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Article

Knowledge Management Tools for the European Knowledge Based Society

CES Working Papers

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Suggested Citation: Leon, Ramona-Diana; Lupu, Adrian; Manolache, Anca-Codruța (2011) : Knowledge Management Tools for the European Knowledge Based Society, CES Working Papers, ISSN 2067-7693, Alexandru Ioan Cuza University of Iasi, Centre for European Studies, Iasi, Vol. 3, Iss. 4, pp. 537-555

This Version is available at:

<https://hdl.handle.net/10419/198145>

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KNOWLEDGE MANAGEMENT TOOLS FOR THE EUROPEAN KNOWLEDGE BASED SOCIETY¹

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Abstract: *Increasingly more literature mention that in the current competitive environment, knowledge have become the main source of the competitive advantages, while recent researches regarding economic growth and development have defined knowledge as being the most critical resource of the emerging countries.*

Therefore, the organizations interest for knowledge has increased, the latter being defined as knowledge management process in order to meet existing needs, to identify and exploit existing and/or acquired knowledge and developing new opportunities.

In other words, knowledge management facilitates productive information usage, intelligence growth, storing intellectual capital, strategic planning, flexible acquisition, collection of best practices, increasing the likelihood of being successful as well as a more productive collaboration within the company.

In order to benefit from all these advantages, it is required the usage of specific tools including models and systems to stimulate the creation, dissemination and use of knowledge held by each employee and the organization as a whole.

Keywords: knowledge management, models, systems, learning organization.

JEL Classification: D21, D83

1. INTRODUCTION

Since March 2000, the European Union started to be oriented towards becoming the most competitive knowledge based economy. This goal generated a lot of interest in the management research field. As a result, more and more managers and researchers started to be preoccupied by identifying or developing tools that would facilitate the processes of knowledge creation, acquisition, dissemination and use.

More and more literature mention that in the current competitive environment, knowledge have become the main source of the competitive advantages (Wiggins and Ruefli, 2005; Joia and

¹ **ACKNOWLEDGEMENT:** This work was partially supported by the European Social Fund in Romania, under the responsibility of the Managing Authority for the Sectoral Operational Programme for Human Resources Development 2007-2013 [grant POSDRU/107/1.5/S/78342].

Lemos, 2010; Mitchell and Boyle, 2010), while „recent researches regarding economic growth and development have defined knowledge as being the most critical resource of the emerging countries” (Millar and Choi, 2010, p.760).

Therefore, the organizations interest for knowledge has increased, the latter being defined as knowledge management process in order to meet existing needs, to identify and exploit existing and/or acquired knowledge and developing new opportunities "(Quintas et al., 1997). On the other hand, its implementation „offers a company the opportunity to learn from organizational memory, to change knowledge and identify skills in its request of becoming a learning organization that is concerned for the future” (Robinson, 2005).

In other words, knowledge management facilitates productive information usage, intelligence growth, storing intellectual capital, strategic planning, flexible acquisition, collection of best practices, increasing the likelihood of being successful as well as a more productive collaboration within the company.

In order to benefit from all these advantages, it is required the usage of specific tools including models and systems to stimulate the creation, dissemination and use of knowledge held by each employee and the organization as a whole.

2. METHODOLOGY

Present paper aims to examine articles published from 1995 to date in order to identify which companies have the tools available to facilitate the creation, dissemination and use of knowledge.

Being in the area of knowledge management, the paper stresses to find answers to the following questions: what are the models, systems, methods and techniques on that an organization should develop to ensure the capitalization of the human capital full potential and to benefit from sustainable competitive advantages?

