

STRATEGIC DECISIONS, INFORMATION AND KNOWLEDGE

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Abstract:

Through this study, the authors intend to approach the issue of types of knowledge (tacit and explicit) reported to the extensive knowledge pyramid proposed by Apurva and Singh. It is envisaged that they have an extremely important role in the economic development of large corporations. Starting from the idea that this knowledge covers the correlation of social progress with economic progress, it shows that their level is achieved in conjunction with several factors. Our approach is to provide a relatively complete picture of the meaning / usefulness of the information provided by knowledge and their role to solve economic problems by using decision-making systems.

Key words: Knowledge, inventions, innovations, tacit, explicit, experience, intuition

JEL classification: M1, M15

1. LITERATURE REVIEW

Starting from the 80s to the present, the market value of a company was started to be given more frequently asset value non tangible available to that organization, assets that can be summarized by the term "knowledge" (inventions, innovations, patents, trademarks, designs, symbols, execution skills of employees, employees' cognitive skills, creative ability of employees makers vision, experience etc) [2].

Knowledge Management (KM) is a relatively new concept, and it occurred in connection with a wide variety of schools of thought that attempt to explain this concept. Among them, we can mention those related to information theory, developed by Tom Davenport and Larry Prusak (they discuss the conversion of tacit knowledge internal external knowledge encoded, etc.) [3]; Hirotaka Takeuchi and Nonaka Ikujiro proposing more strategic guidelines and models of the Acquisition KM / knowledge conversion [10].

One of the major classifications on sharing knowledge is the knowledge in the following two categories: [4], [5], [6], [8]:

- Explicit knowledge gained rational knowledge that can be transferred through the usual processes of teaching, learning, communication, etc; they can be removed from the holder and processed in various ways at the organizational level (knowledge that can be found in textbooks, encyclopedias, databases, etc.);

- Tacit knowledge is knowledge of the non rational, such as knowledge derived from experience or intuition of the individual, in which case the transmission and processing them become relatively more difficult (we know intuitively and from experience how to achieve various actions or to behave social context, but it is sometimes difficult to explain verbally how fulfilling those actions.

The process of converting tacit knowledge explicit knowledge and vice versa takes a spiral of learning in modern business organizations; He was shown for the first time by Professor Japanese Nonaka Ikujiro (in literature KM was imposed so-called model Socialization, Outsourcing, Combination and Internalization (SOCI) converting knowledge from tacit to explicit and vice versa; it stages of Socialization, Outsourcing, Combination and Internalization of knowledge; in at each stage members of a group / organization teams can foster through a KM strategy in the process of creating new knowledge)[12].

We want to note that both the model of conversion of knowledge and different ideas promoted by Professor Nonaka generated a strong interest in areas like logic, knowledge management, systems engineering, mathematical modeling etc. [12]. Over the decades, a large number of other researchers have extended and amplified the issue of sharing knowledge and tacit knowledge explicit linking together powerful organizations subject life and computer networks (Internet, intranet, etc.) [2].

2. THE INFORMATION AND MANAGEMENT LEVELS

From a management perspective applied since the 1980s until today, they have become extremely familiar phrases such as knowledge management, learning organization, human capital, intellectual capital, intangible assets, information revolution, e-learning, business process re-engineering etc [7], [11]. .

Without developing much idea invoked in Figure 1 we present information role for the 3 hierarchical levels of the company organization chart:

