge property: It is very significant for a progressing firm that it should evaluate about how the implemented KMS contributes to the business from time to time. Of course, it is difficult task but very important to authenticate the development and use of a KMS systematically.

When the KM tactics are implemented efficiently in the organization, soon the organizations can reap the copious benefits from out of it. Well, they can marginally bring down the loss of intellectual capital by retaining the people who intend to leave the company, and achieving economies of scale with various elements like increasing employee happiness through greater individual growth and empowerment, enhancing productivity by making knowledge available quickly and easily and obtaining information
from external providers. Lastly, it would help the organization to a great extent to survive and lead in the particular segment in today’s extremely competitive market.

3.10 Knowledge Management: The Information Processing Paradigm

Over the period of time, the information-processing view of KM has been extensive in information systems practice and research. This viewpoint originated in the era when business environment was less uncertain, the products and services and the corresponding core competencies had a long multi-year shelf life.

The advancement of the information-processing pattern over the last four decades to build intelligence and manage change in business functions and processes has usually progressed over three phases:

1. Automation: To augment efficiency of operations;
2. Rationalization of procedures: To simplify the procedures and to eliminate noticeable bottlenecks that are exposed by automation for improved effectiveness of operations; and,
3. Re-engineering: To redesign the essential business processes that rely on information technology.
The information-processing standard has been customary over all the three phases that have been characterized by technology intensive, optimization-driven, and efficiency-seeking organizational change. The exercise of information technologies in all the three phases was fairly based on a predictable view of products and services and contributory organizational and industrial structures as well.

Figure 4: Information Processing Paradigm: Old World of Business

The compilation of various interpretations of KM derived in the last couple of years are given below.

As per the Boland (1987) there is much prominence on machinery than the way people in organizations acquire and distribute new knowledge
for the overall benefit of the organization. There is by far, considering the meaning of knowledge as “unproblematic, predefined, and prepackaged”.

Implementations of sophistication of KM technology and its failures-
The word sophistication creates an important question here is whether more sophisticated technologies often deliver the desired result or not. However, (Zack, 1999) states that the technology need not be intricate to furnish the considerable benefits. It is proven truth that KM promises much, but many a times delivers very little. It does not stand for simply a procedure of installing new software or changing a small facet of the business, but it is all about allocation of the gained knowledge amongst people in the organization.

In addition, Malhotra (2004) notes that despite there is increase in sophistication of KM technologies, it has been observing salient failures in implementation of KM technology due to one or other reasons. Even a little gap between knowledge process, technology inputs in team members leads the business performance of organization towards the total failure of KMS. Malhotra also throw a light on the evidences where business organizations spend less on technology and are not leaders in adoption of most glorified Real Time Enterprises (RTE) technologies that has high success ratio.
Management and coordination of varied technology architectures, data architectures, and system architectures poses observable KM challenges (Malhotra, 2004). And such challenges are derived from the attentive need for integrating computer programs, diverse technologies, and data sources across internal business processes. These challenges are compounded multiple by the harmonized need for simultaneously adapting enterprise architectures to keep up with changes in the external business environment. For this to happen, changes in the existing technologies or their replacement with newer technologies must be done. Growing business enterprises frequently have too much (unprocessed) data and (processed) information and also sometimes excessive technologies. However, many a times, it is seen that, when strategic decision has to be taken where high-risk and high-return is involved, required data/information is not readily available on time as more and more of such data/information has to be collected from the external sources.

However, with recent extraordinary growth in volumes of data and information in almost all sizes of organizations, the continuously evolving variety of technology architectures, and the drastically changing business environment, this replica has outlasted its utility.
The restrictions of the technology-push model are apparent in the following depiction of IT architectures as described in Information Week by LeClaire and Cooper (2000):

The infrastructure issue is affecting all businesses . . . E-business is forcing companies to re-architect all or part of their IT infrastructures – and to do it quickly. For better or worse, the classic timeline of total business-process reengineering – where consultants are brought in, models are drawn up, and plans are implemented gradually over months or years – just isn’t fast enough to give companies the e-commerce-ready IT infrastructures they need . . . Many companies can’t afford to go back to the drawing board and completely re-architect critical systems such as order fulfillment and product databases from the bottom up because they greatly depend on existing infrastructure. More often, business-process reengineering is done reactively. Beyond its troublesome effect on business operations, most IT managers and executives don’t feel there’s enough time to take a holistic approach to the problem, so they attack tactical issues one-by one. Many companies tackle a specific problem with a definitive solution rather than completely overhaul the workflow that spans from a customer query to online catalogs to order processing.
3.11 Conclusion

Looking to the remarkable significance of the KM system, now-a-days, almost every organization has unquestionably accepted that in order to maintain and to make the existence of the organization stronger gradually in today’s competitive and global environment, the knowledge-based economy revolution has to be faced at any cost. Each and every organization has realized the need and importance of this precious property. It needs to be managed KM productively since KM caters to the crucial issues of organizational adaptation, survival and capability in face of raid increasing of environmental changes. Three components that can play powerful role in managing this priceless asset proficiently which include: 1) defining successful strategies for its management, 2) utilizing contemporary information technologies for effectual implementation of these strategies and developing KMS and 3) establishing a strong customs that can make out its requirement and significance and lastly become used to it.

Effective management of the knowledge can bring improvement in capabilities and business activities of a learning organization since knowledge is a prerequisite element of learning anything. Undeniably, such improvement could add more value to its services or products which could
be helpful in improvement of its overall performance and giving a competitive edge to it.

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