CHAPTER 3

OVERVIEW OF ENTERPRISE KNOWLEDGE MANAGEMENT

3.1 Introduction

In order to sustain in the competitive and dynamic business environment in today’s world, it is inevitable to construct and maintain the Information Technology (IT) for every Enterprise. The success of enterprises primarily rest on its ability to learn faster and stay updated so as to respond strategically to every business scenario. The nature of the present competitive environment is that, while tangible assets (Plants, Machinery, Capital) may be necessary for the enterprise to function, it is its Information-based resources - its invisible assets (technological know-how, customer and employee information and trust, MIS, corporate culture, etc.) which provides it with competitive edge (Itami, 1987).

The wisdom gained by many organizations have shown that long-term survival and competitive success, are determined not so much by their financial muscle and size always; but by the manner in which they consciously attempt to learn, create, codify, utilize and maintain knowledge resources.

3.1.1 Knowledge: Some Fundamentals

Data, Information and knowledge are the true shared resources for routine functions such as planning, executing and monitoring. The attributes of these elements have been depicted in figure 3.1 for better understanding. They provide the organization with a potent weapon with which they can beat competition. As a matter of fact, a competitor may analyze and copy a product or even the process and strategies but it may quite be a challenge to replicate the internal information system around which these are built.
There are certain Management Information Systems in place to cater to the ever-evolving need of data. But with the changing nature of the business scenarios and day to day market fluctuation, it is becoming critical and cumbersome to manage existing enterprise data and its further processed versions as well; in order to sustain its position ahead in the global competition. A change is as well observed in the way MIS has advanced during the last 30-40 years, as a result of an increased usage of computers and voluminous data involved.

In this context IT (Information Technology) has definitely supported & led to a better set-up for many organization and its users who are essentially called as knowledge workers; as they are direct players or are responsible entities which constantly churn & evolve enterprise knowledge.

The IT industry in India as is the case worldwide faces the challenges of intense competition, capricious customers, and increasing globalization. Hence, for survival and growth, IT industry has to develop strategies to remain competitive. IT industry should learn and adopt rapid cycle of learning-unlearning-relearning. It should as well get accustomed with the application of the new knowledge in real time; since today the main competitive advantage a company has is certainly ‘knowledge’ more specifically ‘enterprise knowledge’.

Knowledge has become the key economic resource and the dominant – and perhaps even the only source of competitive advantage (Drucker 1993). This has led to an enhanced emphasis on establishing a clearer understanding and developing better
frameworks for accessing knowledge management (KM) effectiveness; thereby determining its impact on bottom line business results (Lim and Ahmed, 2000).

o **A Knowledge Base:**

Knowledge originates and is applied in the mind of the knower. In organization, it often gets embedded not only in documents and repositories but also in organizational routines, processes, practices and norms (Davenport and Prussack, 1998). In general, not all information is valuable. Therefore, it's up to individual and the enterprises to determine what information qualifies as intellectual and knowledge-based assets.

A knowledge base is an organized collection of information. It is a central warehouse or repository where the information about the organization is stored, information such as

- Corporate Information
- Product/Service information
- Industry/Competitors information.
- Customer profile/Database
- Business partners/Alliances information

As with many physical assets, the value of knowledge can become obsolete over time. Therefore the content in a KM initiative should be constantly updated, amended and deleted. The relevance of knowledge at any given time changes, as do the skills of employees. Therefore, there is no endpoint to a KM initiative undertaken in any enterprise, in-fact it should be kept up-to-date & evolving. It is inevitable that enterprises treat knowledge Management initiatives like product development, marketing and R&D constantly evolving business practices.

o **Knowledge : Types & Classifications:**

There are six types of knowledge that knowledge management application can contain (Hollsopple and Winston defined-1996). They are:
I. Descriptive: is information about the past, present, future or hypothetical states of relevance concerned with Knowledge what.

II. Procedural: is concerned with knowing how and specifies step-by-step procedures for how tasks are accomplished.

III. Reasoning: is concerned with knowing why, evaluating conclusions that are valid for a set of circumstances.

IV. Linguistic: interprets communication once it has been received.

V. Presentation: It facilitates communication. It is concerned with the method of delivery of knowledge.

VI. Assimilative: helps to maintain Knowledge base by improving on existing knowledge.

The first 3 types are basic Knowledge that an organization has in terms of performing business processes. The latter 3 provide communicating, understanding, and learning of Knowledge in order to use it.