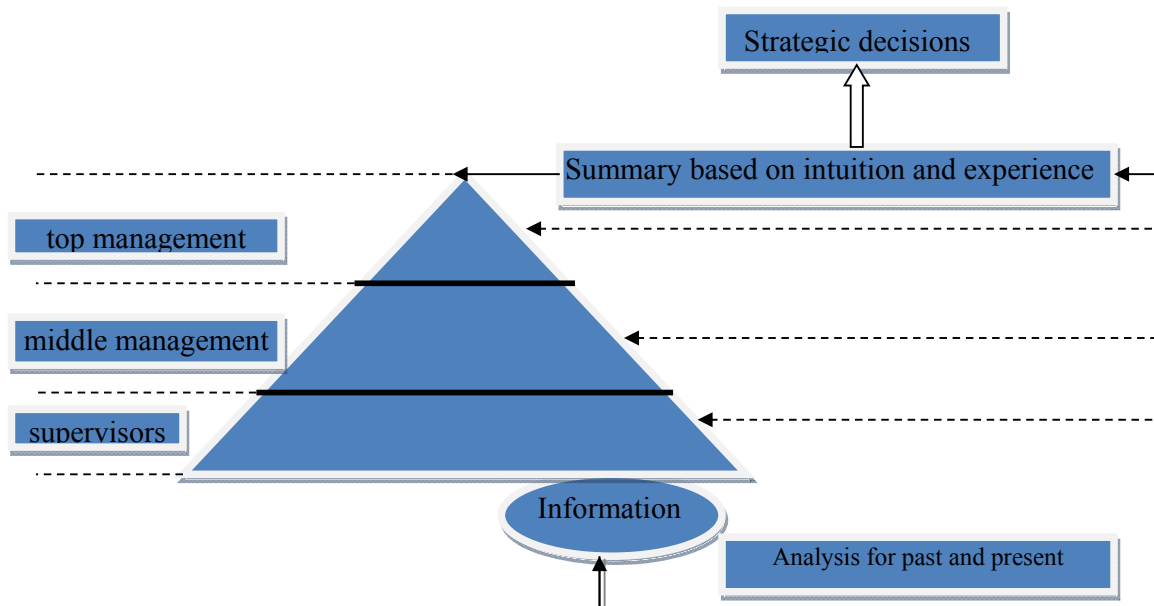


Fig. 1. The information and hierarchical levels of management

Source: Adapted Iancu E, (2011) - Sisteme expert in contabilitate și informatică de gestiune, Ed. Politehnica, Timișoara

From the perspective of the objective sought by this paper, we managed to briefly argue (as shown in Figure 1), we believe, deep connection that exists between information, hierarchical levels of management and information support underpinning strategic business decisions.

Company Management is based largely on information when adopting different strategies; But he relies equally on intuition and experience gained over decades, that the tacit knowledge that are difficult to quantify and mathematically modeled.

3. WORK PRINCIPLES IN THE DEVELOPMENT OF DECISION SYSTEMS

The starting point in developing methodologies for achieving information systems decision resulted largely from stating the objectives sought to be solved by some kind of system. While some were structured working principles underlying computer systems design methodologies, as follows:

- easily acquisition of knowledge by expressing as directly as possible expertise obtained from human experts; this expertise can be measured type (when it comes to information

or data) or non-quantifiable (you need to rely on fuzzy logic to transfer knowledge in a readable form);

- Knowledge efficient operation of the collection placed in the database;
- easily to bear the full range of operations on knowledge (adding, changing and removing them), according to the manner in which it is structured database when designing the system.

Issues mentioned above can be summarized in a graphical form as shown in Figure 2.