For answering these questions, there were analyzed the most relevant articles published in the internationally recognized journals in the period December 2010 - January 2011. Thus, there were considered EBSCO databases, Emerald Group Publishing and Science Direct. Within these databases there were searched articles which have had included the phrase "model/system for knowledge management" in the title, abstract or keywords. The journals in which these articles were published are: *Journal of Knowledge Management*, *Strategic Management Journal*, *Management Science*, *Expert Systems with Applications*, *Journal of Strategic Information Systems*, *Decision Support Systems*, *Information & Management*, *International Journal of Information*

Management, Organization Science, Long Range Planning, California Management Review, Journal of Management Information Systems, Decision Sciences, Journal of Information Technology, Academy of Management Journal, International Journal of Information Technology & Decision Making, Engineering, Construction and Architectural Management, The Journal of Knowledge Management Systems, Engineering management Journal, EIT Software, Technological Forecasting & Social Change. Subsequently, after the analysis of references of the articles found have been identified following sources: *Information Strategy, The Executives Journal, International Journal of Project Management, Journal of Operations Management, Knowledge-Based Systems.*

All these studies were analyzed in terms of their contribution for the field's development. Regarding the extra information brought, it will be presented in the following subchapters which will reflect a gradual evolution from general to particular. Initially, we shall outline the main models of knowledge management, and then we shall make a foray into the manner in which they are implemented and operationalized as systems within companies.

3. SPECIFIC KNOWLEDGE MANAGEMENT MODELS

In the literature, we encounter a series of knowledge management models, each with both strengths and shortcomings or limitations.

Guerra-Zubiaga and Young (2006) argue that specific knowledge management models are created to represent a support for the organizational environment decisions. These models are embedded in a system making use of various techniques and tools to achieve competitive advantage and a specific "know-how" specific. Knowledge is much more difficult to define because it can have many possible interpretations. For example, knowledge is defined by Guerra and Young as information which add details on how to be used or applied.

One proposed model belongs to Woitsch and Karagiannis (2005). It focuses on process-oriented knowledge management and distinguishes between three main categories (Figure 1):

1 - Process as content. KM is meant to define the process as content.

2 - Process as an entry point and integration platform. The purpose of the second category of KM is to define business process as a starting point.

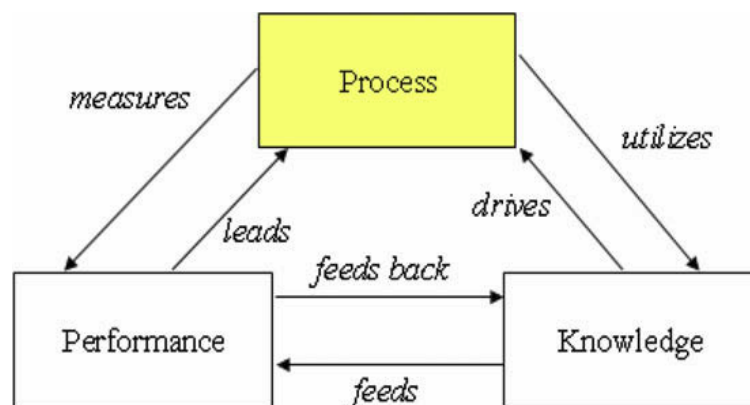
3- The process from a managerial perspective. This third interpretation defines the activities related to KM. The purpose of such a KM model is to identify and classify types of knowledge to be created and accumulated in a process-centered manner. Subject of knowledge in the companies

focused on applying KM process-centered model takes two forms: the knowledge process and the knowledge support task.

The purpose of such an organizational KM model is to enriching the information context in order to perform correctly the requirements. To achieve this goal it is necessary to connect the concept in a coherent manner as well as a multi-layered acquisition of knowledge. By using this model, one that is involved in performing the required tasks set is gathering more sophisticated and network knowledge than simple knowledge.

When new data are created on a specific concept such as a new product, this information is recorded in an ontologically warehouse. Common attributes of such information is ID, name, description, data type and size. Subsequently, the connection is established between the project (process court) and the remaining components. Therefore, during the process execution, participants may retrieve relevant knowledge using only project's name or ID. There can be easily retrieved multi-layered and network knowledge linked to a particular object of interest, aspect that facilitates both the context and the knowledge content enrichment.