- Knowledge is also classified as:
  
a) Advantaged Knowledge – The Knowledge that can provide competitive advantage.

  b) Base Knowledge – It is integral to an organization, providing it with short term advantages.

  c) Trivial Knowledge – This type of Knowledge has no major impact on organization.

Knowledge is also called intellectual capital – It’s the competence of an individual and the commitment of the individual to contribute to the organization’s goal. Therefore Knowledge is information in action - as defined by Ulrich (1998) and O’Dell (1998).

o **Taxonomy of Knowledge: Tacit & Explicit forms:**

As also termed as typology of knowledge or the Intellectual and knowledge-based assets fall into one of two categories: *Explicit or Tacit Knowledge*. Its formal distinction is assumed in the table No.3.1.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Tacit</th>
<th>Explicit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature</td>
<td>Personal, context specific</td>
<td>Can be codified and explicated</td>
</tr>
<tr>
<td>Formalization</td>
<td>Difficult to formalize, record, encode, or articulate</td>
<td>Can be codified and transmitted in a systematic and formal language</td>
</tr>
<tr>
<td>Development Process</td>
<td>Trial and error encountered in practice</td>
<td>Explication of Tacit understanding &amp; interpretation of information</td>
</tr>
<tr>
<td>Location</td>
<td>People’s mind</td>
<td>Documents, data bases, web pages, e-mails, charts, etc.</td>
</tr>
<tr>
<td>Conversion Processes</td>
<td>Converted to explicit through externalization that is often driven by metaphors and analogy</td>
<td>Converted back to tacit through understanding and absorption</td>
</tr>
<tr>
<td>IT support</td>
<td>Hard to manage, share, or support with IT</td>
<td>Well supported by existing IT</td>
</tr>
<tr>
<td>Medium needed</td>
<td>Needs a rich communication medium</td>
<td>Can be transferred through conventional electronic channels</td>
</tr>
</tbody>
</table>

Table No 3.1: Tacit versus Explicit Knowledge Assumed Distinction

**Tacit Knowledge:** Much harder to grasp is the concept of tacit knowledge, or the know-how contained in people’s heads. The challenge inherent with tacit knowledge is figuring out how to recognize, generate, share and manage it. It is usually in the domain of subjective, cognitive & experimental learning. It’s the cumulative store of experiences, mental maps, insights, acumen, expertise,
know-how, trade secrets, skill sets, understanding and learning that secrets, skill sets, understanding and learning that an organization has as well as the organization culture that has embedded in its past and present experiences of its people, process and values, organization high level skills, expertise. It is diffused, unstructured without tangible forms and therefore difficult to codify. It is observed as an informal piece of knowledge determined through contextual experience. It will be almost unique to the viewer having the experience. It will be not transferable unless it is recreated through experiences produced by those who actually experienced it and shares with others, and such gained knowledge would be a different and new one by others. 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.

E.g. guidelines in mind before they are shared with the team members for a task, directions worked out in mind about how to swim, insight for a particular software program before actually starting writing one.

**Explicit Knowledge**: It deals more with the objective, rational & technical knowledge. As a general rule of thumb, explicit knowledge consists of anything that can be documented, archived and codified, often with the help of IT. It is the policy manuals, procedural guidebooks, white papers, designs, products, strategies, goals, mission and core competencies of the enterprise and IT infrastructure.

It is Knowledge that is formally codified (documented) in a form that can be distributed to others without interpersonal interaction / transformed in a process / Strategy. So we can say that it is formal and transferable, deriving in part from context related information established into definable patterns based on past experience or judgment. It is an asset such as patents, trademarks, business plans, marketing research and customer lists.

E.g. Instructional manual, how to process job application is documented in firms HR policy manual, good coding practices are drafted in a manual to which programmer need to adhere to the given rules.
The Key Components Of Knowledge:

Knowledge develops over time with expenditure which makes connections among new situations and events in context. Knowledge can be characterized by –

- **Ground Truth**: i.e., Truth gained from experience, not theory; that only works in practice.
- **Complexity**: Complex situations at times indicate difficult approaches to solve them. Sometimes a lack of Knowledge makes a problem complex.
- **Judgment**: Judgment puts Knowledge into actionable context. Knowledge keeps on evolving and may no longer apply to the situation that it originally did.
- **Heuristics**: (rules of thumb) and intuition – guides to action, Shortcuts and simplification for problem solving
- **Values and Beliefs**: Different people have different problem solving frames; as per their own values and beliefs.

