Strategically-Focused Enterprise Knowledge Management

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INTRODUCTION

Many of the knowledge management systems, such as the ones described in this entry, were originally computer information systems to which were added knowledge expertise that complemented the information and data communicated. As use of the Internet expanded and intranets within companies were developed, many new knowledge expertise exchange systems were established. As seen in the following discussions, many knowledge systems are therefore mixed, that is, integrated with traditional information and decision support systems, as at the consulting firm, while many, such as Xerox's, focus specifically on expertise knowledge storage and transfer and so can be designated *focused* knowledge management systems. Expert knowledge-based systems generally are *pure* knowledge systems (Mockler, 1992; Mockler & Dologite, 1992).

BACKGROUND

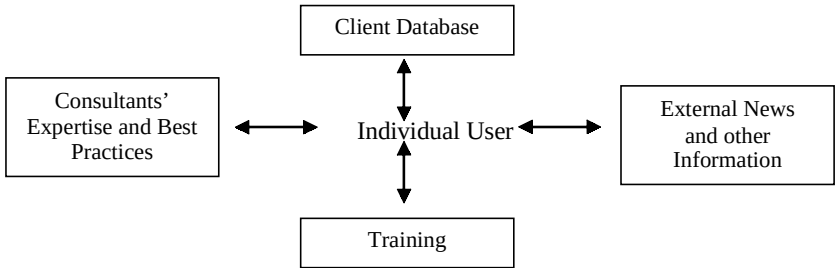
Narrowly defined, knowledge refers to practical skills or expertise gained from actual experience. In practice, however, knowledge management generally refers to the process of identifying and generating, systematically gathering, organizing and providing access to, and putting to use anything and everything that might be useful to know when performing some specified business activity. The knowledge management process is designed to increase profitability and competitive advantage in the marketplace.

As seen in the Key Terms section at the end of this article, since the knowledge management process involves keeping informed about and getting to know anything useful to doing a business task, the process can encompass data, information, and knowledge. Further, the knowledge management process can involve employing any useful and practical means of communication and storage, manual or electronic. Useful manual means might include: service manuals; professional publications; personal correspondence and conversations; special studies and reports; client correspondence and summaries; competitor role-playing; sales force feedback; current news; supplier feedback; and the like. Useful computer-based electronic technologies might include: e-mail; hierarchical, network, and relational databases and data warehouses; group decision support systems; Lotus Notes; intranets and Internet Web sites; browsers and search engines; expert and knowledge-based systems; and the like.

Because of the wide range of concepts and activities involved, the term knowledge management can more easily be understood by examples. Figure 1 outlines the knowledge management system (KMS) at a large consulting firm (Engoron, 1998).

The strategic focus is the individual consultant who needs access to data, information, and knowledge in order to do his/her job. Since consulting is its business, the

Figure 1. Knowledge management system at a major consulting firm



system is strategic. The system provides this access in large part electronically.

At the top of Figure 1 is a large computer database of information about clients, covering past assignments, consultants who worked on the assigned projects, outcomes, organized data on the company involved, and contacts who can provide further information. On the right, there is a system incorporating expert knowledge-based systems that scans news media and library resources daily and daily directs relevant intelligence material to different consultants. On the left is a database of consultants' expertise or knowledge including that acquired from experience during past assignments. This includes written summaries of what was learned from the assignments, videos in which consultants describe the highlights of their experiences or general knowledge, and contingent best practices guidelines in different areas (such as strategic alliances, all marketing and production areas, human resources management, and the like). At the bottom, there is available a bank of online training programs, which a consultant can make use of (privately) to sharpen skills needed to improve job performance.

On any given day that a consultant receives a new assignment, he/she could immediately review current relevant information in the media (intelligence) about the client and project area, gather information quickly about the client and past assignments involving the client, review the related knowledge expertise of other consultants, and brush up on needed skills. At the same time, the consultant would make use of any relevant personal knowledge sources. The system is a good example of using a knowledge system to strategically manage resources; that is, of a strategic management knowledge system.

Not all knowledge management systems are that complex or that multidimensional in scope. Some are narrowly focused on single activities. For example, Xerox in 1996 developed Eureka, an intranet communication system linked with a traditional corporate computer database that helps service representatives share repair tips; that is, knowledge. To date, more than 500 tips have been entered by Xerox technicians, and this practical knowledge is available to all via their laptops. For employees scattered around the world who travel often, the ability to share such know-how means they do not have to miss out on the kind of knowledge typically exchanged at the water cooler (Hickens, 1999).

A number of key characteristics of knowledge management can be identified from company experiences. These can apply to strategic and operational knowledge systems. First, the types of knowledge management systems vary considerably depending on the company situation requirements, a contingency perspective. Second, knowledge generation involves identifying knowledge relevant to strategic business activities, as well as its source and the way it is used or exploited. Third, *structuring* refers to designing knowledge management systems to capture and deliver the knowledge generated; such structures can range from simple ones involving individual business process areas, as at Xerox, to multidimensional complex enterprise-wide ones, as at the consulting firm. Their content can involve any company activity/business process or combination of them. Fourth, *diffusing* or communicating any type of relevant data, information, or knowledge involves transferring and absorbing knowledge to put it to work. In the company experiences studied, the main means of diffusion was electronic and audio/video tools. Knowledge is also very often continually transferred and absorbed informally through personal interaction.

Due to the complexity of knowledge management systems, they are best defined by a description of their characteristics, as discussed previously.

ENTERPRISE-WIDE KNOWLEDGE MANAGEMENT SYSTEMS

This section begins by describing a range of systems in use by businesses followed by a discussion of the contingent situation requirement factors of knowledge management systems. This section then continues with discussing the impact of these factors and others on KMS developments as well as their implementation and use in such areas as: knowledge generation and selecting or developing strategic structure, content, and design of the system

Company Examples

The Ford Motor Company case provides an example of how at a large firm the company-wide strategic knowledge systems are closely linked to and dependent on computer information systems (Austin, 1997, 1999). As part of an integration program in the early 1990s, computer information systems at Ford were standardized across the company, which enabled installation of an external Internet network – extranet – with appropriate Web sites linking Ford with its suppliers and with its customers. Most of these were used initially for communication of information on available models, prices and availability of supplies, and other information (that is, targeted organized data). It also enabled development of an internal company intranet system, which also focused mainly on information conveyance initially.