

# ROLE OF IT IN KNOWLEDGE MANAGEMENT

**Yashvir Singh**

Assistant Professor-Department of Management Studies  
Dwarikadhees Research Education and Management School, Saharanpur-247001 (U.P. India)

**Gesu Thakur**

Assistant Professor— Department of computer science  
GSBA Engineering, Pharmacy and Management Institute Roorkee (UK)

## ABSTRACT

We know the Modern age is “information Era’ or ‘knowledge-based enterprise’. The knowledge have a valuable role in the organizations Such as formal and informal information of employees but these can’t lives only in the collective human memory, and thus is poorly preserved and managed. This article will present a number of technologies of Knowledge Management. Different IT tools are used to capture, codify, store and distribute knowledge through out the organization. IT tools such as Internet, Intranet, Extranet, Email, Data Management Systems (DMS), Wikis, Web logs, and other shared networked and net-based technologies are used to leverage Knowledge Management processes in the organization.

IT provides member in an organization the platform to communicate and to get access to the right information at the right time for the right purpose. Therefore, there should be a balance between knowledge management initiatives and engagement of IT tools and infrastructure in order to exploit the benefits of Knowledge Management to the fullest.

**Keywords:** Data, Information, Knowledge, Technology, Management, Database, Web based

## 1. PHILOSOPHY OF INFORMATION AGE

The Modern age is “information Era’ or ‘knowledge-based enterprise’. The **Information Age**, also commonly known as the **Computer Age** or **Information Era**, is an idea that the current age will be characterized by the ability of individuals to transfer information freely, and to have instant access to knowledge that would have been difficult or impossible to find previously. The idea is linked to the concept of a **Digital Age** or **Digital Revolution**, and carries the ramifications of a shift from traditional industry that the Industrial Revolution brought through industrialization, to an economy based around the manipulation of information.

## 2. INTRODUCTION TO KNOWLEDGE

As per the definition of knowledge we assure

that we can find the facts by the help of relevant information where information is the collection of raw facts and figures, which is known as data. In other words, we can say the knowledge is an extract of which is used the tacit facts from the collaboration of information and data.

## 3. RELATION AMONG DATA, INFORMATION AND KNOWLEDGE

The information is a processed and collated data while the data is entity with the least amount of confusions. Everyone can understand it easily and deal with it. The information and knowledge are the both the entities which are unknown and interchangeable and there can be more description of them. The data information and knowledge have a perfect relation between them. According to different researchers we can define the data and information and knowledge as follows:

There was a researcher **John Seely Brown** says that “*The information is the fundamentally dis-embeddable and therefore transportable and re-embeddable, knowledge is not. Knowledge lives in its context*”.

The above discussion shows that a business organization runs beneficially by the correct knowledge collections. So there is a most important task is to retrieve the knowledge by extracting, that from different sources. There are following example a knowledge-based enterprise derives knowledge from various sources that include:

- **Customer knowledge:** customer needs, perceptions, and motivations, who to contact, customer buying power, what differentiation strategy and customer services need to be developed to **win and retain customers**, etc.
- **Competitor knowledge:** what competitors are selling now and what they are planning to sell in the future, what is their strategic intent, what **competitive strategies** they use to win in the marketplace.
- **Product knowledge:** the products in the

marketplace, who is buying them and why, what prices they are selling at, and how much money is spent on such products now and may be spent in future.

- **Process knowledge:** best practices, technology intelligence and forecasting, **systemic Innovation**, cross-functional synergy opportunities, etc.
- **Financial knowledge:** capital resources, where and how to acquire venture capital and at what cost, and the integrating in financial practices.
- **People knowledge:** knowing people and what motivates employees, obtaining feedback, the expertise available, and how to go about finding experts.

#### 4. KNOWLEDGE MANAGEMENT

In most of the organization there are the knowledge management solutions use to find the difference between knowledge and information. The knowledge management refers to a collection of organizational practice and approaches related to generation capturing, disseminating know-how and other content relevant to the organization's business. This means that design of Knowledge Management-systems must be based on an understanding not only of information architecture and structure, but also of the situation where the users develops the information need, once and analysis of the usage of the same information once it has been obtained and interpreted by the user

The knowledge has a valuable role for an organization. It consist all the valuable concepts and vital know-how that shake the organization in the response of customer/employee too. Such as the formal and informal information of all customers/employee, but these can't be live only in the collective form in human memory. These should be preserved perfectly. Knowledge once acquired needs to be stored and preserved. The term storing and preserving is not a process to put them somewhere and forget about all them. Unless, the knowledge is preserved in such a manner that can be updated periodically. The knowledge should be stored and preserved also securely, because absolute knowledge can be most dangerous if leaked.

By the above view, we came to know that to preserve the knowledge is not an easy task because we have to aware the security on sharing, recovery if lost, periodically updations of knowledge. To solve these problems, we can use the information technology. Most of the organizations apply the

Information Technology solutions to facilitate secure sharing and integration of knowledge. The information technology helps to share the knowledge through common storage, so as to achieve economic reuse of technology. As per our opinion the all tacit and unstructured knowledge can be shared largely through direct personal communication. For example, for this purpose we use the knowledge expert's directories and video conferencing tools. Information technology is the fundamental approach tool to describe the role of IT for knowledge management.

Information technology offers powerful tools to help you gain and make the best use of knowledge. Some of the systems can be complex to set up and time-consuming to maintain. You need to choose systems that fit with your business and that will improve it without becoming a burden. You may find it useful to consult an IT specialist.

#### 5. IT TOOLS FOR KNOWLEDGE MANAGEMENT

There are some important IT Tools used in knowledge management are described below.