Characteristics Of Knowledge (Gray 1999):

- **Extraordinary leverage and ever-increasing returns**: There is seldom any threat that Knowledge would lose any returns. When it is used, it is actually not consumed; in fact its consumers can keep adding to it. Eventually its value and worthiness increases and improves overtime.
- **Fragmentation, Leakage, and Need to refresh**: As Knowledge grows, it branches and fragments. Knowledge is Dynamic; it is information in action. Therefore, an organization must continually refresh it Knowledge base, to maintain it as a source of competitive advantage.
- **Uncertain value**: It is difficult to estimate the impact of an investment in Knowledge.
- **Uncertain Value of Sharing**: It is difficult to estimate the value of sharing the Knowledge to the organization even that will benefit the most.

Knowledge management is concerned with the exploitation & development of the knowledge assets of an organization with a view to furthering the organization’s objectives. Here the researcher the knowledge to be managed includes explicit,
documentary and tacit or subjective knowledge which resides in the minds of the employees. Knowledge Management embraces all the processes associated with the identification, sharing & creation of information. Successful knowledge Management requires systems for the management of knowledge repositories, & to cultivate & facilitate the sharing of knowledge & organizational learning. KM is fundamentally the management of corporate Knowledge & intellectual assets that can enhance a range of organizational performance characteristics & add value by enabling in an enterprise to act more intelligently.

A review of literature studied by Avimanyu and Sukumar (2004) gives a guideline that there is shift in the definition of KM from process of acquiring, storing and structuring of information to the creation and dissemination of knowledge under an organizational settings as an enabler and driver of competitive advantage.

The changing role of KM in creating a Fast Learning Organization is depicted by Koenig and Srikantaiah to create competitive advantage. This signals a need for knowledge set up so as to enable an organization to respond quickly with accuracy to the changes in their ever-changing environment by creating a knowledge-based organization, defined by Zack (2003).The aim for creating a knowledge-based organization is to create a knowledge strategy that enables effective management of existing knowledge as well creation of new knowledge. The goal here is four fold: (a) ensuring that knowledge from one part of the company is applied to other parts, (b) to ensure that knowledge is shared overtime, so that the company is benefited from its past experiences, (c) to make it possible for people from various parts of the organization and to collaborate and create new knowledge and (d) to provide opportunities and incentives for experimentation and learning. In other words as stated by Avumanyu and Sukumar it’s about (a) capturing organizational memory (OM) (b) to enhancing collaboration; (c) improving productivity; (d) enabling and driving innovation; and (e) coping with information overload, in an increasing turbulent and volatile environment within which it as well as the industry operates.
3.1.2 Understanding Organizational Memory and Organizational Learning:

Organizational Memory (OM) is built based on the knowledge Setup in the organization, designed to capture informal knowledge. It can be associated with the organizational best practices and actions taken by organizational members in a particular business situation.

Conklin (1996) stated that, KM can help capture what organizations have as a valuable asset in the informal knowledge, which is the daily currency of their workers, and which usually lives only in collective human memory, and thus is poorly preserved and managed. He stated that there are significant technical and cultural barriers in capturing informal knowledge and making it explicit.

In the eBook published by Jennex in 2008; it referred an OM/KM model proposed by Jennex and Olfman (2002) that performed a longitudinal study of KM in an engineering organization that identified association between knowledge use and improved organizational effectiveness. This model was tried and implemented in certain firms to check its viability which was successful in some of the cases.
Organization Learning (OL) - As defined by Malhotra (1996) OL is a process of detection and correction of errors. In this context, organizations learn through these individuals acting as agents for them. Individual learning activities are seen being facilitated or inhibited by an ecological system of factors that may be called an organization learning system. Huysman, Fischer and Heng (1994) believe that OL has OM as an important component. In this view, OL is a process whereby experience is used to modify current and future actions.

