CHAPTER – 7

KNOWLEDGE MANAGEMENT

INTRODUCTION:

Knowledge management (KM) is the process of creating, sharing, using and managing the knowledge and information of an organization. It refers to a multidisciplinary approach to achieve organizational objectives by making the best use of knowledge.

Many large companies, public institutions and non-profit organizations have resources dedicated to internal KM efforts, often as a part of their business strategy, IT, or human resource management departments. Several consulting companies provide advice regarding KM to these organizations.

Knowledge management efforts typically focus on organizational objectives such as improved performance, competitive advantage, innovation, the sharing of lessons learned, integration and continuous improvement of the organization. These efforts overlap with organizational learning and may be distinguished from that by a greater focus on the management of knowledge as a strategic asset and on encouraging the sharing of knowledge. KM is an enabler of organizational learning.

It provides the following benefit to achieve the organizational goals:

a. **Employee Awareness:**

Knowledge management helps the employees to be aware of their tasks and responsibilities. It facilitates the employees to save their time and efforts because everyone knows where to go to find the destination of the organization.

b. **Availability:**

Knowledge can be used wherever it is needed whether from the office or on the road or at the customer's site. Knowledge management enables increased responsiveness to customers, partners, and co-workers.

c. **Timeliness:**

Knowledge is available whenever it is needed. It helps to eliminate the wastage of time for the distribution of information. But it is achieved just in case when people are interested.

d. **Adapt Organizational Change:**

Knowledge management helps to develop, acquire, process and retain old knowledge. Thus, such knowledge helps to adapt the organizational change.

e. Helps In Decision-Making:

Knowledge gained from experience gives the idea about the future. It shows the trend of the past which helps to take the right decision at present and future. The manager can collect essential information from knowledge store and analyze the situation in a systematic way.

f. Transfer Knowledge:

Knowledge management ensures the sharing of information among all employees in the organization. Such sharing of information helps to transfer knowledge from the employees to other employees which help to develop employees.

g. Reduces Risk:

It accumulates the knowledge or information from internal and external sources. Such information can be used in decision making and its implementation. The manager can take the right decision using such knowledge. Thus, it reduces risk.

h. Goal Achievement:

Effective knowledge management facilitates to reduce costs. It should also increase the speed of the response of employees as a direct result of better knowledge. People are developing their competence and confidence faster in an organization that practice effective knowledge management.

i. Availability Of Information:

All the information either tacit or explicit is stored in knowledge store or in the form of information. Such sharing of information helps to transfer knowledge from one employee to other employees and also provides sufficient information for conducting various activities.

Managing Knowledge:

In order to manage knowledge effectively in an organizations, special attention should be given to contextual dimensions of organization such as *culture, strategy, technology* that is:

- Most important is building a strong culture to adopt and support it.
- Defining effective strategies for using all knowledge resources efficiently.
- Using information technologies (digital documents, intranets, expert systems etc.) for developing knowledge management systems.

Culture:

An organization's knowledge management strategy cannot be successful unless the organization has developed a trusting knowledge culture that emphasizes the role and value of knowledge in day-to-day business decisions and enterprises. Today many companies are engaged in high-level and general efforts to change the organizational

norms and values related to knowledge. They are making efforts to make their personnel understand the importance of this valuable asset. Effective knowledge management requires a good fit between the organization's culture and its knowledge management initiatives.

In general, if the cultural soil isn't fertile for knowledge management initiatives, no amount of technology, knowledge content, or good knowledge management practices will make the effort successful.

Strategy:

The real point of knowledge management strategy is to create an environment for leveraging the organization's intellectual property into a collaborative platform, making this knowledge actionable. Forming a knowledge strategy is straightforward. The first step is to develop sophisticated scenarios for current and future competitive environments. The next step is to describe ideal successful companies with respect to the future scenarios. A vital characteristic of this step is evaluation of the advantages and base knowledge required in these successful organizations.

