Position of Knowledge Management Systems in Future Libraries

Pasam Girinaidu
Librarian i/c
Rashtriya Sanskrit Vidyapeetha
Deemed University
Tirupati -517 507, Andhra Pradesh

Abstract - The development of knowledge management in recent years has become the key concern for librarians and libraries. This paper can review the development of information management and can compare the variations between info and data also as between information management and knowledge management. It will additionally examine the role of librarians/libraries in data management and suggests that librarians/libraries within the digital and data age ought to be guilty development of information management in their individual organizations so as to leverage the intellectual assets and to facilitate knowledge creation

Keyword: Knowledge Management, Information System, Libraries, Data management

Introduction

Knowledge Management has become the new mantra of avant-garde organizations gluttonous to compete in an more agitated and aggressive world. It is acceptable accustomed that the only accurate aggressive advantage for organizations over the continued appellation is knowledge: that is, how organizations actualize or access knowledge, how organizations absorb and abundance knowledge, how organizations advertise and use knowledge, and how organizations assure and administer the knowledge they have. Knowledge administration systems (KMS) are apparent as the agency to aid organizations in creating, administration and appliance knowledge. In the accomplished three years, firms accept invested millions of dollars in these types of systems in adjustment to actualize aggressive value. The acceptable advantage that can be accomplished by the able and able generation, administration and appliance of ability aural an alignment is not actuality absent on today's avant-garde managers.

What is bare is a accepted acclimation framework for the abstraction of KMS. In a sense, this framework could be anticipation of as an calendar for analysis into KMS. This calendar should help guide KMS analysis and claiming KMS advisers and practitioners to attending at their acreage from a ample perspective.

Definitions: Setting the Context

There is no commonly accepted definition of knowledge management systems. Most definitions refer to "tools" or "technologies" that support knowledge management. However, only a few provide a comprehensive definition of tools or technologies, or combine those definitions with explanations of how knowledge is systematically managed.

Knowledge:

In terms of defining knowledge management systems, a starting point might be the definition of knowledge itself. There are a number of definitions of knowledge in the literature but a working definition might be "(knowledge) ... is information combined with experience, context, interpretation and reflection" (Davenport, 1998). Knowledge is thought to be of two types, explicit and tacit (Polanyi, 1967). Explicit knowledge is that knowledge that is codifiable and is capable of being stored in machines. Tacit knowledge is thought to be in people's head's and very difficult to codify and store in machines. KMS typically focus on explicit knowledge but increasing attention is being given to how KMS might support tacit knowledge capture and transfer.

Knowledge can be defined in terms of the function it serves (from Zack, 1999). That is, knowledge may be "declarative" or descriptive in describing *what* something is. Knowledge may also be "procedural" or process-oriented in describing *how* something is done. Finally, knowledge may also be "causal" describing *why* something happens. Knowledge management systems are attempting to support all three functional types of knowledge but the most predominant type appears to be declarative knowledge.

Knowledge can also be described in terms of its specificity. That is, some knowledge is of a general nature that can be used as background or context for many situations. Other knowledge is more specific and applicable to only a very narrow context. Knowledge management systems again should be able to handle both types of knowledge.

Knowledge Management Systems:

The second fundamental concept providing the basis for KMS is the systems concept. In general, a system is defined as "a set of elements that interact to achieve some common goal". In terms of organizations, systems are typically composed of people, technologies and data/information. These components interact with one another for some specific purpose (e.g. product distribution system). Feedback and control are used to keep the system working in the way it is intended. In terms of knowledge management systems, the components of people (knowledge workers, managers, etc), technologies (manual and computer-based technologies) and knowledge itself, interact to comprise a knowledge management system. Feedback and control aspects of KMS are those processes that ensure the KMS is performing the knowledge management tasks intended. Knowledge management systems are defined as systems designed and developed to give decision makers/users in organizations the knowledge they need to make their decisions and perform their tasks (Davenport, 1998). These systems extend beyond the traditional information systems in that they must provide "context" for the information presented. Examples of some current computer-based systems that practitioners are calling knowledge management systems are some applications of Lotus Notes and "intranets".

Knowledge Management Tools and Generators: Knowledge management tools and generators are the technologies that are used to acquire, store, and distribute knowledge. As

Ruggles (1997) notes, not all knowledge tools need be computer-based (such as a pencil and paper) but most modern knowledge technologies have some computer component. It is important to note the difference between knowledge management tools and information management tools. Tools for knowledge management should be capable of handling the richness, the content, and the context of the information and not just the information itself.

This five-step KM process is concerned with five key steps:
1. Identifying the knowledge
2. Creating knowledge
3. Storing knowledge
4. Sharing knowledge
5. Applying knowledge

There are a number of forms of computer-based tools/technologies to support data management in trendy organizations. data management generators area unit outlined as those technologies that area unit self contained that may be accustomed generate or build a spread of specific KMS. These technologies usually accommodates variety of tools like document management, intelligent agents, and package that may be bespoke to the data management application needed

- **Intranets:** Private internet-based networks using Web browsers to share knowledge
- **Information Retrieval Programs:** Tools to search corporate knowledge/data bases as well as external knowledge sources to provide access to a wide variety of knowledge
- **Database Management Systems:** Combine with intranets and information network tools to provide a platform to build specific knowledge management tools
- **Document Management Software:** Provide the means for capturing, storing, and distributing knowledge in the form of documents as opposed to discrete data
- **Groupware:** Software and hardware that enables workgroups to communicate and collaborate. Groupware tools typically have features that enable groups to perform such tasks as generating ideas (create new knowledge) and reaching consensus
- **Intelligent Agents:** Software programs that can filter out the knowledge that the user really needs. This may be particularly important in knowledge intensive situations where particular knowledge sources need to be monitored.
- **Knowledge-Based or Expert Systems:** Store the knowledge of experts in the form of rules or cases and then provide that knowledge to novices or other experts.