Thus with reference to the Figure No.3.1 it can be understood that OL assimilates the experiences of the Talent pool of an organization whereas OM facilitates the Organization learning process. Organizational learning must be addressed with approaches such as increasing internal communications, promoting cross-functional teams and creating a learning community. Advanced computer storage technology and sophisticated retrieval techniques such as data warehousing and data mining, multimedia databases and database management systems, and powerful search engines have proven to be effective tools in enhancing organizational memory. These tools increase the speed at which organizational memory can be accessed. Groupware also enables organizations to create intra-organizational memory in the form of both structured and unstructured information and to share this memory across time and space (Vandenbosch and Ginzberg, 1996). Document management technology allows knowledge of an organization’s past, often dispersed among a variety of retention facilities, to be effectively stored and made accessible (Stein and Zwass, 1995).

Thus Organization Knowledge as defined by Davenport and Prusak (1998) is stated as “Knowledge is an evolving fluid mix of framed experiences, values, contextual information and expert insight that provides framework for evaluating and incorporating new experiences and information.” Knowledge is seen embedded in documents or repositories and organizational routines, processes, practices and norms. In order to get maximum usable knowledge from these stored knowledge from the organizations it should have some context specific base so as to apply for some task in the organization or even universally. This as well denotes to what is referred as Enterprise Knowledge in context of the current research work documented in this thesis.
3.2 Outlook On KM and EKM

Information is the lifeblood of the organization with internally generated information much concerned with the management & control of the business, and externally sourced information contributing to planning and strategic decision making.

![Diagram: Relative information needs of planning & control]

**Figure 3.2:** Relative information needs of planning & control; Source: Oak, MIS, 2004

Beyond the automation of manual tasks, emphasis is increasingly focused on the knowledge worker whose main activities revolve round the utilization & exploitation of information; an activity crucial to the success of innovation. One of the organizations has estimated that the percentage of its company records relevant to the classic four levels of the corporate pyramid amounted to percentage as indicated in figure 3.3.:

![Diagram: Relative information needs of a company relevant to the 4 levels of the Corporate pyramid]

**Figure 3.3:** Relative information needs of a company relevant to the 4 levels of the Corporate pyramid; Source: Oak, MIS, 2004;

This was the observation for the internal information. As far as the external information is concerned, with the outward-looking business strategist requiring a
variety of information from the external environment, much of it being text-oriented
and much being interpersonally communicated.

Today, Knowledge has become an important competitive advantage for
organizations. Lacking competence & Knowledge are the most critical factors
restricting the development of the operations at many companies. And it is thus
strongly believed that the main source of knowledge and competitive advantage of
companies is their human capital, the tacit knowledge of their employees. Tacit
knowledge is difficult to imitate, copy or “reengineer”. It is both individual and
collective, takes time to build and is, in a sense, invisible, since it resides inside
“people’s heads”.

In this context, “Knowledge Management” implies, the adoption of management
practices compatible with the principal findings about individual learning and
creative processes and the systemic coordination of efforts at various levels:
organizational and individual; strategic and operational; formal and informal.

3.2.1 KM Dimensions:

According to the model specified by Nonaka & Takeuchi, 1995, KM may be
understood through seven dimensions of management practice:

1. The critical role of top management in defining the knowledge fields in which the
organization should concentrate their learning efforts, clarifying business strategy
and establishing challenging goals (Nonaka & Takeuchi, 1995 & Singe, 1990);

2. The development of an organizational culture geared towards innovation,
experimentation and Continuous learning and committed to long-term results and the
optimization of all areas of the Company should be one of the fundamental concerns
of top management. In this sense, decisions regarding which formal and informal
norms are to be encouraged and supported seems to be highly Strategic.

3. New organizational structures and work organization practices are emerging to
overcome the limits to innovation, learning and the generation of new knowledge
that are imposed by the traditional hierarchical-bureaucratic structures. Several
leading companies in various sectors and different countries are adopting innovative
organizational structures that are based, to a large extent, on the work of multidisciplinary groups with a high degree of autonomy;

4. Human resources management policies. In particular, the following initiatives stand out:
- Improving the capacity of organizations to attract and keep people with abilities, behaviors and competencies, that adds to their (value) knowledge stocks and flows. This occurs from the moment that companies adopt extremely strict selection processes (Sveiby, 1997) and seek to increase the diversity (Leonard-Barton, 1995; De Masi, 1999) of backgrounds in hiring;
- Encouraging behavior attuned to the requirements of individual and collective learning processes, as well as those that safeguard the strategic and long-term interests of the company with respect to the strengthening of its core competencies. Thus, the singling out of career plans and training that expand experiences, as well as contacts and interaction with other people in and outside the companies;
- Adopting wage structures associated with the improvement of individual competencies and the Performance of the group and the company as a whole in both the short- and long-terms;

