



Knowledge management in companies: tacit to explicit knowledge

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Abstract

Today, information technology have changed in business and engineering and affected on decision making and strategy planning, the information revolution lead to change on productivity and services. A way that converts information to knowledge can enhance power of performance in companies. Knowledge Management (KM) most important in this condition. It develops many opportunities for management, production and human resource. Creation, sharing and storing the knowledge can establish brilliant condition for integrate systems in developing country. In this paper an attempts has been made to explain processes of KM for using this system and develops profit for A private company with discovering information from employers and another resources. The results of this study indicate that consideration of trust in the transfer and sharing of knowledge and information, system of knowledge management in addition to improving lead to increase efficiency and strengthen competitive advantage for these companies.

Keywords: knowledge management system, companies in developing country, efficiency, strengthen competitive advantage

Introduction

Knowledge Management (KM) and discussion about it, it is not new issue in strategy planning and industrial engineering. This issue was introduced at 1990 decade and it was one of the important subjects in management. Peter Drucker, Nonaka and Takeuchi, Alvin and another strategist man emphasized to KM in organizations.

Peter Drucker says that knowledge is all information that be changed by something or somebody and developed background of action plan. Knowledge and information is the most important resource of compilation and exploiting in every organization, so companies for improving and decision making need to have active management knowledge and implementing KM system. (Mostafa Jafari, 2008)

Companies for establishing this strategy should discover all information system because it is necessary proviso for succeeding.

KM consist of two knowledge, tacit and explicit knowledge:

Tacit knowledge shows that sharing the knowledge between employers (knowledge carrier) in companies can be done from parts of organization to another part. So this knowledge exists in mind of employers.

This knowledge while be developed that establish motivation and sharing ideas among of staff because this process lead to new idea and developing team working.

Explicit knowledge is all of information that can be explained by staff such as procedure, instruction and etc. main shapes of knowledge can be develops with explicit knowledge.

Missions of tacit and explicit knowledge have different methods, but two methods can be establishing some advantage for companies and managers.

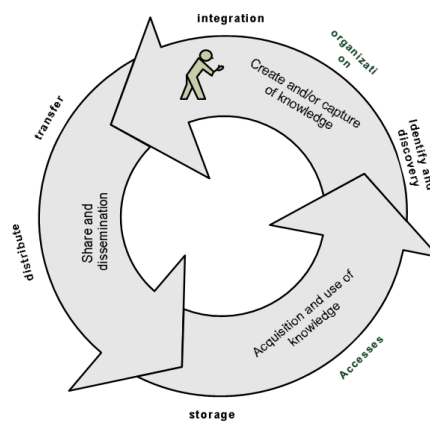


Figure 1: knowledge management chain

Knowledge management consist of 3 processes: (Figure 1)

- Creating knowledge
- Sharing knowledge
- Acquisition knowledge (Abbasi, 2008)

Figure 1 illustrates knowledge management chain. Two inputs and outputs are necessary to implement this process.

- Tacit knowledge to explicit knowledge
- Explicit knowledge to tacit knowledge

Aim of this paper is implement knowledge management in a private company and explain all steps of this system with some criteria about strategy planning.

Literature Review

There has been much discussion of the definition of knowledge and implementing of KM in organizations.

Alton Chua in his paper shows that between KM and technologists have relationship and technologists support KM process, he describes some method for implementing visualization to develop power of company. (Chua, 2004)

Tuula Lehtimäki et al focus on relationship between KM and project marketing activities, he believes that KM helps to understand knowledge category in project. (Lehtimäki, 2009)

Kuan Yew Wong et al say that KM is primary key in strategy planning and help on innovation and decision support, he shows that KM practice into daily work most important. (Kuan Yew Wong, 2006)

Pang-Lo Liu et al believes that KM effect on new product development strategy in Taiwan industries, he says that this performance become better with four methods of KM, these method calculated with statistical analytical model. (Pang-Lo Liu, 2005)

Wiig in his paper find that aim of KM search of different knowledge in variation operations. He believes that KM is great opportunity to achieve companies' goal in their strategy. (k.Wiig, 1998)

B. Rubenstein-Montano et all in their paper illustrated that system thinking for knowledge management establish many suggestions in companies , in this system discovering and writing knowledge between employers most important and should be evaluated with some criteria framework in companies. (Rubenstein-Montano, 2001)

Yukika Awazu wrote a case study paper and shows that test of KM system in technology alliance and succeed in this match. He says that KM with 7 steps implemented and this system key of arriving to goals of strategy. (Awazu, 2006)

M.N. Ravishankara et al in their paper say that organizational identification affect on KM system in India and India need to make a knowledge strategy for changing. (Ravishankar, 2008)

Abbasi et al shows that knowledge is one part of strategy planning around of organizations and also knowledge can develop economical programs. Background of knowledge-based organizations is created by these resources. Knowledge is most important in "competitive advantage". Intellectual capital or knowledge is Main capital of organizations. Intellectual Organizations are chief in the market. (Abbasi, 2008)

Hadian et al in their paper shows that discovering of knowledge in strength of material lab and creation four steps for changing tacit to explicit knowledge. He says that this system influence on efficiency and accuracy of test result. (hadian & doroud, 2014)

Neda khatibian et al in paper shows that measurement level of maturity between companies. She described KM with key process areas and all factor calculated by quantities' data. (KHATIBIAN, 2010)

Mohsen Allameh et al in paper KM most effect on cultural organization, this paper provided by questionnaires from Isfahan Staff University. It is about creation and sharing knowledge between employers. (Allameh, 2011)

Rod Dilnutt in his paper illustrated KM in 3 problems that influence on KM and it was great lead to brilliant IRR and benefit (economic analysis). (Dilnutt, 2002)

Nonaka and Takeuchi show that KM is one of the processes for acquiring. Tacit knowledge and explicit knowledge between employer's increase efficiency and productivity in framework. (Nonaka, 1995)

Knowledge management and its reflections on performance

The concept of knowledge management is discussed about collocation and developing system for informations. In this study knowledge is understood primarily as a fountain. It has some input and output, resulting of this system all of knowledge that exist in a private company and planning. Explicit knowledge consist of maps, procedure and etc, in company and tacit knowledge is all of information in mind of employers and these are discovered by some methods.

