
Knowledge Management – An Initiative

A WHITE PAPER

By
Abhishek Mishra,
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ABSTRACT

The knowledge management goal for organization must lead to leveraging the organizational knowledge for benefits in business. The generic organizational knowledge management provides a basic understanding of the Knowledge management philosophy. The scope of implementing this philosophy involves a complete change in the way people, process and technology interact with each other and are influenced by the uniform corporate culture. This white paper proposes ways for maintaining a knowledge repository at different levels ranging from individual to organizational. Further a framework for knowledge management is proposed. The white paper also explains the seven layer structure for Knowledge harnessing.

Introduction

The path to reach the skies in business benefits in a business organizational structure that has its roots in organizational knowledge is to manage mindsets. At the first instance it is the technology companies which could find this philosophy of management most relevant.

Effective product innovation is imperative for the survival, growth and profitability of an organization which associates itself to the core knowledge Industry. Speaking of current statistics, a company utilizes only twenty percent of its available knowledge asset. This number shows the average production capacity which is being pooled. This fact brings to light the untapped potential that can fuel the production and drive the profitability in an organization.

The current trends in knowledge Industry show that over seventy percent dependency is on floating knowledge (knowledge workers) and a small part of production depends on static knowledge (Documented information), it is essential that we manage the floating knowledge into repositories which over a period of time grows to become substantial source of relevant information and expertise.

Modern enterprises must adopt a deliberate and systematic approach to managing the drivers of innovation and expertise in order to create and deliver effective services and thus maintain competitive advantage.

Knowledge Management

Knowledge management starts from the level of individuals involved in an innovation, if practiced widely, can improve organizations' ability to achieve development results. Knowledge management is all about converting the available raw data into understandable information which forms a reusable repository for any future service being offered which anticipate similar kind of experiences.

Knowledge management tools only work when individuals see the direct benefits in linking their personal knowledge management systems with organizational knowledge management systems. The knowledge workers must believe that the chores of contributing to an organizational knowledge management program benefits themselves and the communities with which they work.

At the individual level, knowledge management involves a range of relatively simple and inexpensive techniques and tools that anyone can use to acquire, create and share knowledge, extend personal networks and collaborate with colleagues without having to rely on the technical or financial resources of the organization. Implemented from the bottom up by one development worker at a time, these techniques can increase productivity and enthusiasm and help to build momentum that can overcome the technological and social barriers to top-down, organization-wide knowledge management initiatives.

Personal Knowledge Management Skills

The most critical in knowledge management is the human factor and not the sophisticated electronic and networking tools. It is the personal knowledge management which drives the knowledge management in an organization. The skills of personal Knowledge Management include

- Ways that people filter information overload
- Effective reading
- Concise note-taking
- Making sense of and analyzing information
- Synthesizing information
- Communicating effectively with others
- Sharing the knowledge effectively.

These skills demand serious attention in job descriptions, training sessions, performance appraisals and organizational strategic plans. It is required to find creative and practical ways to encourage continuous organizational and personal learning and improve the

quality and clarity of information transfer that can be shared and used to improve the organizational skill set.

When practiced consciously knowledge management cultivates learning on how to get relevant information without reading voluminous information. The control over the reception and transfer of information increases the value of knowledge worker within the organization. It is required that the knowledge workers feel that it is an organizational mandate to develop their own creative approach towards knowledge acquisition and evaluation.

Organizational Knowledge Management

Organizations should support individual knowledge management by consciously looking at knowledge workers activities and approach to manage their personal knowledge and to leverage that, organizationally. Efficient knowledge management behaviors across the organization and within projects must be encouraged.

A review on knowledge management software and networking tools must be done very carefully and a tool which "fits" with people must be selected. The tool should help increase the efficiency at work and help manage the time. An Engineer on deputation will benefit from an on-line knowledge management database that would update him with the current information base. This tool could be on a simple hand-held computing device that can synchronize with a database too.