5. Advances in computing, telecommunication technologies and information systems are affecting knowledge generation, dissemination and storage processes within organizations. The importance of opportunities made available by technological progress is recognized, but the role of personal contacts and tacit knowledge in the organizational learning processes and the maintenance of an environment with a high level of confidence, transparency and collaboration are still considered to be essential;

6. Recent efforts to measure results from various perspectives and their dissemination throughout the organization. Current findings and efforts of authors and companies concerned with assessing various dimensions of intellectual capital should be especially emphasized (Edvinsson & Malone, 1997; Sveiby, 1997);

7. The growing need of companies to engage in processes of learning with the environment, particularly, through alliances with other companies (Alcorta & Plonski

### 3.2.2 Components of knowledge management:

As proposed by Thomas Short KM architecture consists of:

(a) Knowledge capital,

(b) Social capital, and

(c) Infrastructure Capital.

As depicted in figure 3.4 it contains a fourth component latter proposed by Avumanyu and Sukumar which determines the Level of diffusion among the three components. This is the management structure and the Organization culture.

![Components of KM](image)

**Figure 3.4: Components of KM; Source:** Thomas Short, Avimanyu and Sukumar (2004)

Short and Sahasrabudhe, underscored how informal communication networks within the organization can induce encouragement among employees to share Knowledge Capital, Infrastructure Capital Social Capital KM Organizational structure and Management Culture experience, insights, intuitions etc., which add up to the Knowledge Capital of an organization.
Employees form an integral part of the intellectual capital of an organization creation and management of tacit knowledge becomes one of the most integral and challenging aspects of KM. A change in the organizational culture in terms of top management support, flattening or organization, delegation of decision-making rights to lower levels of management is required. Social capital is defined as a multidimensional concept that includes culture, trust, context and informal networks. The concept of social capital gained its importance in KM, when it was believed that the ill effects of business process reengineering, downsizing could negatively affect the deployment of a successful KM (Koenig and Srikantaiah).

Traditionally infrastructure related to the levels of sophistication in the deployment of Information Technology. But now the Infrastructure Capital should view technology in the light of the organization culture and management Support( Avimanyu and Sukumar). Management structure and Organization Culture constitute the pillar that ties the three components together to create a level of cohesiveness that results in sustained competitive advantage through leveraging of Knowledge.

The stated components of KM cannot work in isolation as it would not result in competitive advantage. They should work in cohesion as one object giving a synergistic effect.

A classification of knowledge management is observed in two dimensions:
- one dimension is to manage existing knowledge, which includes developing of knowledge repositories (memos, reports, presentations and articles), knowledge compilation, arrangement and categorization.
- Another is to manage knowledge-specific activities, that is, knowledge acquisition, creation, distribution, communication, sharing and application (Stenmark, 2001).

Knowledge Management looks at how an organization adapts to changing conditions in order to survive; in the same way that animal and plant species change over time to adapt to changing conditions, unsuccessful firms die off or are swallowed up by more successful competitors (Burn, Marshall and Barnett, 2002). KM is concerned with the exploitation and development of the knowledge assets of an organization with a view to furthering the organization’s objectives. (Sanchez, 2000; Abell and Oxbrow, 2001).

An organization should have the capacity to exploit its knowledge and learning capabilities better than its competitors if it decides to assume a given competitive
strategy (Grant and Gnyawali, 1996; Roth, 1996). This capacity depends on its KM tools, the usage of ICTs and the organizational structure. It is therefore important to investigate how organizations and their employees take advantage of the technological tools that can make communication more convenient and less expensive.

Before discussing the methodology and tools, it is important to remember that the knowledge repositories consist of all the documents with knowledge embedded in them, such as memos, reports, presentations and articles (Kaplan, 2002). These repositories are used when knowledge goes through the following phases: acquisition, creation, distribution, communication, sharing and application (Stenmark, 2001).