Knowledge management tools are the basic technological building blocks of any specific knowledge management system. Individual tools can be combined or integrated to form a specific knowledge management system that performs particular functions such as knowledge storage and retrieval. Another specific KMS may be comprised of tools to generate ideas and share those ideas among a work group.

Below is a set of knowledge management processes proposed by P. Galagan

- Generating new knowledge.
- Accessing knowledge from external sources.
- Representing knowledge in documents, databases, software and so forth.
- Embedding knowledge in processes, products, or services.
- Transferring existing knowledge around an organization.
- Using accessible knowledge in decision-making.
- Facilitating knowledge growth through culture and incentives.
- Measuring the value of knowledge assets and the impact of knowledge management.
- From both the project perspectives and the operational processes described above we can gain a general understanding of the current scope and contents of knowledge management.

Knowledge management in Libraries

While the business world is dynamical within the new information economy and digital age, libraries of all sorts area unit undergoing forceful changes additionally. The new role of libraries within the twenty first century must be as a learning and information center for his or her users yet because the intellectual commons for his or her various communities wherever, to borrow the phrase from the Keystone Principles, "people and concepts move in each and virtual environments to expand learning and facilitate the creation of recent information."

As a learning organization, libraries ought to offer a robust leadership in information management. in contrast to those business organizations whose goal for information management is for competitive advantage, most public, academic, and analysis libraries, with the exception of company libraries (which is also notable or referred to as company libraries, special libraries, or information centers), have a special orientation and worth. rather than competition, internal use solely, and small sharing of data with others outside, the foremost necessary mission of public, academic, and analysis libraries is to expand the access of data for his or her users. Charged by this mission, libraries ought to aim their information management goal high.

Knowledge Resources Management

Because of the exponential growth in human data in a very type of formats, libraries got to develop their resources access and sharing methods from written to electronic and digital resources mutually with their mission and charges. Restricted by limited funding, technology, staff, and space, libraries must carefully analyze the needs of their users and seek to develop cooperative acquisition plans to meet these needs. The ever-changing conception from "ownership" to "access" and from "just in case" to "just in time" ought to be the goal of a sound resources development strategy.

An integrated online public access catalog (OPAC) with both internal and external resources as well as printed and other formats of knowledge should be developed and maintained. Useful

websites and knowledge sources should be regularly searched and selected from the Internet and included in OPACs by hard links. A system for the reviewing and updating of these resources should be performed.

Resources Sharing and Networking

Libraries have had a long tradition of resources sharing and networking. These have been greatly expanded by the rapid development of computer, telecommunication, networking, and digital technologies since the 1960s. In the India it is very common for libraries to be a member of several consortia at the same time for various types of cooperative work and resources sharing. Exmple: UGC Infonet, INDEST etc. The successes of most of these examples in resources sharing and networking are largely the result of the full cooperation and participation of all member libraries without selfishness. Large and major libraries must take the lead in such an endeavor. Supports in policies and funding from the government or parent organizations are also critically important. Experiences indicate that all libraries, regardless of size and specialties, have been benefited by library cooperation and resources sharing.

Information Technology Development

To facilitate the implementation of knowledge management, a well-designed and operational knowledge management system should be in place. Latest information technology should be used as an enabler. In recent years, many of the newly developed information technologies for database and information/document management can be utilized in knowledge management; such as, data warehousing, data mining, text mining, content management, knowledge extraction, knowledge mapping, groupware, and information visualization, etc. It was observed by Hsinchun Chen that "since the mid 1990s, the popularity of search engines and advances in web spidering, indexing, and link analysis have 12Knowledge transformed IR systems into newer and more powerful search tools for content on the Internet." (Chen, Hsinchun, 2001).

User services

The utmost goal of information management is to supply users with a spread of quality services so as to enhance the communication, use and creation of information. the maximum amount as attainable these services ought to be tailored to the interest and wishes of every user. Information regarding every user will be obtained by analyzing the records of user registration, surveys, circulation and interlibrary loans, commonly asked reference queries, and also the use of e-journal and digital resources, etc. User satisfaction and wishes ought to be collected through periodic users' surveys. The findings ought to be used for the look and design of library services. it's important, however, that user's privacy must always be protected.

Some of the manual services such as "new publication alert" and "selective dissemination of information," which libraries have been providing, can now be done automatically by employing the "push technology" with great efficiency and convenience. Each library user can also set up his/her virtual "MyLibrary" enabled by library systems and networks for collecting and

organizing resources for personal use and to stay informed of new resources provided by the library. (Cohen, Suzanne, 2000)

Conclusion

In the business world, data management has been thought to be strategically necessary for organizations to achieve a competitive advantage over their competitors, to feature worth to their merchandise, and to win bigger satisfaction from their customers. Within the library world, there's a lesson to be learned from the business world. Knowledge management is as necessary for libraries as for the companies minus the competitive, proprietary, and moneymaking considerations. In fact, libraries have had a protracted and wealthy expertise within the management of knowledge. several of such data and skills of berth may be applied to knowledge management. Information technology and systems will give effective support in implementing data management. Librarians ought to work along with IT professionals and other to develop the acceptable data management systems.

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