Figure 1 – KM process-centered model



Source: Woitsch and Karagiannis, 2005

As previously mentioned, most of these models have a series of limitations. A limit of this model is the lack of a workflow engine function to control the project progress, in conjunction with the lack of measurement function for managing business performance. Molina et al. (2007) studies the relationship between quality management practices and transfer of knowledge internally and externally. Their goal is to find the foundations of knowledge confirming the relationship between practices implementation in quality management and managerial performance.

They attempt to define and explain the link between knowledge management and the companies' competitive advantages on the market. The authors studied the transfer of knowledge

and have bordered two major theories which are being used on a competitive market. The first highlights the social network for any type of organization, and the second theory emphasizes the importance of this social network using networking structures based on diversity. All these networks are based on issues laid down in the social (Liebeskind et al., 1996), physical (Almeida and Kogut, 1999) and institutional field (Kraatz, 1998).

Internal and external knowledge transfer should not be used as an alternative for the knowledge sources. The distance between the knowledge base and its implementation in organizations should be shorter than the one established between organizations and organizational environment (Postrel, 2002). Once the organization applies its resources on the useful knowledge transfer between employees and customers, this knowledge has a lower cost for internal transfer than for the external knowledge transfer. If external transfer is taken to shape the organization's performance, the benefits of knowledge transfer should be the main element which is chosen in order to achieve the organization's mission and objectives.

This points out that once the knowledge is transferred to all of the organization's area, internal and external transfer can be considered a leader of organizational performance. This idea is supported by the fact that the transfer will be high and will require a low cost, but also by a much lower perceived risk resulted in organizational structures.

Research undertaken in internal knowledge management focuses on the connections between knowledge management and organizational performance, which are produced by the innovation in knowledge management (Andrew et al., 2001). Infrastructure capabilities such as knowledge based on culture, technology and human resources are assumed to have a greater impact on knowledge management process, claim Chang and Chuang (2011).

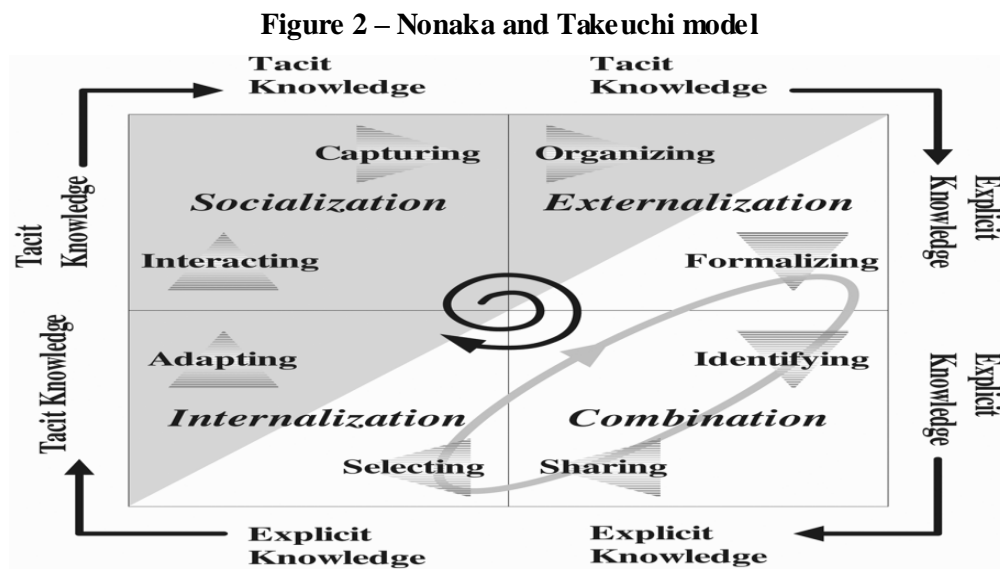
This process subsequently influences the organizational performance. Knowledge management based on human resources describes an extension in which the companies' employees are specialized on particular areas, and this demonstrates that it creates an interaction between knowledge from different fields. Human resources are the heart of knowledge and resources creation (Holsapple and Joshi, 2001).

Wiig (1995) defined knowledge management as a well-defined group of methods and processes used to searching for important knowledge in various KM operations. KM is used interchangeably to confirm and define a new product strategy but also to strengthen the human resources management in defining the goals of an organization.