### 3.2.3 Enterprise Knowledge Management and Ontology

EKM is surely a multi-disciplinary area which can have any number of contexts and contributions from varied sources. It is predominantly the group knowledge that gets generated from the pool of knowledge in an organization and the business environment in which it resides. According to Stata (1996), this differs from individual learning in two respects: first, it occurs through shared insight, knowledge and shared models; second, it is based not only on the memory of the participants in the organization, but also on “institutional mechanisms” such as policies, strategies, explicit models and defined processes (we can call this the “culture” of the organization). These mechanisms may eventually get revived or changed over time, which can be a form of learning.

Company-wide knowledge is Enterprise knowledge management that entails formally managing knowledge resources in order to facilitate access and reuse of knowledge, typically by using advanced information technology. This Enterprise knowledge or organization Knowledge should actually be maintained and made easily available and more importantly it should get blended with the organization culture. The major thrust for managing enterprise KM is to make knowledge accessible and reusable to the enterprise. As organizations store an increasing amount of information and knowledge in data and knowledge warehouses and in data and knowledge bases, they are attempting to manage that knowledge in more efficient ways. More and more innovation and efficient ways to manage and store
this enterprise knowledge have been worked out in the IT Enterprises in major. Use of newer database storage options like: knowledge repository and data ware-houses are becoming more popular and effective, to manage the knowledge that is evolved in the interest of the company. Better technological alternatives, suitable for managing such huge knowledge base are availed to improve accessibility, updatability, and archivability. There is a vital need to understand the company culture, the important business process, functions and tasks that are defined in a particular organization in order to signify and build an Enterprise Knowledge that gets mingled with the company culture and the resources.

Ontology is an explicit specification of a conceptualization. In context to the EKM there are certain Ontologies maintained that are essential for the enterprise KM systems. Ontologies specifications can refer to taxonomies of the tasks that define the company wide knowledge for a particular system. Such Ontologies define the shared vocabulary used in a system in order to support and facilitate communication, search, storage and representation. Development and maintenance of an enterprise-wide ontology requires continual effort to evolve the ontology over time.

Ontologies are particularly important in ensuring that best-practices databases are able to communicate to the user the broadest range of practices and activities and allow the user to recognize when a best practice would fit in their organization. Price Waterhouse reportedly has ontology with over 4,000 entries for its best-practices database. Since Price Waterhouse is an international firm, the ontology has been translated into other languages to broaden use and accessibility of the knowledge base. In addition, since enterprises are often involved in multiple industries, multiple ontologies may be required as part of the KM system. (O’Leary, 1998)

3.3 EKM as a Methodology

EKM is basically a methodology and not a technology is to be understood first. As an effective methodology that facilitates the organization’s growth and excellence as shown in Figure No.3.5 As a matter of fact there are several drivers to achieve organizational excellence; creating organization wide commitment and acquisition of continuous improvement tools and techniques is just one way.

Enterprise Knowledge management is emerging as a significant organizational and management challenge. Effective knowledge based system implementation hinges upon
two vital aspects – the people and the culture with a support of Technology. But technology alone may not help to meet the challenges in the ever changing environment in an organization and at the same time environment cannot be bypassed for that matter. By amplifying the existing treasure of company-wide knowledge and strengthening the organization and its processes at all its levels with strong recent technological support will surely enable the rise of organizational excellence. Today the Constant pressure to grow and fulfill the needs of the stakeholders in a continuous changing and uncertain environment presents a formidable challenge, to capitalize on every opportunity and to embrace continuous improvement and innovation at all the levels of the organization. In this context, the organizational knowledge is recognized globally as a significant source of competitive advantage. Due to information revolution, the possession of such information has ceased to provide the requisite competitive advantages as it used to in the not-so-far past. (Archana Shukla, R Shrinivasan, 2002)

Thus it becomes important to also note the manner in which the people and technology that the organization utilizes, in order to get an energetic leap for achieving organizational excellence.

**Figure 3.5: Drivers of Organizational Excellence**  
Source: consulting@sai_global.com
With the rapidly changing environment organization do generate lot of experience and develop competencies over a long period of time. They leverage on competencies by weaning them in their core processes there by institutionalizing and facilitating organization to achieve desire level of efficiency but external environment changes these processes and routine also are required to be redefined and re institutionalized.( Leonard Barton , 1995). There are several drivers identified to achieve organizational excellence leading to sustainable business improvement. Creating organization wide commitment and acquisition of continuous improvement tools and techniques is just one way to achieve the organization; excellence. Achieving organizational excellence through such modules are effective to reap several benefits such as reflection in improved services, raised customer satisfaction ,improved operational and organizational performance that will obliviously boost employees moral.