Following the identifications of the knowledge needed at successful firm, the next step is to identify the individuals within the firm who have the knowledge required or the capability to acquire that knowledge. It is important to identify external knowledge sources to help determine and understand current and future customers, suppliers and markets. The source of intellectual capital may not reside within the organization but can be leveraged elsewhere. The step for the organization is to model its efforts on those of a conceptually an ideal company. The business strategy for such an ideal company would include a plan in acquiring and maintaining the necessary knowledge. Once the knowledge strategy is in place, the strategy is set.

Technology:

Technology plays a key role in the trend towards knowledge management. Today, information technologies support knowledge management and broad sharing of information and are good examples of effective knowledge management tools.

When facilitating knowledge management initiatives, information technology environments such as intranets can be utilized to establish a virtual meeting place where communities of practice can engage in dialogue and collaboration. Actions such as information creation, information seeking, and information interpretation can successfully be performed in these environments. To facilitate this, intranets must be designed to support not only the informational aspects but also include people by making salient networks of users with similar interests and allow these to communicate and collaborate.

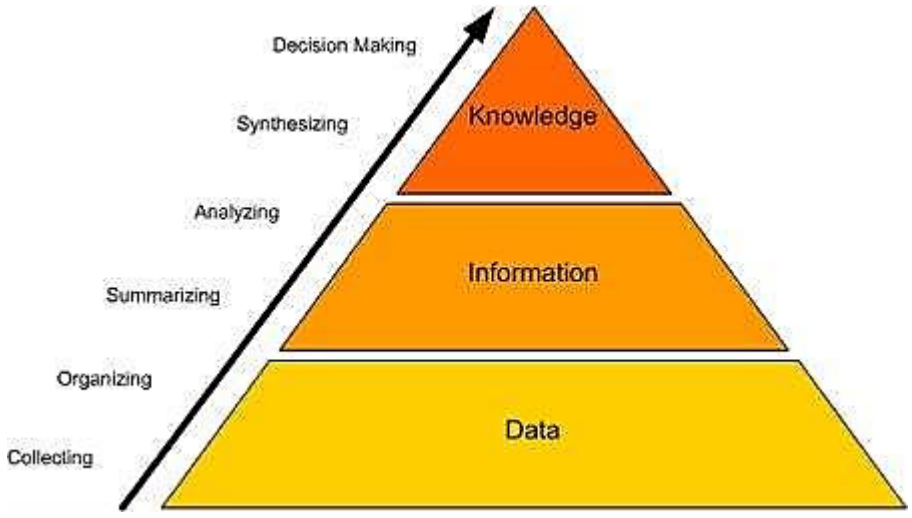
Another tool that helps in managing knowledge effectively and provides a solution to the problem that most of the organizations are facing today, that is loss of experts, is expert system. Today, this system plays a very important role in organizations and is to large extent reducing dependency of organization on highly expensive professionals and experts.

Expert systems are computerized advisory programs that attempt to imitate the reasoning process of experts in solving difficult problems. These are in use more than any other applied Artificial Intelligence technology. Expert systems are of great interest to organizations because they can increase productivity and augment workforces in specialty areas where human experts are becoming increasingly difficult to find and retain or are too expensive to hire.

The Knowledge Management Process:

The process of knowledge management is universal for any enterprise. Sometimes, the resources used, such as tools and techniques, can be unique to the organizational environment.

The Knowledge Management process has six basic steps assisted by different tools and techniques. When these steps are followed sequentially, the data transforms into knowledge.



Step 1: Collecting

This is the most important step of the knowledge management process. If we collect the incorrect or irrelevant data, the resulting knowledge may not be the most accurate. Therefore, the decisions made based on such knowledge could be inaccurate as well.

There are many methods and tools used for data collection. First of all, data collection should be a procedure in knowledge management process. These procedures should be properly documented and followed by people involved in data collection process.

The data collection procedure defines certain data collection points. Some points may be the summary of certain routine reports. As an example, monthly sales report and daily attendance reports may be two good resources for data collection. With data collection points, the data extraction techniques and tools are also defined. As an example, the sales report may be a paper-based report where a data entry operator needs to feed the data manually to a database whereas, the daily attendance report may be an online report

where it is directly stored in the database. In addition to data collecting points and extraction mechanism, data storage is also defined in this step. Most of the organizations now use a software database application for this purpose.

