Chapter 5
The Impact of Knowledge Management Information System on Businesses

Natasa Blazeska-Tabakovska
University "Sv.Kliment Ohridski", Macedonia

Violeta Manevska
University "Sv.Kliment Ohridski", Macedonia

ABSTRACT

Organizations put their focus on organizational knowledge rather than on material resources. They increase their efforts to maximize knowledge utilization in order to cope with global trends, improve their business processes, make effective decisions, improve the quality of their products/services, and increase their effectiveness. The successful management of organizational knowledge leads organizations one step further in their work, and it is an important factor in gaining and maintaining a competitive advantage. The knowledge management processes can be facilitated and supported by various information technologies and techniques. Some of the information techniques and technologies give better effects in knowledge management processes than others. This chapter proposes a model of a knowledge management information system as a result of extensive research and analysis.

INTRODUCTION

The global trends as globalization of the economy, changing environment in which organizations work today, large amount of information in decision-making on the one hand and dealing with large amounts of information on the other, and the fluctuation of employees, impose the need for a different way of managing the organization and its processes. Today, in order to reply to these world trends and to advance its business processes, to make more efficient decisions, to improve the quality of their products/services and to increase its effectiveness, more and more organizations put the focus instead of material resources to organizational knowledge and their efforts are oriented to its maximum use. The constant tendency is to be different from the competition in the degree and manner of using the knowledge. The organizations are transformed into knowledge-intensive organi-

zations. This is a result of the awareness that using the knowledge that they own takes them one step higher in their work and it represents significant factors in acquiring and maintaining advantage in the competition. But successful use of knowledge is a product of its successful management, which is not easy at all. It is a complex activity that consists of many processes. The knowledge management includes several integral parts: using the accessible knowledge from external resources; installing the knowledge in business processes, products, and services; preserving knowledge by its presentation and storing in the data and documents basis; promotion of the increasing of the constant knowledge through positive organizational culture and motivation of the employees for knowledge sharing; transferring and knowledge using through the entire organization and evaluation of the benefits from the knowledge application and knowledge installation in the basis of the organization. Which of these activities will be emphasized varies from organization to organization, which mostly depends on the period of practicing the program for knowledge management in that organization and from the aim of the program.

The knowledge management activity and processes can be facilitated and supported by various information technologies and techniques. Different information technologies and techniques applied in the function of the knowledge management give different effects in separate processes as well as in the improving of different indicators of the organizational efficiency. While certain information technologies and techniques are more appropriate in the process of knowledge creation, others have better effects in the knowledge transfer or in the process of knowledge storage and accessing.

The fact that the information technologies and techniques in knowledge management processes do not have a unique role, as there is no unique technology that includes all the processes; this leads to the need of a set of information technologies and techniques integrated in one system called Knowledge Management Information System. The design of Knowledge Management Systems is imperative for the system to produce the desired results.

In this chapter are presented three models, that is, three sets of information technologies and techniques, and their influence on increasing the organizational efficiency is analyzed. This is done through the degree of client satisfaction from the products/services, number of the innovations, and the degree of satisfaction of the employees' work.

The analyses of the influence of these three sets of information technologies and techniques results with recommendations for their integration in the Model of Information Knowledge Management System - *multimedia design of knowledge management system, which is based on metadata.* The metadata aims to increase the effectiveness of the system in the process of knowledge acquisition stored in the system, on the demand of the user or in the process of extracting contents that can be interesting for the user based on the user profile.

MODEL

Key Concepts

One of the key concepts that the Knowledge Management Information Systems (KMIS) are established is the knowledge. Compared to data which presents a collection of unprocessed and unanalyzed facts, records, events and information that signifies organized and processed data, which are temporarily correct, the knowledge has strong experience and reflexive elements which differentiate it from the information in a certain context as shown in Figure 1.

Davenport and Prussic (1998) describe the knowledge as "a mixture of temporary experiences, values, contextual information and expertise in which frames it is provided a frame of evaluation and incorporating new experiences and information". On the organizational level, knowledge can

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