OVERVIEW OF THE NEWEST KNOWLEDGE MANAGEMENT INITIATIVES ASSESSMENT APPROACHES

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Abstract: Even if knowledge management practices and initiatives become more and more popular all over the world, there is not yet a general acceptance or standardized knowledge management assessment approach. The most utilized methods are the one based on the intellectual assets, considering that knowledge management implementation conduct to the development of such assets. Recently, there were developed methods, techniques and indexes especially designed to evaluate the impact of knowledge management and knowledge management systems initiatives over the company, the paper presenting these approaches.

Key words: knowledge management, assessment, methods

The most utilized methods to evaluate knowledge management and knowledge management system implementation are based on intellectual assets, considering that knowledge management implementation conduct to the development of such assets. The most popular methods are: Skandia Navigator, house of quality, intellectual capital index, intangible assets monitor, balanced scorecard, citatin-wighted patents, technology broker, inclusive valuation methodology, the value explorer. These methods are either used to evaluate the correlation between inputs-processes-outputs, or the cause-effect relation.

For the past years, the preoccupations for evaluating exclusively the effects and the of knowledge management (KM) solutions conducted to new methods, both quantitative and qualitative, the assessment of the effects representing one of the challenges of KM, as managers need proofs of KM initiatives' value in order to adopt them. These new quantitative methods consist mostly of indexes, but there is evidence that qualitative methods are more effective as knowledge is not material assets.

Thus, Roa (2005) developed five types of KM indexes in order to assess KM initiatives:

♦ indexes that reflect the technology – number of e-mails, online forums usage, site traffic, number of interrogations;

♦ indexes that reflect the process: time of answers at search, international standards certification conformation, increasing the number of interaction in real time;

♦ indexes that reflect knowledge: number of new ideas introduced by employees, number of new practices created, active communities of practice;

♦ indexes that reflect information about employees: degree of bound relationship with colleagues, importance feeling;

♦ indexes that reflect the business: reducing the costs, increasing the market share, increasing the productivity.

Beccera-Fernandez (2003) highlights the importance of combined evaluation – quantitative and qualitative, such as informal discussions with employees; semi structured interviews or structured interviews. As organizations become more experienced in KM usage, the proportion of quantitative measures increases.

Within the preoccupations for developing a knowledge-based economy and knowledge management, EU, through CEN (2004), developed also KM performance key indexes, such as:

♦ time to create new knowledge;
♦ contributions to knowledge bases;
♦ transfer and usage of best practices;
♦ number of identified experts;
♦ number of patents;
♦ employee' satisfaction;
♦ knowledge about clients complaints;
♦ knowledge about clients' satisfaction;
♦ proportion of employees with new initiatives;
♦ time to develop new ideas;
♦ percent of sales determined by new knowledge.

There are also used systems of indexes incorporated into guides of evaluation of intellectual capital, used in order to evaluate the performances of knowledge-based company, according to Nicolescu (2005), guides such the one elaborated by Patricia Pablos, the results being structured on three documents: report on intellectual capital, report over intellectual capital flows and memorium on intellectual capital.

Annie Green (2005) developed a dynamical model within which she represents the bounds between strategic objectives of knowledge management and the value of intangible assets, concluding that its value varies based on the degree of details of KM objectives.

In order to evaluate a knowledge management system implementation, seen as a complex software architecture that enables knowledge management processes, there are used direct methods to evaluate software applications, according to Ioniţă et. al (2004, p. 137) are: LOC method (lines of code) – number of code lines - or KLOC method (Kilo Lines of Code) – thousands of written code lines. The methods are based on determining the costs of development and effects of software/time unit type, considering also the aspects as: speed of development, memory allocated dimension, deficiencies on a certain time interval, number of documented pages, number of programmers that developed the product evaluated through the number of programmers/month (year).

The following indexes are thus developed, according to Ioniţă et. al (2004):

♦ productivity = KLOC/ number of programmers/month;
♦ quality = number of errors/KLOC;
♦ value = cost of programmers*KLOC;
♦ documentation = pages documented/KLOC.

Also, functional score method, according to Ioniţă et. al (2004, p. 138) allows determination the value of a software application through measuring its productivity from the point of view of functioning, ergonomic feature and utility. Indexes uses, according to Ioniţă et. al (2004), are:

♦ number of entries of users ;

♦ number of outputs of users: reports, error messages;
♦ number of on-line queries: inputs having as result on-line instant outputs;
♦ number of files;
♦ number of external interfaces.

U.S. Navy (2001) developed Knowledge Management Metrics Guide, the summary of KM Performance Measures for Personnel and Training, in form of outputs (first two) indexes and system indexes (the following eleven), being presented bellow:

♦ Usefulness survey
♦ Anecdotes
♦ Latency (response times)
♦ Number of downloads
♦ Number of hits to the site
♦ Dwell time per page or section
♦ Usability survey
♦ Frequency of use
♦ Navigation path analysis
♦ Number of help desk calls
♦ Number of users
♦ Frequency of use
♦ Percentage of total employees using system

Qualitative methods of success case studies is a method developed by Brinkerhoff (2003) and applied initially within human resources management in order to evaluate the effectiveness of investments in training. It offers a general framework for evaluating the impact of KM initiatives implementation over the organization's performances. The application of this method offers information such as "what worked, what does not worked, what significant results were obtained, what actions must be undertaken to obtain better results in the future", according to Brinkerhoff (2005, p.90).

The method is based on the hypothesis that the performance of the company may be increased in the most rapid and effective way by analyzing the most successful/unsuccessful KM case studies. It analyzes the factors that leaded to positive/negative performances after KM initiative implementation. Using a comparative analyze, there may be developed adequate strategies to obtain better performances. The investigation method and the interview methods are used in order to locate, prove and evaluate the case study.

The newest trend in assessment is based on fuzzy set and subtle sets utilization. Thus, Liebowitz (2005) developed a technique of evaluation using fuzzy sets, considering that the evaluators of the knowledge management system can judge the success of the knowledge management initiative on improving employee morale through looking at employee interaction. He proposes to create a fuzzy "employee morale" set by determining that an "A" grade would be "all employees are connected with everyone else in the organization" and an "F" grade is "no interaction."

Four evaluators give their respective opinions, and varying weights, as to the overall employee morale in the organization based upon focus group interviews. These weights should be normalized to add up to 1. A synthetic index will be draw up by using a weighted averaging method (i.e., multiplying the measurement result matrix with the weight vector), where after these results are in the forms of fuzzy sets which can be defuzzyfied into a crisp value from ten to zero, according to Chan (2003). The

defuzzyfied crisp number, would be the computed employee morale score, which incorporates the fuzzy sets and the opinions of the evaluators.

From all the above results that there is a strong interest in evaluating knowledge management initiative's effects, both using quantitative and qualitative methods, as knowledge management become more and more used by the companies as a strategy to obtain competitive advantage, considering the sustainable development and the limited feature of material resources versus unlimited feature of knowledge.

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