In this study firstly knowledge area introduced.

Software system	It covers all information about Design, official information, conclusion about projects in a private company
Operational analysis	All analysis about projects and employers with some criteria.
Data management	Feedback from top manager about performance
procedure	All satandard of working
maps	All maps about tehran with details about bus station and subway
Projects	Theorize about some branch in tehran city
employers	Knowledge that exist in their mind with great experience

Table 2: knowledge area

Implementing knowledge management

1. General background about A private company

A private company as an official company. Purpose of this company theorizing of some science about urban management and research about increase improving and quality for serving people.

This company has 340 employers that:

- 40 person are PHD degree
- 85 person are Master degree
- 190 person are bachelor
- 25 person are diploma

This company did not have great strategy about support system development but have great certain talents and it decided to established great system for collecting information and developing team working for responding of all request about urban management. With the KM, this capability is further augmented. Company is an example of a thriving small business, bringing demonstrable and tangible benefits to its clients. This in part, also justifies why the company was chosen for the case study.

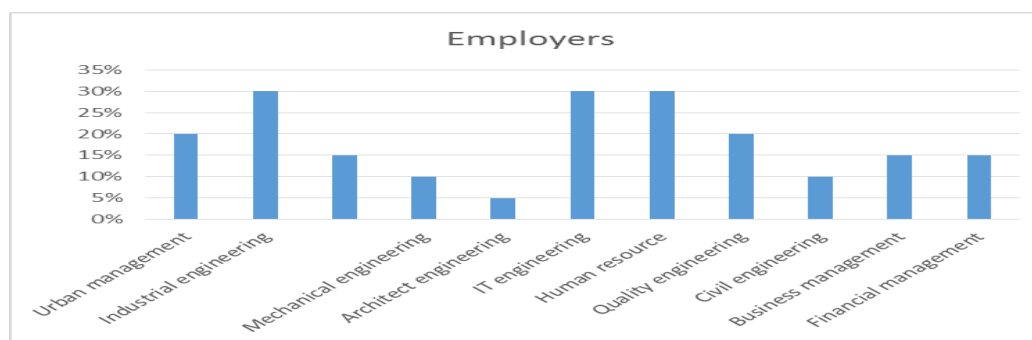
2. Collecting information

As table 3 knowledge area resource in A private company is divided by different branch and KM team grouping this system and collecting in software.



<i>dividing</i>	Software system	Operational analysis	Data management	Procedure	Maps	project	Employers (tacit knowledge)
Urban management	10%	20%	5%	15%	10%	20%	20%
Industrial engineering	10%	20%	20%	10%	0	10%	30%
Mechanical engineering	12%	8%	10%	20%	20%	15%	15%
Architect engineering	10%	5%	5%	20%	40%	10%	10%
IT engineering	50%	10%	10%	10%	10%	5%	5%
Human resource	20%	20%	20%	5%	0	5%	30%
Quality engineering	10%	10%	20%	20%	5%	5%	30%
Civil engineering	20%	10%	10%	20%	10%	10%	20%
Business management	10%	10%	10%	10%	0	50%	10%
Financial management	20%	10%	10%	30%	0	15%	15%

Table 3: dividing of knowledge area





4 person responsible for collecting this information and dividing as a table 2 and table 3. In addition a powerful search to found necessary knowledge and interview with employers for discovering tacit knowledge also All relevant documents such as word, html, excel as a general format are stored.(template 1)

Sample of knowledge area

Explicit knowledge

Introduction:

Overview about branch and model

Aim:

Explain target of this issue

Domain of activity:

Consist of which section need it and who can use this knowledge

Folder storing:

Explain of found folder in software and explicit knowledge

Essential application:

This section explain of this system and how can use about it

Tacit knowledge:

Expert of this knowledge area:

Explain who can use and work with this issue

Unique skill without any mistake:

Persons can work very great and have great experience about this issue

(This section after training about knowledge management, and training about this issue can be determined.

When this section can be succeed that company support these person and developing motivation as a sample of great employer.

Discussion:

The analysis of this case study allows that divided with great area and company go to team working instead individual work.

The primary key in this case study storing of knowledge and insurance knowledge without any mistake.

This system have some problem for implementing, firstly employers do not have time for helping and do not have motivation about working in addition employers had resistance to changing but KM team can be discovered knowledge and develops motivation among of employers.

Conclusion:

In this paper has tried to show all information about implementing KM and effect on this issue for A private company and planning:

1. Storing
According to this system about 350 project are collected with KM software and all employers can use this project to their working
2. Discovering
About of 14 person known as the expert employer and all discussion about every issue Should be studied by these people.

Totally this system shows that consideration of trust in the transfer and sharing of knowledge and information, system of knowledge management in addition to improving lead to increase efficiency, motivation, true performance and great complete advantage.

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