Knowledge management tools go beyond electronic or paper-based data repositories. They include communities of practice as through which people create personally meaningful knowledge networks. Organizations need to encourage Knowledge workers to take advantage of communities of practice by enabling, encouraging and rewarding them to join professional and special interest groups. I would suggest such communities and discussion forums to be active within the organizations intranet.

Through this platform I suggest that organization should have a project management coordinator or knowledge leader or a champion for every project who would be assigned specific knowledge management related goals within projects.

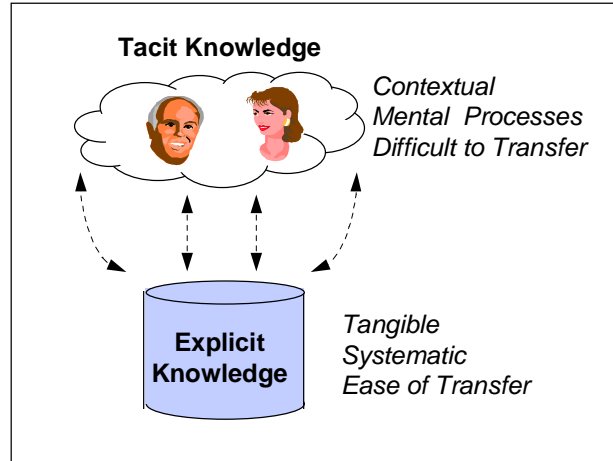
Knowledge management within an organization can be strengthened by a variety of methods like orientation training programs, online discussion boards, presentations and seminars which foster knowledge sharing within the organization.



Fig: How Inputs and Actions lead to results

The flow diagram represents how various inputs and actions towards focused organizational goals lead to results. Knowledge management contributes towards streamlining the ideas, problems, projects and deployment in light of organizational goals driving towards productivity.

The knowledge Transfer Process



The knowledge in the organization are of two types, Tactic knowledge what I call as floating knowledge and explicit knowledge, I refer to it as static knowledge. The former is very difficult to capture since it more of a kind of an expertise that a person gets over a period of time by the virtue of his experience in a particular project. To capture this kind of knowledge calls for mental processes this can be a transfer between two individuals and not from an individual to a computer or vice versa. This is relatively a difficult process. A human carries his expertise wherever he goes and this cannot be learnt or transferred this can only by developed only a period of time. To take an analogy, ask a person to define explicitly how to swim he cannot define it however he can do it.

	Passive (information)	Active (knowledge)
Person to Person	Computer conferencing Expert networks	Meeting support Video- conferencing
Person to Computer	Document Mgmt Info Retrieval Knowledge bases	Expert Systems Decision Support

Fig: The knowledge transfer process

A Knowledge Management Framework for Organizations

<p>Creating and Discovering</p>	<p>Creativity Techniques Data Mining Knowledge Elicitation Business Simulation Content Analysis</p>
<p>Sharing and Learning</p>	<p>Learning analysis Sharing Best Practice After Action Reviews Project Specific Presentations Cross Functional Teams Seminars</p>
<p>Organizing and Managing</p>	<p>Vertical Specific Knowledge Centers Expertise Profiling Knowledge Mapping Information Audits/Inventory</p>

For an organizational structure which is divided into departments that handle projects in different domains, what I call them as verticals. It would be a valued experiment to maintain Vertical Specific Knowledge centers. These Centers could be headed by a knowledge coordinator or a champion. He would be responsible for synchronizing the information across the entire vertical into a generic vertical specific repository. It would be the responsibility of Team leads and Project leads to ensure every member of their project not only contributes but also practices using this repository to drive performance at work.

To analyze the output of this system it is suggested to have "after action reviews" and "learning analysis".

At a later stretch when this grows to be a huge repository of relevant information it would be required to have frequent "information audits" to update/ remove obsolete information. Also it would be a driving edge if we segregate the available information repository into profiles and the process and training team joins with knowledge coordinator to utilize this information for training the new joiners on a project for a particular kind of job that they would be associated during their term in that project.