Step 2: Organizing

The data collected need to be organized. This organization usually happens based on certain rules. These rules are defined by the organization.

As an example, all sales-related data can be filed together and all staff-related data could be stored in the same database table. This type of organization helps to maintain data accurately within a database.

If there is much data in the database, techniques such as 'normalization' can be used for organizing and reducing the duplication. This way, data is logically arranged and related to one another for easy retrieval. When data passes step 2, it becomes information.

Step 3: Summarizing

In this step, the information is summarized in order to take the essence of it. The lengthy information is presented in tabular or graphical format and stored appropriately. For summarizing, there are many tools that can be used such as software packages, charts (Pareto, cause-and-effect), and different techniques.

Step 4: Analyzing

At this stage, the information is analyzed in order to find the relationships, redundancies and patterns. An expert or an expert team should be assigned for this purpose as the experience of the person/team plays a vital role. Usually, there are reports created after analysis of information.

Step 5: Synthesizing

At this point, information becomes knowledge. The results of analysis (usually the reports) are combined together to derive various concepts and artefacts. A pattern or behavior of one entity can be applied to explain another, and collectively, the organization will have a set of knowledge elements that can be used across the organization.

This knowledge is then stored in the organizational *knowledge base* for further use. Usually, the knowledge base is a software implementation that can be accessed from anywhere through the Internet. We can also buy such knowledge base software or download an open-source implementation of the same for free.

Step 6: Decision Making

At this stage, the knowledge is used for decision making. As an example, when estimating a specific type of a project or a task, the knowledge related to previous estimates can be used. This accelerates the estimation process and adds high accuracy. This is how the organizational knowledge management adds value and saves money in the long run.

Knowledge Management in E-Business:

E-business is wide term means the use of all IT capabilities in business, it does not mean only buying and selling (e-commerce) it also includes other business processes such as serving customers/suppliers and managing their relationships electronically (e-CRM), managing all supply activities till delivering products/services to customers (e-SCM), internal communication between employees and external collaboration with other business partners.

Obviously, all those activities are intangible assets, which mean that e-business solutions concentrate on the management of knowledge (intangible assets). E-Business strategy based on group work of different levels of management and organization departments, the shared factor which integrate them together is knowledge.

For Example: Customer's satisfactions feedbacks will linkage the marketing department with the production department. It thus connects the tasks between individuals, departments, and organizational levels.

Creating E-Business Strategy Based On Four Stages:

1. **Initiate:**

The objectives of this stage are:

- Outline project scope.
- Identify project stakeholders.
- Determine project schedule.

Project scope and schedule tasks deal with data and information nothing tangible "no deliverables", they are about prediction and general study. KM has extremely significant contribution for these two tasks because both depend on gathered data/information 'Declarative Knowledge' about customers and suppliers, as well as 'Behavioral Knowledge' about organization documents, market competition, and prediction for deliverables .

All these tasks can be performed effectively by the following KM tools:

- Organizational knowledge base.
- Knowledge mining.
- Knowledge determination.

For identifying project stakeholders' task, there is also significant role of KM. KM is one of three key enablers to manage the relationship between stakeholders. Knowledge transfer sticks the stakeholders together and assists the creation of the value proposition. Knowledge repository has all required knowledge which enables the firm to identify the affected customers, employees, suppliers, departments, public and private sectors in the new system.

2. Diagnose:

The purpose of this stage is to find out strengths, weaknesses, opportunities, and threats (SWOT) of the current business strategy, which can be done by:

- Analyzing the organization position among its competitors.
- Revises the current strategy in order to understand the current relationships between the organization and its suppliers and customers.

To analyze and assess the current organization position there are some analytical tools can be used that enable the firm to assess its position, Small-size firms can use industry analysis, medium/large-size can use supply chain analysis. For customers'- suppliers' relationships there is a tool called Customer/Supplier Life Cycle enable the firms to evaluate its relationships. All tasks in this stage need organizational knowledge base and knowledge repository to be carried out, because they are about the current state of the organization which means no need for gathering data/information and no predictions as well for the future behavior.