Nonaka and Takeuchi (1995) described a different definition of knowledge management: the creation of knowledge is generated by interaction between tacit knowledge and explicit knowledge.

Using a model of knowledge transformation, the two authors have shown the relationship and consequences of tacit knowledge and explicit knowledge. These links between the two types of knowledge have created a SECI knowledge management model that includes (Figure 2):

1. *Socialization*: converting tacit knowledge into tacit knowledge;
2. *Externalization*: converting tacit knowledge into explicit knowledge;
3. *Combination*: converting explicit knowledge into explicit knowledge;
4. *Internalization*: converting explicit knowledge into tacit knowledge.



Source: Nonaka and Takeuchi, 1995

This model described by Nonaka and Takeuchi forms a well-defined system of knowledge management. When experience is gained with these transformations, it is defined by a system of active knowledge which is very valuable. Holthouse (1998) defined knowledge as a continuous flow through which the knowledge is transferred from the one who ask for it to one who wishes to obtain it. Nonaka et al. (2000) defines the relationship between knowledge creation and innovation such as being a division between individuals and groups who share the same experiences. Because the main objective of knowledge management is knowledge innovation, each organization member must share to the social group, knowledge belonging to one of four models: socialization, externalization, recombination and internalization.

A new model that uses information and knowledge structures was developed by Guerra-Zubiaga and Young (2006) and was called Development of easy information and knowledge model. Two distinct classes were formed in this model: facilitating knowledge and types of knowledge. The model described operates with these two classes which help for a description of the knowledge

structure. This model shows that knowledge structures can store processes and resources which serve for different types of knowledge. Understanding and representation of these different types of knowledge is important to build a structured and rigorous model. Each type of knowledge can have different representations showing the value of embedded knowledge.

The introduction of innovative knowledge in the basic existing knowledge will bring benefits and professional success to the organization. Recent studies present many management strategies of the innovative knowledge, these strategies can be exploited quantitatively and dynamically. The study conducted by Tsai (2009) presents a model for the diffusion of knowledge associated with innovative knowledge model to investigate the influence of the adoption of innovative knowledge in the organizational environment. The model uses many parameters simultaneously considered as part of knowledge management different subsystems. Tsai (2009) expressed a mathematical model of knowledge management. The results of the mathematical model can describe closely the relationship between the amount of existing knowledge, value of the innovative knowledge and the organization benefits. With this model, managers can evaluate the performance of knowledge management and in the future they may establish new analysis parameters to permit definition of several mathematical models. Managers can also develop effective knowledge management strategies by analyzing the parameters involved in the model of diffusion of knowledge.

Original concept of diffusion of knowledge belongs to Bass (1969) model that captures the value of knowledge that can be transformed into organizational benefits using knowledge outsourcing, and then transforming organizational benefits with the help of knowledge internalization. Knowledge management should be implemented in an open system, where the internal aspects of the organization should interact with the external environment of the organization (Tsai, 2008). The proposed model of knowledge diffusion describes interaction intra-firm and inter-firm, outlined by a relationship based on knowledge value and company benefits. The implementation of such models which outlines a knowledge management system is vital for organizations. The performance of Knowledge management can be researched only by establishing relationships between knowledge and benefits of the organization.

The paper called "The index of performance in knowledge management" (Lee et al., 2005), establishes the link between performance and knowledge management. The authors consider that firms are always oriented to accumulate and apply knowledge to create economic value and competitive advantages. To describe the relationship between performance and knowledge management, they highlighted five stages: knowledge creation, knowledge accumulation, sharing/knowledge sharing, knowledge utilization, knowledge internalization.

Sharing knowledge is also one of the methods used by Nonaka et al. (2000). He defines with this model the relationship between knowledge creation and innovation. The other four models are subject of testing and verification by Lee et al. (2005) in the index of performance in knowledge management.

Sedera and Gable (2010) describe in their paper, a cycle of knowledge management that goes through four phases: creation, transfer, retention and application. Each of these four phases is described as models of knowledge management.