Implementing the seven layer structure

After a successful implementation of the described framework, the software engineers of the organization would leverage value through knowledge by concentrating on just a few of the layers of "The Seven Layer Structure":

- **Customer Knowledge** - The most vital knowledge for delivering performance
- **Knowledge in Processes** - applying the best know-how while performing core tasks
- **Knowledge in Products (and Services)** – Developing more efficient and Innovative Products.
- **Knowledge in People** - nurturing and harnessing brainpower, your most precious asset
- **Organizational Memory** - drawing on lessons from the past or elsewhere in the organization
- **Knowledge in Relationships** - deep personal knowledge that underpins successful collaboration
- **Knowledge Assets** - measuring and managing individuals' intellectual capital.

The challenge is to turn individual knowledge into organizational knowledge and to lock both explicit and tacit knowledge into the organization. Upon implementing this we can formulate a successful knowledge management strategy that will transform individual knowledge into organizational knowledge, thus increasing the value of the business.

Knowledge Management v/s Content Management

Knowledge management and Content management are often interpreted as fruits of same tree but after having so much about KMS; it makes me feel that the essence of this paper would be incomplete without a comparison of between tools for KMS and CMS.

<u>Sharepoint Portal Server</u>	<u>Content Management Server</u>
<p>SharePoint Portal Server is a tool for knowledge workers, offering them a powerful new way to organize, find, and share information.</p> <p>Central point of access Sharepoint Portal Server is a central point of access to business critical information and applications through a customized Web-based portal interface combined with powerful <i>enterprise search</i> technology.</p> <p>Document collaboration Sharepoint Portal Server Provides a document collaboration and management solution that is especially intuitive for users of Office, the Windows operating system, and Internet Explorer</p> <p>Content SharePoint Portal Server typically is used to store business information contained in documents such as Word documents, spreadsheets, and PDF files. SharePoint Portal Server provides workgroup management of this type of content and enables its availability to enterprise search and its publication on intranet portals.</p> <p>Features</p> <p>Publishing to an intranet portal site An intranet portal makes it possible for users inside or outside your organization to search for and gain access to critical business information regardless of format.</p> <p>Searching across multiple locations Enable users to easily search a variety of sources, including SharePoint Portal Server workspaces, Web sites, file systems, Microsoft Exchange Server folders, and Lotus Notes databases.</p>	<p>Content Management Server is a tool for content authors, offering them a quick and efficient way to build, deploy, and maintain highly dynamic Web sites.</p> <p>Web content management Content Management Server is the enterprise Web content management product that enables your company quickly and efficiently to design, publish, and manage highly dynamic and customized Web sites.</p> <p>Content Management Server also provides a distributed authoring and publishing environment that utilizes built-in workflow to accelerate Web site creation.</p> <p>Content Content Management Server is used to store Web content such as text, graphics, video, and application logic. This type of content is published by business users using templates on Web sites built and managed with Content Management Server.</p> <p>Features</p> <p>Content contribution for non-technical business users: An easy-to-use browser-based tool enables non-technical users to create and manage their own content.</p> <p>Role-based workflow and approval: Built-in workflow and approval processes ensure that content is always accurate and up-to-date on published Web sites.</p> <p>Personalized and targeted content: Web pages, dynamically rendered in real-time, can be classified and personalized by associating metadata properties with content.</p>

Document access based on user roles Role-based security helps you control access to documents and other types of content.

Review and approval Document routing makes enables you to control when a document is ready to be published to an intranet portal site.

Advantages

- Industry leading search
- Mainstream document management
- Customizable portal
- Deep integration with Office

Limitation

- SharePoint Portal Server helps to ensure that only users with appropriate access can see a given document. But not offering Page level security as Content Management server.

COST

SharePoint Portal Server

\$30,000 US per server

The External Connector license enables the extension of the productivity and collaboration capabilities of SharePoint Portal Server to business partners and clients.