3. Breakout:

The objective of this stage is to derive a new strategy (e-breakout strategy) from the overall business strategy to match the organization goals. E-business strategy could be dependent or independent on other organization's strategy. That is why it is recommended to understand the relationship between the proposed e-business strategy and other adopted strategies before creation.

New e-business strategy should be ready to form based on (Diagnose Stage) the assessment of organization strategy (SWOT) and analysis of its position, these both are intellectual assets of the organization. The derivation process of the new strategy is duties of project manager for allocating staff, distributing tasks, identifying IT requirements, adding/deleting new features to optimize the corporate overall business strategy, satisfy SWOT deficiencies. Furthermore, the responsibilities of the project manager deal directly with the human dynamics of the corporation and concerned on the required technology.

In conclusion, building e-business strategy is about converting the corporation's intellectual assets (Knowledge) into a new roadmap of what the corporation needs to do, by re-arranging the corporate business strategy based on IT infrastructure. The main role of Chief Knowledge Officer (CKO) is to convert knowledge into valuable profit by managing and controlling the corporation's intellectual assets. Therefore, CKO can be e-business strategy project manager.

4. Transition:

In this stage, the firm has to implement the proposed roadmap of the new strategy. Transition means that the firm will move from current state to the proposed state, this movement will be supported by new resources and capabilities.

In this case, it is recommended for firms to carry out gap analysis in order to avoid the changes, risks, and conflicts between the current and new strategy to understand and identify the differences between them.

The key role of KM in this stage is vital and valuable. KM is necessary to measure the organization's ability for implementing the new strategy. Knowledge as intangible resource of the organization comprise of organization's culture, policy, business processes, and HR experiences, will capable the corporation to assess itself by assessment tools (e.g. risk or change readiness analysis) to know if the corporation has the ability to cope with the changes of the new strategy, and able to alter or not, and critically determine all areas of changes in order to manage these changes. CKO can conduct the evaluation process of the corporation and diagnose risk and opportunities of the new strategy.

Benefits of KM Tools into e-Business Information Management

KM tools are all technologies and resources that enable the knowledge transfer, generation, and codification. It does not mean that all KM tools are computer-based applications; knowledge can be transferred via phone calls. The following are possible benefits of KM tools for e-business information management:

1. Organize and Evaluate Customers' and Suppliers' Requirements and Relationships (Customers-Suppliers Oriented Trends):

Questionnaires as a tool for gathering data and information are one of the common methods to get information. But getting information is nothing new to organizations. The classification and evaluation processes are based on all gathered information from customers, suppliers, and partners such as satisfaction, suggestions, recommendations, and requirements. Knowledge Base System (KBS) is KM tool to organize a collection of information and evaluate them in such way to be 'knowledge'.

The importance of this process is to enable the organization to respond and make correct decisions toward the customers' or suppliers' demands. This is the first step for organization changes 'new strategy'. For example: After classifying the knowledge related to customers' feedbacks, the organization found out that, customers do not receive up-to-date information about new products, prices, and offers. That would make the organization think about "new marketing" tool to improve the promotion, such as e-Brochures or e-Mail marketing.

2. Support the Decision Making Process (Forecast):

KBS for existing customers and suppliers helps the organization to keep update their needs (Declarative Knowledge), as well as benefit from the internet technologies as KM tool such as search engines, also capable the organization to capture more information about the market competition, new customers' demands, customer's demographics, competitors, etc. (Behavioral Knowledge).

Declarative and behavioral knowledge will support the decision makers (executive management) in the following benefits, in order to structure the organization on internet:

- Select appropriate e-business model. (Initiate step for e-business strategy)
- Suitable e-marketing plan.
- Predict the size of competition after implementing e-business system as global tool for business.

3. Filter and Store All Organization's Knowledge in Knowledge Repository (Organizational Trends):

Knowledge repository stores the processed information that are captured, organized, filtered, and evaluated and save them as knowledge, as well as store all knowledge that are related with other organization's strategies such as marketing strategy and Information System (IS) strategy.

Knowledge repository makes the process simple for employees to save, retrieve, access, and organize all knowledge. These three benefits prepare the basic infrastructure to formulate e-business strategy, and identify where we can practically benefit from knowledge in the building process. They show KM value chain components begin from creation to storage and distribution of knowledge.