Creating knowledge is the first phase of the cycle of the entrepreneurial system, which belongs to planning and implementation of knowledge in the organizations. This phase is based on knowledge requirements to outline a structured model of the cycle.

Knowledge transfer highlights a number of channels through which knowledge can be transferred, channels which can be formal or informal (Pan et al., 2007). The formal transfer of knowledge is established by a rigorous program, and informal knowledge transfer can take place even in the coffee break, for example. Informal transfer of knowledge also promotes effective socialization in small organizations. Avital and Vandenbosch (2000) argue that the formal transfer of knowledge takes place especially during training programs and is focused on knowledge transfer.

Accumulation/retention of knowledge shows that people accumulate knowledge from observations, experiences and actions (Sanderlands and Stablein, 1987). Gable et al. (1998) observed the importance of the organizational strategies of retention of knowledge by the success determined by the cycle of entrepreneurial system,

Application of knowledge highlights the fact that once knowledge is created, the transfer and the accumulation interact with entrepreneurship system. Markus (2001) suggests that the source of competitive advantage lies not in knowledge but the application of knowledge. Application of knowledge is essential in the cycle described in the outlined system of the knowledge management, in particular by the maintenance and achieving the success.

There are many articles in the literature discussing various types and dimensions of knowledge. In particular, the distinction between tacit knowledge and explicit knowledge is given special attention. Tacit knowledge is that which exists in the minds of individuals, while explicit knowledge are outsourced and shared with others. Reijers et al. (2009) identified the same patterns of knowledge interaction as Nonaka and Takeuchi (1995). Therefore, we can identify the transition from:

- Tacit knowledge to tacit knowledge - the process of "socialization" while sharing experience and interaction.

- Explicit knowledge to explicit knowledge - process of "combining" of existing knowledge with the innovative ones, the transition from basic knowledge to new knowledge.
- Tacit knowledge to explicit knowledge - process of "outsourcing" of knowledge that individuals assimilate them.
- Explicit knowledge to tacit knowledge - process of "internalization" of acquired knowledge (Polanyi, 1967).

Drew (1999) presents a classification of economic knowledge in which may appear the risk of deficiency of knowledge:

- What we KNOW, KNOW (sharing and access to knowledge);
- What we KNOW, NOT KNOW (finding and creating knowledge);
- What we do NOT KNOW, KNOW (tacit knowledge, concealing knowledge);
- What we do NOT KNOW, NOT KNOW (the discovery, exposure and opportunities).

According to this model, knowledge management is presented as two processes: the "bottom", through which are established priorities that must be handled explicitly and effectively throughout the organization and the "top", which sets strategy for the entire organization, strategies that include roles and priorities for the intellectual capital, costs and benefits for implementing knowledge management, operational models, organizational development plans, objectives and strategies for each area of knowledge, tactical details for priority knowledge and creating a favorable environment for sharing tacit knowledge in order to make them explicit.

In the last decade, many researchers and practitioners have recognized the importance of knowledge management as a key factor in fostering competitive advantages. Holsapple and Singh (2001) have divided the knowledge management into five main activities and four secondary activities. The five core activities concern to acquisition, selection, generation, internalization and externalization of knowledge.

The other four secondary activities are leadership, coordination control and measurement. These activities encompass the knowledge logistic model. Analysis of activities and resources necessary to lead to knowledge management operations leads to competitive advantages.

Logistic model of knowledge is described by the two specialists as follows:

- Acquisition, through which external knowledge must be transposed into the organizational environment.
- Selection, through which knowledge must be so selected to obtain the best results.

- Generation, through which the knowledge obtained is useful and can be analyzed to create new knowledge.

- Internalization, through which knowledge is transformed into internal resources.
- Externalization, through which knowledge is communicated.

Organizational knowledge creation is a process that includes new perspectives needed for the development of the culture and organizational environment of companies.

Han and Park (2009) proposed a model that describes business based on the ontology business. They have treated the process as a company based on knowledge, focused on knowledge management in decision support and not as a company based on automatism.