Content reuse across applications: The content of a Web site can be stored and managed separately from its design elements, facilitating content reuse and integration with other e-business applications.

Rapid time to market: Industry standard technology and a complete Publishing API enable rapid Web site development.

Advantages:

- Comprehensive system for managing Web content
- Dynamic content delivery
- Rapid time-to-market
- Page-level security is an important feature of Content Management Server. For example, Content Management Server can allow all employees within a company to see the overview portion of a financial statement on a Web page, but ensure that only members of the Accounting group can see a link to the entire statement.

COST

Content Management Server

\$42,999 US per processor

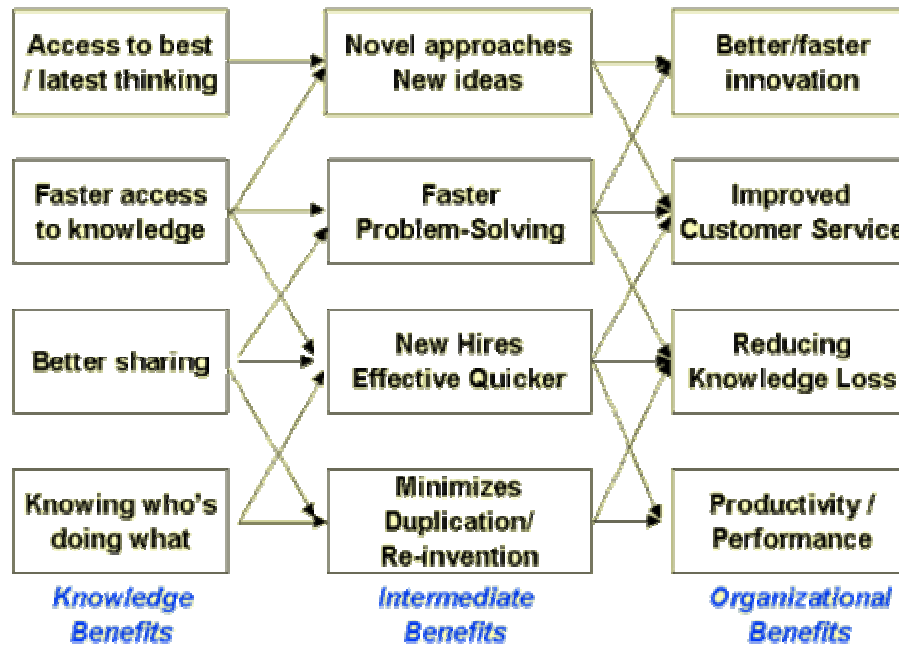
SQL Server*

\$4,999 US per processor

*Content Management Server requires Microsoft SQL Server™ 2000 with Service Pack 2 (SP2) to host the Content Management Server databases.

Achieving Benefits

Implementations of Knowledge management are successful and found to share the benefits at various levels of implementation.



Knowledge Benefits - These are those derived from more efficient processing of information and knowledge, for example by eliminating duplication of effort or saving valuable time. A study shows that a knowledge repository for a project increases the productivity by eight times.

Intermediate Benefits - These are how the knowledge benefits could be translated into benefits that can be expressed in terms of efficiency or effectiveness. A common example is that best practices databases helps to eliminate less efficient operations through transferring knowledge from the best practitioners.

Organizational Benefits - This class of benefits are those that impact some of the organization's key goals, such as productivity and customer service.

Conclusion

Information and communications technologies are an important ingredient of virtually every successful knowledge management program. An ever wider range of highly effective solutions are coming to market, including a new generation of artificial intelligence solutions, new flavors of document management systems and various collaborative technologies. The successful implementation depends, as always, on giving appropriate focus to the non-technical factors such as human factors, organizational processes and culture, the multi-disciplinary skills of hybrid teams and managers, and the already existing knowledge repository of prior learning - that is well structured, accessible and gives an access to critical expertise!

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**Abhishek Mishra,
B.Tech (CS).**