To be successful, business firm must redefine and question their current knowledge store in a corporative database, while creating a new practice to fit the business environment. As a reaction to the questionable benefits from certain practices like downsizing, business process re-engineering etc. in 1980-90., KM surfaced as suitable steps in addressing the competition in a hard – to- predict environments. (Elias Awad and Hassan Ghazhiri, 2004).

Every process to gain the organizational excellence has to be carried out at individual, group or organizational level.

- **Individual level:** - Persons understanding becomes the Base of original knowledge.
- **Group level:** - Sharing of individual knowledge with other people in group generates new knowledge taking the knowledge at a higher level.
- **Organizational level:** - The group organization learning processes are those by which the groups in the organization interact and acquire other resources required to put their knowledge into action and there by convert group knowledge into improved dimension of organizational excellence.

At all the layer of organizational structure, above mentioned levels of the knowledge help in pursuing organizational goals as well as actionable plan to achieve them can be developed and coordinated efficiently (Subhankar Pandey and Anindita Rai, 2003).
3.4 Enterprise Knowledge Management Practices (EKMPs)

EKM practices are bundled together on the base of various group of activities. The practices may include feedback mechanisms and sequence patterns that have proved their usefulness in the workplace and have some degree of social acceptance. The EKMPs are actually the procedures or processes that are responsible for creation, generation, elicitation, application and evolution of knowledge. KM practices are vital ingredient in every enterprise to remain competitive and sustain the growing dynamics of the business today. Here a proper KMS may prove to be an enabling mechanism in order to transfer the essential relevant knowledge. These systems act as agents to support the creation, organization and dissemination of enterprise knowledge to all the concerned people throughout the enterprise. Enterprises would be able to achieve and retain an edge over other organization and gain competitive advantage in the market only by the proper blend of EKM practices and the core competencies.

The EKMPs does affect overall business performance. Knowledge Management till date has majorly dealt with issues like the classification of types of knowledge. These analyses are typified by debates about whether the 'tacit' knowledge held by individuals can be effectively represented as 'explicit' knowledge that can be represented in ways which can be easily shared across time and space, say through ICT databases and networks (Polanyi 1958; Nonaka 1994; Nonaka and Takeuchi 1995). This perspective also encompasses discussions about the role of the 'whole system' of knowledge management, such as core competencies and knowledge building to achieve competitive advantage (Leonard-Barton 1995).

3.5 Enterprise Knowledge Management Framework

A Basic Framework is required to be defined essentially at the beginning of any design of a Model to be implemented in Business context. The EKM framework rests on strategy & objectives of the organization since these decide the kind of knowledge that is significant within the organisation. Organisation culture plays a very momentous role in creation of EKM framework. The values, feedback culture, communication habits & management styles of the organisation either help or hinder Knowledge Management. Next, the organization needs to provide the learning
support systems to create, capture, share & apply knowledge & finally the support of HRM & effective IT system. As the organizations are made up of teams which contain individuals, the EKM framework also needs to address them. These knowledge structures or framework are to be defined customized for a particular business entity. They underscore the need for the enterprise to embed their organizational knowledge within the working vocabulary of every management team in a more prominent way.

At the end of this thesis, an attempt is being made based on such values and using the qualitative and quantitative inference. These are used to design a suggestive proposal of EKM Model.

3.6 Enterprise Knowledge Management Tools

Enterprise Knowledge management is more of a methodology applied to business than a technology or product. Typically an organization creates an Enterprise Knowledge architecture that allows collaboration with and access to one or more Knowledge repositories via web browser technology. A Knowledge repository basically is a collection of both internal and external Knowledge. EKM tools are the technologies broadly defined which ensure and enable knowledge generation, codification and transfer. These tools could be information architecture tools, technical architecture tools, application architecture tools.

- **Information Architecture tools**: Includes a new language category and metaphors for identifying and accounting for skills and companies.
- **Technical Architecture Tools**: which is more social like that of Internet as a tool.
- **Application Architecture tools**: which is oriented towards problem solving and representation rather than output and transaction.