4. SPECIFIC KNOWLEDGE MANAGEMENT SYSTEMS

A strategy increasingly more common and which is designed to improve the access to reliable and timely information is the development of a knowledge management system (KMS). Typically, the mission of a KMS is to select existing knowledge in a particular area of interest, to reduce and summarize their content in manageable text, to attach key categories and then to put the material available to KMS subscribers.

The central idea is that KMS will provide instant access to updated and specialized knowledge. This perspective refers to changing the current form for production of the knowledge in an economy based on production of knowledge without addressing the existing digital divide and its tendency of increasing of it between those who have Internet access and those who do not have and most likely they won't have very soon.

Knowledge management systems are, by definition, different from the data banks. The term "management" indicates the selection of knowledge considered most relevant to the organization that coordinates the system. KMS is under the tutelage of a manager or administrator of inputs/outputs of knowledge. Under the responsibility of this person or of a small team of people will be the tasks for knowledge selection, considered valuable, synthesized in "material removed as a result of aging process" and the creation of the most relevant "knowledge classification schemes" (APQC, 1997).

One of the most important knowledge-based systems is the software able to support explicit representatives of the knowledge from specific areas. The mechanism of knowledge system is able to solve high level problems related to performance. Knowledge management system is named after specific areas of knowledge and tools used to support decision making. The engineering knowledge

system is one of the knowledge-based systems. In other words, there are many knowledge management systems, as many as the specialized fields that exist. For example we can have the knowledge management system of mathematics, physics, economics, and many other systems based on specific knowledge of each area.

Other types of knowledge-based systems are also the expert systems; they are intelligent programs of the computer that use knowledge to solve problems difficult enough for a human expertise. Expert systems can even imitate human abilities in private fields. However, the knowledge cannot be completely implemented in computerized programs. Smith (2001) proposed a number of alternative techniques for the recognition, acquisition, sharing and measurement of tacit and explicit knowledge that can help at the understanding of the knowledge role.

The knowledge life cycle begins when the new information or knowledge is identified. However, the transformation of knowledge is important for renewing of tacit knowledge, explicit and/or implied. An important element in this transformation is defining the type of knowledge that will be used to store new knowledge. If the new information is necessary it must be automatically localized and must find its roots, while the old information will be replaced with the new knowledge. Portions of the new knowledge will be expressed in different representations of tacit knowledge, explicit and/or implied. The premise from which this transformation leaves is given by the outcome which must be reached. For those that use knowledge is necessary to use valuable knowledge caused by change of form, context or content.

Borges-Tiago et al. (2007) considers that knowledge management system based on the Internet has a positive impact on business performance. Han and Park (2009) believe that while manage the knowledge through centralized processes is essential to establish a model of knowledge management which to stabilize different types of knowledge-based business and the creation of relationships between objects and knowledge so that be oriented to specific processes.

Shue et al. (2009) have introduced into organizations an expert system based on the knowledge division in the areas of knowledge and operational knowledge, applied to an ontological model of business and to production rules represented by operational knowledge.

Garcia-Crespo et al. (2011) focuses more on financial issues of the organizations than on issues relating representation and the knowledge process. This is useful for helping business process based on the previous experience, but also is not applicable to companies based on automatism and not knowledge. Tran and Tsuji (2007) created an extension of the expert system to represent "templates" that can be applied even for the business process automated. Therani (2007) created a business network based on a dynamic process that can be implemented as specific software. The

