Chapter III

IS/IT in Knowledge Management

INTRODUCTION

As we trace the evolution of computing technologies in business, we can observe their changing level of organizational impact. The first level of impact was at the point where work got done and transactions (e.g., orders, deposits, reservations) took place. The inflexible, centralized mainframe allowed for little more than massive number crunching, commonly known as electronic data processing. Organizations became data heavy at the bottom and data management systems were used to keep the data in check. Later, the management information systems were used to aggregate data into useful information reports, often prescheduled, for the control level of the organization—people who were making sure that organizational resources like personnel, money, and physical goods were being deployed efficiently. As information technology (IT) and information systems (IS) started to facilitate data and information overflow, and corporate attention became a scarce resource, the concept of knowledge emerged as a particularly high-value form of information (Grover & Davenport, 2001).

Information technology can play an important role in successful knowledge management initiatives. However, the concept of coding and transmitting knowledge in organizations is not new: training and employee development programs, organizational policies, routines, procedures, reports, and manuals have served this function for many years. What is new and exciting in the knowledge management area is the potential for using modern information technology (e.g., the Internet, intranets, extranets, browsers, data warehouses, data filters, software agents, expert systems) to support knowledge creation,
sharing and exchange in an organization and between organizations. Modern information technology can collect, systematize, structure, store, combine, distribute and present information of value to knowledge workers (Nahapet & Ghoshal, 1998).

According to Davenport and Prusak (1998), more and more companies have instituted knowledge repositories, supporting such diverse types of knowledge as best practices, lessons learned, product development knowledge, customer knowledge, human resource management knowledge, and method-based knowledge. Groupware and intranet-based technologies have become standard knowledge infrastructures. A new set of professional job titles — the knowledge manager, the chief knowledge officer (CKO), the knowledge coordinator, and the knowledge-network facilitator — affirms the widespread legitimacy that knowledge management has earned in the corporate world.

The low cost of computers and networks has created a potential infrastructure for knowledge sharing and opened up important knowledge management opportunities. The computational power as such has little relevance to knowledge work, but the communication and storage capabilities of networked computers make it an important enabler of effective knowledge work. Through email, groupware, the Internet, and intranets, computers and networks can point to people with knowledge and connect people who need to share knowledge independent of time and place.

According to Grover and Davenport (2001), most knowledge management projects in organizations involve the use of information technology. Such projects fall into relatively few categories and types, each of which has a key objective. Although it is possible, and even desirable, to combine multiple objectives in a single project, this was not normally observed in a study of 31 knowledge management projects in 1997 (Davenport & Prusak, 1998). Since that time, it is possible that projects have matured and have taken on more ambitious collections of objectives.

Regardless of definition of knowledge as the highest value of content in a continuum starting at data, encompassing information, and ending at knowledge, knowledge managers often take a highly inclusive approach to the content with which they deal. In practice, what companies actually manage under the banner of knowledge management is a mix of knowledge, information, and unrefined data — in short, whatever anyone finds that is useful and easy to store in an electronic repository. In the case of data and information, however, there are often attempts to add more value and create knowledge. This transformation might involve the addition of insight, experience, context, interpretation, or the myriad of other activities in which human brains specialize (Grover & Davenport, 2001).

Identifying, nurturing and harvesting knowledge is a principal concern in the information society and the knowledge age. Effective use of knowledge-
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