EKM 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, synchronous interaction tools, and search and data mining tools.
A wide spectrum of EKM tools is extensively available and used to cater the need of various business processes. Given here are few such generic KM tools;

**Web-based IT tools:** - offer the powerful platform tools supporting all stages of KM implementation. It is an interactive medium providing communication between a user immaterial of the geographical location as well as equipment’s, the interaction may be in synchronous or asynchronous mode

**Traditional Database Tools:** - These tools capture knowledge into the database and ensure that the content is up-to-date. The analysis of data from the database leads to new knowledge creation.

**Process modeling ad Management Tools:** - These tools encode considerable knowledge of every business process more over they assist in managing the processes as well as managing the knowledge generated within the process.

**Workflow Management Tools:** - These tools have grown out of traditional flow charting tools; moreover they also allowed the specification of the movement of documents in information processes. Workflow management tools are used to implement and manage business processes

**Enterprise resource management Tools:** - These tools have been developed to provide all the modeling capabilities of typical ERP System (Enterprise Resource Planning) Along with explicit representation of the organizational and environmental knowledge.

**Agent Tools:** - These tools rely on agencies, relatively autonomous program that can perform verity of task. These agents are provided with specifications and they search web or the databases to give the result.

**Search Engine Navigation tools and portals:** - The search engines provide automatic text search while others also readout uninformative hits. This search engine has become knowledge navigator. Users are provided support as they navigate through knowledge domain in order to locate knowledge.

**Collaboration tools:** - Enable individual work collectively on a specific problem, by pooling individual knowledge

**Virtual Reality:** - These tools provide environment for collaboration through interactive model building and analysis. They also provide active laboratory for investigating, representing, refining and sharing knowledge.

Technology tools that support Knowledge management are called ‘know-wares’ although not so popular. They include DecisionSuite, wincite, Dataware,
KnowledgeX, KnowledgeShare, SolutionBuilder, Intraspect, DocuShare, GrapeVine, and others. Search/retrieval vendors Excalibur, Fulrum, and Verity are transforming older products into what are called Knowledge management platforms. Also Wincite, Channelmanager, and BackWeb help firms identify, organize, store, manage, and disseminate Knowledge and information. Most rely on Web browser technology for access, and each tends to be strongest in one area.

Now-a-days certain embedded best practices comprising Business rules and workflow, expert systems. Integrated applications and ERP forms a newer item to the list of available KM Technologies. There are human collaborative environments such as knowledge enabled Yellow Pages, GroupWare’s and multimedia publishing and intranets taking the KM technologies ahead. To support these technologies, knowledge search and knowledge access tools are being developed such as DW/DM (Dataware house/Data Mining) tools, EDM (Electronic Document Management) and environment scanning Tools.

Ajila and Sun [1] investigated two approaches to delivering knowledge to software development projects: “push” and “pull”. “Push” strategy means using tools to identify and provide knowledge to potential users. “Pull” means that users themselves have to use repositories and other tools to identify relevant knowledge. On the basis of a survey of 41 software companies in North America, the authors claim that pulling leads to more effective software development. These strategies should be further studied and applied in other areas in an organization apart from just product development such as Human Resource Management and Development.

- **Concluding Remarks:**

A brief outlook on Knowledge Management and Enterprise Knowledge Management concepts was a major aspect of this Chapter. A particular reference has been considered in context to the Information Technology (IT) Sector. In today’s knowledge era, organizations can create and sustain competitive advantage through initiation of appropriate enterprise knowledge management processes and systems. EKM is being lauded as an vital methodology to be applied to sustain the competitive edge and continuous innovation .For achieving organizational excellence, in the hyper dynamic environment, successful implementation of knowledge base system is taking the energetic leap In this context, technology alone
is certainly not the only key issue but more important are the stake-holder as well as the KM environment itself. Innovation and creativity are vital aspect to provide the actions and ideas necessary to an environment that is so much dynamic volatile, uncertain. Knowledge base organization especially in IT Business context can be predicted as a powerful one with a raised degree of organizational excellence; where in the organization itself behave as an intelligent and self-controlling system.

Most of the IT organizations that can leverage technology to exploit the data will realize the benefits by creating a competitive advantage in a long run. The recent emphasis on Enterprise knowledge management arises out of the need for organizations to manage resources more effectively in a hyper-competitive, global economy.