##### 5.1 Database Tools

**A Database Organizes** information so it can be easily accessed managed and updated. For instance, you might have a database of customers containing their contact information, their orders and preferences.

**Data Warehouse:** The data warehouse is works as centralized repository system for an organization. The data warehouse gives the integrated view of all server based assets. There are multiple types of servers in an organization like a database server, application server, web server, OLAP server etc. In today era, the data warehousing becomes relevant as web-warehousing which merges data warehousing and business intelligence with web technology. The data warehouse/web warehouse is a relevant tool for knowledge management which provides a comprehensive view of all organization information and even it provides unknowns patterns and ideas to bring through the use of data mining tools. So we can say that warehousing an important enabler for knowledge extraction from existing information system.

**Data Mining:** It is a technology that runs simultaneously with data warehousing. It is a process in which all the data you collect is sorted to determine patterns. For Example we can find easily which products are most popular and whether one type of customer is likely to buy a particular item by the help of it.

**Reporting And Querying Tools:** The report play great role for a business processing system. By the help of Reporting and querying tools we can achieve them easily.

### 5.2 Web-Based Tools

**Business Intelligence Portals** These are websites that bring together all sorts of potentially useful information, such as legal issues or details of new research.

**The Internet and Search Engines** can be a powerful source of knowledge, although be certain to check the credibility of your information source. Internet newsgroups can be specific sources of business information, but check the authors' other postings before deciding how to view their opinions and claimed facts. An **Intranet** is a secure internal network for the sole use of your business. An **Extranet** is similar to an intranet but can be extended to customers and suppliers.

**Social Software**, such as wikis, blogs and social networking sites, can also be useful when it comes to sharing knowledge. A wiki is a website that allows different users to publish and edit the same pages quickly, making it possible for teams to record their collective knowledge. A blog allows one individual to share knowledge with other people in a business and social networking sites are an easy way to communicate informally.

### 5.3 Customer Analysis Tools

**Customer relationship management software** helps you build up a profile of your customer database and enables you to target them through email, telephone or postal marketing campaigns.

**Call-centre systems** enable you to serve large numbers of customers if you sell by telephone.

**Website log-file analysis** helps you to analyze how customers use your website so you can improve its effectiveness.

**Systems to Analyse and File** customer letters, suggestions, emails, and call-centre responses, which will enable you to spot trends, improve customer service and develop new products, services and systems.

At last on focusing on IT as the most integral component of Knowledge Management, may jeopardize the potential benefit from Knowledge Management activities and may lead to failure in Knowledge Management implementation. Organizations collect and distribute information. Organizations will need to "understand" the wider patterns of changing technologies, economic forces and social concerns if they are to respond effectively, and they will need to account for the reflexive nature of their response. Their adjustments to the market will alter the market landscape. In this environment

those strategies that are **designed** to alter the market will be most powerful. Entrepreneurial action will be the attractor that unites intelligent organizations.

## 6. CONCLUSION

Organizations are employing IT to facilitate sharing and integration of knowledge. The main role of IT here is to help people share knowledge through common storage so as to achieve economic reuse of knowledge. An example of such IT tools is electronic knowledge repositories. With the personalization approach, more tacit and unstructured knowledge is shared largely through direct personal communication. Examples of such IT tools are knowledge expert directories and video-conferencing tools. Both these approaches are fundamental to understanding the role of IT in Knowledge Management. If properly used IT can accelerate knowledge-sharing capabilities in both time and space dimensions. On the other hand, due to the difficulty of incorporating most of human behavior aspects in technology, IT cannot fully put into operation many of Knowledge Management's humanistic features. Therefore, IT cannot be considered the magic bullet that makes a Knowledge Management initiative a complete success. Hence, It has to be part of a balanced and integrated set of components.

## 7. REFERENCES:

- Anthes, G.H. "A Step Beyond a Database," *Computerworld*, 25(9), 1991, p. 28.
- Applegate, L., Cash, J. & Mills D.Q. "Information Technology and Tomorrow's Manager," In McGowan, W.G. (Ed.), *Revolution in Real Time: Managing Information Technology in the 1990s*, pp. 33-48, Boston, MA, Harvard Business School Press, 1988.
- Argyris, C. "Organizational Learning and Management Information Systems," *Accounting, Organizations and Society*, 2(2), 1977, pp. 113-123.
- Arthur, W. B. "Increasing Returns and the New World of Business." *Harvard Business Review*, July-August 1996, 74(4), pp. 100-109.
- Ashby, W.R. *An Introduction to Cybernetics*, New York, Wiley, 1956.
- Baatz, E.B. "Making Brain Waves," *CIO*, 9(7), pp. 23-29.
- Bartlett, C.A. & Ghoshal, S. "Changing the Role of the Top Management: Beyond Systems to People," *Harvard Business Review*, May-June 1995, pp. 132-142.
- Bennis, W., "A Funny Thing Happened on the Way to the Future," in H.Leavitt, L. Pinfield & E. Webb (Eds.), *Organizations of the Future: Interaction with the External Environment*, Praeger, New York, 1974.

<b>Authors</b>	<b>Data</b>	<b>Information</b>	<b>Knowledge</b>
Wigg	-	Facts organized to describe a situation and condition	Truth and beliefs, perspectives and concepts and judgments and expectation and methodologies and know-how
Nonaka & Takeuchi	-	A flow of meaningful message	Commitments and beliefs created from this message
Devenport	Simple observation	Data relevance and purpose	Valuable information from the human mind
Devenport & Prusak	A set of discrete facts	A message meant to change the receiver's perception	Experiences values insights and contextual information
Quigley & Debons	Text that does not answer question to a particular problem	Text that answers the questions who, when, what and where	Text that answers the question why and how
Choo et al.	Facts and messages	Data vested with meaning	Justified, true, beliefs