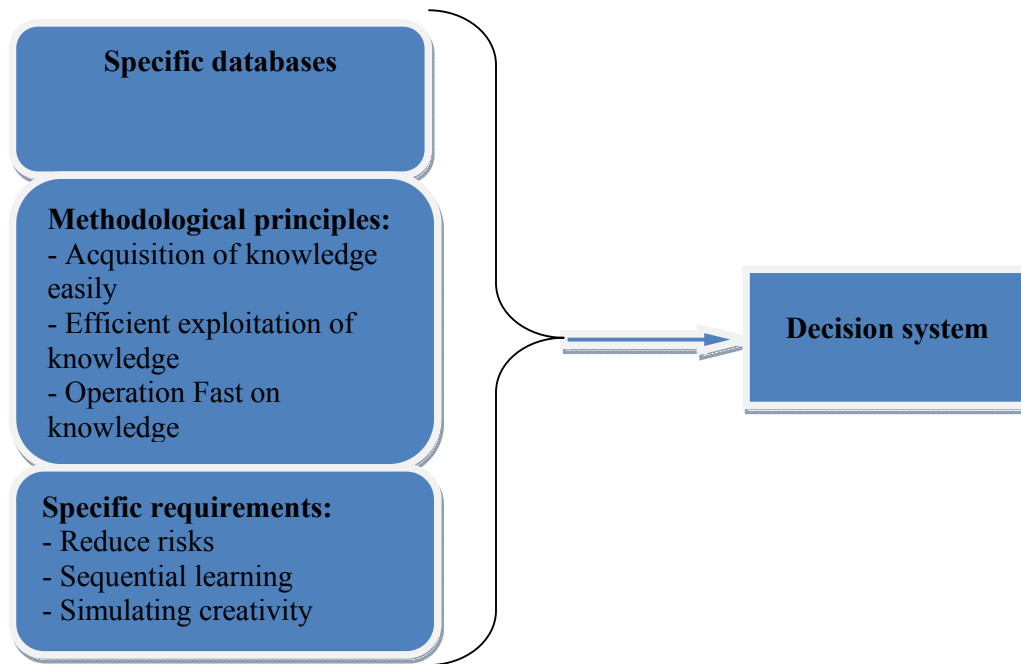


Fig. 1. Principles of work and requirements in system design

4. THE KNOWLEDGE AND DECISION SYSTEMS

A conceptual dimension of knowledge economy requires new ideas and approaches from policymakers. Innovation and technology adoption, information infrastructure, adoption, adaptation and use of knowledge in domestic economic output will result in a higher value-added goods and services.

Given the classifications above, we understand that different databases that support various types of expert systems (data being processed feedstock such a tool), including expert systems applied in the economy, including ultimately tacit knowledge and explicit in different proportions. In fact, as they are synthesized and processed various information in the internal structure of an expert system (the internal structure is its inference engine), it becomes increasingly difficult for the researcher to clearly differentiate between data, information and knowledge. To the extent that we accept the ideas of Nonaka and other analysts [12], is perhaps preferable, we believe that future developments on IT to focus predominantly on tacit knowledge and explicit (including the idea of favoring processes outsourcing knowledge, social knowledge to which we referred above) [4], [5].

On the other hand, it must be concluded that various tools becoming more efficient, which are provided successively by researchers (notes available including expert systems in economy) have a major role and undeniable to promote human decision maker in the process approximation of its absolute knowledge. In the sense that we propose and Apurva and Singh, what we called absolute knowledge actually is, we believe, a fair equivalent for what the authors invoke call "winsdom" and

"enlightenment"[1]. When referring to the knowledge pyramid structure proposed by Apurva and Singh and can be reformulated as suggested graphically in Fig. 3.