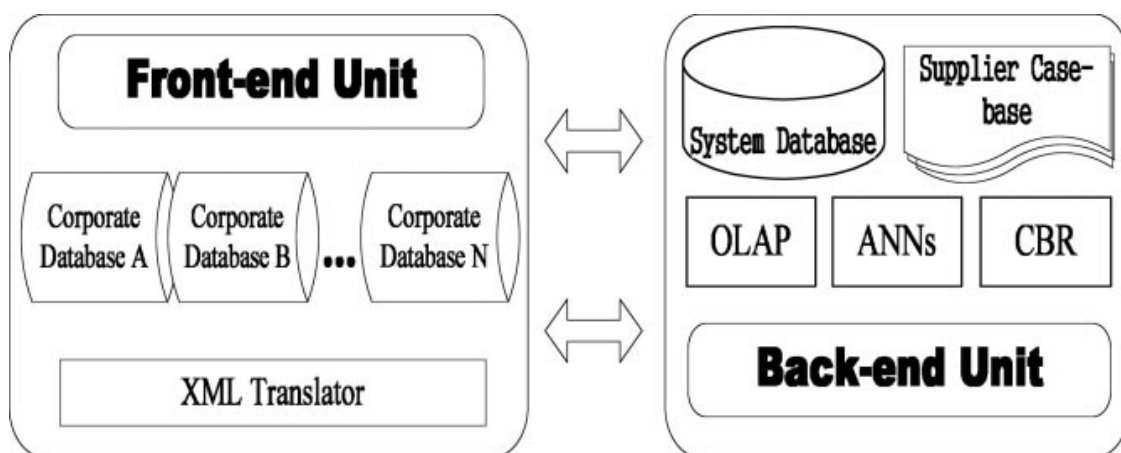
study of Garcia-Crespo et al. (2011) is focused on evaluation and measurement of information of the business, but also, on recommendations for the knowledge management. Their work is centered on knowledge and is focused on both types of knowledge management, but also on the successful execution of specific processes of the domain.

One of the systems used in the knowledge management is studying trends that define technologies which support four specific activities of knowledge management: creating, encoding, transfer and application of knowledge. For a long time, knowledge management system studies the focus on coding and representation of knowledge from IT field. Many of the knowledge-based systems focus on specific technology solutions such as discovery, representation or dissemination. Examples of specific instruments included in intelligent systems vary depending on the type of knowledge.

Such a KM system was presented by Choy et al. (2007) in order to generate the necessary knowledge in assisting decision-making process which allows the creation of a relationship between consumer demand and provider response options. By using SKMS (Figure no. 3), customer requirements are being directly related to the supplier's capacity, so that an order for products in the correct amount can be issued to certain suppliers in the correct time in order to minimize the inventory costs.

SKMS uses CBR (case-based reasoning) as both as methodology and technology. This reasoning is a technique that appeals to past situations and cases for present problems solutions. Central tasks involved in CBR methods are to identify current problem situation, find a past case similar to the present case in order to use the past experience for suggesting a solution for the current issue, evaluation of the proposed solution and updating the system by learning from that specific experience.

Figure 3 – The architecture of a knowledge management system related on supply



Aamodt and Plaza (1994) described CBR as a cyclical process comprising four phases: recovery, reuse, revision and retention. In the CBR cycle, a new problem is, first, compared with historical cases existing in the database, using heuristic recovery methods indexed with one or more similar cases. Subsequently, the solution suggested by the matching cases is reused and tested in order to be validated. At this stage, if the best case assumed is perfectly compatible, the system has achieved its goal. XML language is used to facilitate the integration of existing stock of raw data units, which is useful for estimating future needs of customers from various corporate databases to the SKMS database.

Using knowledge management systems to support professionals from organizations in the decision making process by creating organizational knowledge is a double-edged sword. Availability of explicit knowledge support within a KMS must allow people to improve their decision-making process, but the potential impact on the individuals' expertise development in an organization remains unknown.

Alavi and Liedner (2001) note that some researchers raise questions on the fact that users of a KMS cannot develop their own knowledge while basing on others expertise, which can lead to a lack of knowledge development amongst the next generation of organizational experts and ultimately to a lack of human expertise within the firm (e.g. Cole, 1998; O'Leary, 2002; Powell, 1998). The results obtained from the perspective of knowledge acquisition raise questions that require further research in order to better understanding the overall impact of KMS use. First, results indicate that KMS users show a significant improvement of their problem-solving skills in terms of interpretation.

