

Chapter 1.1

An Overview of Knowledge Management

Jatinder N. D. Gupta

University of Alabama in Huntsville, USA

Sushil K. Sharma

Ball State University, USA

Jeffrey Hsu

Fairleigh Dickinson University, USA

ABSTRACT

One of the key factors that distinguishes the intelligent business enterprise of the 21st century is the emphasis on knowledge and information. Unlike businesses of the past, the fast, high-tech, and global emphasis of businesses today requires the ability to capture, manage, and utilize knowledge and information in order to improve efficiency, better serve customers, manage the competition, and keep pace with never-ending changes. Knowledge management is an important means by which organizations can better manage information and, more importantly, knowledge. Unlike other techniques, knowledge management is not always easy to define because it encompasses a range of concepts, management tasks, technologies, and practices, all of which come under the umbrella of the management of knowledge. This chapter takes a broad view of the topic of knowledge management and aims to provide a comprehensive overview of knowledge

management — the technologies, processes, and concepts involved, and the challenges and future of this important area.

INTRODUCTION

Rapid changes in both personal computer technology and electronic communications during the past decade have given us the ability to create, gather, manipulate, store, and transmit much more data and information than ever before. It is now a fact that large amounts of information are transmitted via the Internet and other means on a daily basis (Chase, 1998; Sistla & Todd, 1998). In addition, the enhanced speed and capacity of communication has enabled the existence of a global market for many industries and business sectors (Chase, 1998). Moreover, the pressures of competition within the 24-hour global marketplace have greatly increased demands for better quality, less costly production, more account-

ability to both customers and shareholders, and improved information about materials, processes, customers and competitors (Chase, 1998; Drucker, 1993). This highly competitive, global environment has fostered the growth of management trends like total quality management, customer satisfaction, benchmarking, re-engineering, restructuring, downsizing and outsourcing, strategic planning, organizational learning and, of course, knowledge management (Skyrme, 2001). Many emerging models of knowledge exchanges represent harbingers of extra-organizational collaborations that will be needed for the execution of an organization's knowledge work. In the 21st century, successful organizations have to be competitive, fast paced, first-to-market, and global in nature. Creating strategic advantage requires a new type of organization that has the capability to create knowledge to maximize organizational competitiveness and strategic success. Knowledge, like any other resource, is viewed as a resource that is critical to an organization's survival and success in the global market. Organizations should have mechanisms to create knowledge and manage knowledge as an asset. However, the bulk of organizations still have not approached knowledge management (KM) activity formally or deliberately. The cause of this inattention could be that most organizations are struggling to comprehend the KM concept. KM is still defining itself because the body of theoretical literature and research in this area is small, but growing (Skyrme, 2001). It is estimated that worldwide spending on knowledge management services will grow from US\$776 million in 1998 to more than US\$8 billion by 2003 and, as the industry moves into the so-called "second generation" phase, managers are being challenged to have in-depth understanding of the issues and need to demonstrate business performance and learning gains from investing in knowledge-based projects and initiatives. The New Wealth of Organizations is total quality management, re-engineering, and intellectual capital, and the companies that will

succeed in the 21st century are those that master the knowledge agenda (Skyrme, 1997, 2000). While most business leaders appreciate the strategic value of knowledge and the need to manage their knowledge assets, many of them seem unable to derive real benefits from their efforts. Creating knowledge-based organizations will not be an easy exercise as organizations have to overcome tremendous hurdles in bringing disparate enterprise data sources into a cohesive data warehouse or knowledge management system (Allee, 1997). This chapter describes the overview of knowledge management concepts that may be required for creating knowledge-based organizations. The chapter has four sections. The first section describes the overview of knowledge management. The second section details the evolution of knowledge management. The next few sections describe knowledge representation, creation and generation and sharing. The next two sections describe the concepts of the learning organization and organizational memory that are useful for creating knowledge-based organizations.

OVERVIEW OF KNOWLEDGE MANAGEMENT

The importance of knowledge to the complex, competitive and global business environments which exist in the 21st century cannot be over-emphasized, and those businesses that know how to effectively acquire, capture, share, and manage this information will be the leaders in their respective industries. We have moved into a period where competitive advantage is gained not just merely through access to information but, also—more importantly—from new knowledge creation (Drucker, 1994; Davenport & Prusak, 1997). Knowledge management is an emerging, interdisciplinary business model dealing with all aspects of knowledge within the context of the firm, including knowledge creation, codification, sharing, and using these activities to promote

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