

## Chapter 2

# Key Characteristics Relevant for Selecting Knowledge Management Software Tools

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### **ABSTRACT**

*The shift to innovation and knowledge as the primary source of value results in the new economy being led by those who manage knowledge effectively. Today's organizations are creating and leveraging knowledge, data, and information at an unprecedented pace—a phenomenon that makes the use of technology not an option, but a necessity. Software tools in knowledge management (KM) are a collection of technologies and are not necessarily acquired as a single software solution. Furthermore, these KM software tools have the advantage of using the organization's existing information technology infrastructure. Organizations and business decision makers spend a great deal of resources and make significant investments in the latest technology, systems, and infrastructure to support KM. It is imperative that these investments are validated properly, made wisely, and that the most appropriate technologies and software tools are selected or combined to facilitate KM, knowledge creation, and continuous innovation. In this chapter, a set of characteristics are proposed that should support decision makers in the selection of software tools for knowledge creation. These characteristics were derived from both in-depth interviews and existing theory in publications.*

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## **INTRODUCTION**

Imagine that, in the same way that a disc failure on your personal computer or laptop erases all information in the file folders, all intellectual capital within your organization is erased from the employees' minds and the organization's storage media. There is no doubt that the market value of such an organization will be affected severely as decisions in an organization are made based on sufficient, relevant and accurate knowledge. Stewart (1997) supports this notion that the management of knowledge turned out to be the most important economic responsibility of individuals, businesses and nations, as it forms a key component of what is acquired, produced and sold.

Knowledge assets are of much greater value than any tangible asset, which includes natural resources, large factories, equipment and land – all of which provided organizations with a competitive edge in the past (Alavi & Leidner, 2001; Davenport & Prusak, 1998). This knowledge asset provides the basis for creating sustainable competitive advantage in the knowledge age (Nonaka, Toyama, & Byosiene, 2001; Vandaie, 2007). Furthermore, as new technologies, innovation, organizational flexibility and new and better forms of leadership propel the growth and earnings of knowledge-intensive companies, so the need to extract wealth from brainpower and knowledge (individual and organizational) becomes increasingly pressing. This importance of knowledge is confirmed by Becker et al (2001) who conclude that machinery and equipment are not the distinguishing aspects any more, but rather the capability to use it resourcefully. An organization that kept its workforce skills and expertise could operate quickly even though it lost all of its equipment. An organization that lost its workforce, while keeping its equipment, would never recover.

This shift to knowledge as the primary source of value results in the new economy being led by those who manage knowledge effectively - orga-

nizations that create, find and combine knowledge into new products and services faster than their competitors (Moss-Kanter, 1997). Drucker (Hibbard, 1997, p. 46) states that *“We now know that the source of wealth is something specifically human: knowledge. If we apply knowledge to tasks we already know how to do, we call it productivity. If we apply knowledge to tasks that are new and different, we call it innovation. Only knowledge allows us to achieve those two goals.”*

Today's organizations are creating and leveraging knowledge, data and information at an unprecedented pace and the extraordinary growth in on-line information makes the use of technology not an option, but a necessity (Folkens & Spiliopoulou, 2004; Lindvall, Rus, Jammalamadaka, & Thakker, 2001). This influence of technology on the maintenance of KM actions is widely accepted, as technology adds value by reducing time, effort and cost in enabling people to share knowledge and information (Chua, 2004). It is especially relevant when it is closely aligned with organizational requirements - the way people work and are supported by and integrated with relevant processes (Hoffmann, Loser, Walter, & Herrman, 1999; Wind & Main, 1998).

In addition to the growth in information technology (IT), organizations embark on employee information access projects, like the creation of knowledge bases, intranets, chat rooms, full-text indexing tools and document management tools as necessitated by KM (Lindvall, Rus, Jammalamadaka, & Thakker, 2001). KM agility and optimal support of technology motivate the need for research in which the focus is on an understanding of the key characteristics of a KM solution by exploring and describing the nature of knowledge. Therefore, this chapter focuses on providing guidelines in the selection of a KM system solution and provides an example where the selection criteria have been applied as a cost saving solution.

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