Users of such systems continue to improve these skills as they use them. Solving interpretation issues is well supported by a KMS, whilst reducing the cognitive effort required resolving this kind of problems. From this perspective, it can be stated that beginners with easy access to examples that can support decision-making process may continue to wear the solving of interpretation problems to fix the problem and not necessarily being motivated to begin development of a high level tacit knowledge.

Multilingual knowledge management systems began to be used in a large scale, which includes government system, medical system as well as the knowledge generating libraries. Multilingual systems facilitate the communication, structure and problems related to knowledge transparency. Peters and Sheridan (2000) made a brief history of multilingual resources integration in knowledge management system.

This system includes knowledge conversion and connection. The content of the two concepts provide details on how to solve a particular problem ("things are going well"), or how not to solve various other problems ("things are going wrong"). Individual knowledge must be converted into groups of knowledge available, while other knowledge resources must be converted from one language into another language, so that in the future all people should be connected with other knowledge resources and other people. Also, knowledge resources must be sought in order to establish links between different knowledge, information and people. Searching should create related connections for everyone who use them.

Table 1 – Modules and functions of knowledge management systems

Modules	Functions
Industry and market analysis	<ul style="list-style-type: none"> • Industrial analysis • Technological position • Financial structure • Analysis of resources • Competitive structure
Generating ideas for dominant design	<ul style="list-style-type: none"> • Technology trends • Technological opportunities • The production value • Needs analysis
Project monitoring	<ul style="list-style-type: none"> • Selection of projects • Fusion technology • Analysis of success / failure
Design and supply planning	<ul style="list-style-type: none"> • Project portfolio • Technology outsourcing • Technology roadmaps
Knowledge research	<ul style="list-style-type: none"> • Patent • Industrial management • Test marketing
Marketing and business modeling	<ul style="list-style-type: none"> • Technology assessment • Predictions for the cash-flow • Production efficiency • Competitor analysis
Management process	<ul style="list-style-type: none"> • Work-flow analysis
Management documents	<ul style="list-style-type: none"> • Sharing knowledge • Exit knowledge

Source: Park, Y., Kim, S. (2006) *Knowledge management system for fourth generation R&D: KNOWVATION*, Technovation, vol. 26, pag. 599.

Kinga et al. (2008) considered that modern processes connected systems can share organizational knowledge in various ways. Researchers and practitioners have focused on knowledge management systems to provide information and relevant knowledge for the organizational environment. Many knowledge management systems are designed to capture individual knowledge. Some individuals from different organizational cultures consider that power stands in the amount of knowledge. The paper is focused on the individual who shares knowledge and potential effects of his motivation - supervising control and organizational support - on the knowledge sharing behavior.

Park and Kim (2006) have sketched together KNOWVATION system which is one of the important systems based on knowledge innovation in research and development. KNOWVATION is a combination of words that include "knowledge" and "innovation". This system is considered as being part of the fourth knowledge generation in research and development. This system's functions are focused on acquisition and knowledge sharing, as well as the knowledge analysis and creation. KNOWVATION is especially designed to cover five modules and twenty-five KMS functions necessary for creating and analysis of knowledge. Systems and modules are presented in Table 1.

CONCLUSIONS

Moving from industrial society to information society, then to the knowledge society through various models, tools and systems especially, we can say that the individual is the focus of the modern era.

In the recent years, many researchers have developed and implemented models and knowledge management systems. The purpose of knowledge management is to be useful to individuals working in different organizational environments, and for people in general.

Knowledge management appeal to intrinsic and extrinsic factors that help society to develop and print her actors the knowledge needs. Users of knowledge management systems are those who perceive the importance of self-discovery and self development.

Awareness of the need for knowledge-based society developed a knowledge management, outsourcing and is a first step towards knowledge society where we are. Bushy bibliography attached to this report, indicate that many of the figures in contemporary management are concerned about rigorous analysis of the knowledge society. Various models, and systems highlighted were successfully applied to the population. Rigorous documentation of those who feel the ground knowledge management was able to develop models and systems important for the

organizational environment. Vulnerabilities of these determinants of knowledge management issues highlighted possible adaptation and improvement of systems and models of knowledge management.

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