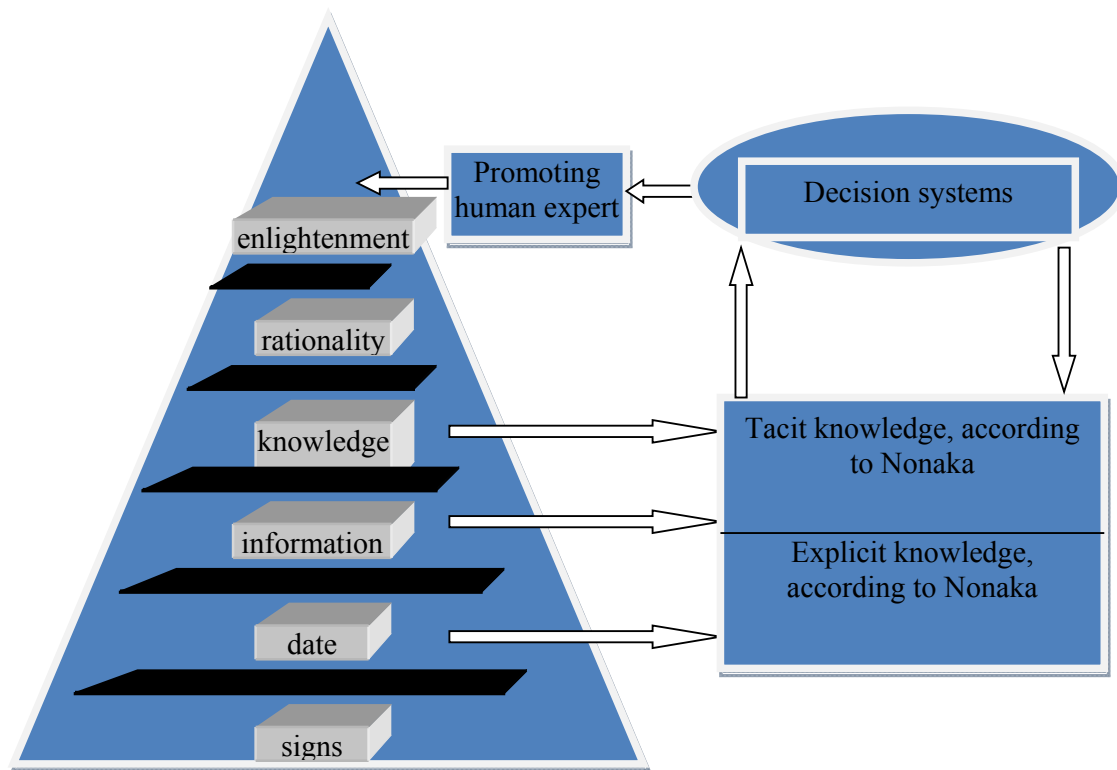


Fig. 3. Potential development of decision systems by recourse to two types of knowledge

Source: Adapted Iancu E, (2011) - Sisteme expert in contabilitate și informatică de gestiune, Ed. Politehnica, Timișoara

Obviously, we mean that what we have called "absolute knowledge" has always been and will remain a major challenge in the future, an ideal which the individual strives to approach gradually in the process of knowledge; indeed achieved this goal but it will not be possible at least for the foreseeable future for humanity [9]. As it emerges basic idea proposed by us in fig. 3 appreciate, however, that the potential development of decision systems in the future may include two distinct bases of knowledge, namely:

- A knowledge base that includes exclusive knowledge of the category called explicit knowledge (in this category include relatively quantifiable data, such as accounting information we process in November after the proposed expert system);
- A knowledge base that includes exclusive knowledge of the category called tacit knowledge (this category includes data relative non quantifiable, such as information from the experience of an accountant who takes the data from the balance sheet or balance, experience the decision-maker superior etc. in this case is necessarily resorting to fuzzy logic to allow the data to be processed simultaneously with the previous base by expert system).

All processes of purchasing, processing and conversion of knowledge to which we referred above will be greatly enhanced when users turn to computer networks.

In our opinion, decision systems can be defined as an operative tool that processes the explicit knowledge and tacit knowledge, a problem associated with highly specialized, intelligent solutions to provide human expert; taking account of these solutions, human expert would be able to gradually approach the so-called "enlightenment", that is the highest form of understanding for the problem.

5. CONCLUSIONS

Recognizing the importance of Knowledge Management will spur organizations understand the added value of information resources they own and find effective ways to reuse knowledge. How about 70% of organizational knowledge is kept in the minds of employees (tacit knowledge) and only 30% as outsourced (explicit knowledge) is necessary to "capture" the minds of employees, innovative ideas of individuals, groups and archiving in electronic form to provide total mobility.

The power of knowledge and the fact that the business environment is guided by a new motto - "Knowledge is power" - reflects current period of transformation in the economy, namely that top positions are occupied by those who have the knowledge (knowledge).

The solutions offered by Knowledge Management applications provide a major support and intercede transforming information into knowledge through action. The challenge maximum for a manager nowadays is managing to make a profit in the context of global competitiveness of outsourcing, partnerships inter-organizational, the labor migration, testing time-saving and various threats from both internal and external company. Despite these factors influence the course and conduct of business, managers must plan and implement the most appropriate KM practices allowing the company to operate efficiently and minimize information loss and "deposits of knowledge" held.

We conclude that the "raw material" that supports the achievement of decision systems consists of a large volume of information, which includes both explicit knowledge and tacit knowledge.

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