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## Knowledge Creating and Sharing Corporate Culture Framework

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### Abstract

Most knowledge - and particularly know-how - tends to be implicit, difficult to communicate in an easy form, and sometimes impossible to document, this is the tacit knowledge. Tacit knowledge provides competitive advantage for future successful companies. Making tacit knowledge available to others should be the central activity of the knowledge and innovation creating organization. A prerequisite for the evolution of tacit knowledge is an open culture in an organization, interaction with others. So, knowledge sharing is the fundamental means through which employees can contribute to knowledge creating, innovation, and ultimately the competitive advantage of the organization. But there are some barriers in the creation and sharing knowledge so that they become critical processes in corporate knowledge management. This paper proposes a framework approach, to integrate creation and sharing knowledge process, based on the resolution of the main walls which exist within both process, and which the company can exploit using different tools. The expected benefits of this approach include personal satisfaction and development, rationalization of decision-making processes by making them explicit, increase productivity, increasing knowledge creation and sharing culture and innovation.

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## 1. Introduction

The paper reports work on progress on the development and implementation of a framework for knowledge creating and sharing corporate culture, which are critical processes in knowledge management into organizational environments according Aslani (2012), Wang (2009), Nonaka (2009), Argote (2003).

Knowledge is defined by Davenport (1998) as a set of experiences, values, skills and information related to experts' viewpoints that provides a frame for combination and evaluation of information and new experiences. Davenport (1999) suggests that knowledge management has two distinctive tasks: to facilitate the creation of new knowledge and to manage the way people share and apply it.

According to Probst (2000) Knowledge management is a systematic process comprises a range of strategies and practices used in an organization to identify, create, organize, storage, represent, distribute, and enable adoption of tacit knowledge and explicit knowledge.

There are two types of knowledge: explicit knowledge and tacit knowledge. Nonaka (2000) and other authors such as Kikoski (2004) describe explicit knowledge as what can be embodied in a code or a language and as a consequence it can be verbalized and communicated, processed, transmitted and stored relatively easily. It is public and most widely known and the conventional form of knowledge which can be found in books, journals and mass media such as newspapers, television internet etc. It is the sort of knowledge we are aware of using and it can be shared in the form of data, scientific formulae, manuals and such like. Patents are an ideal example of explicit knowledge in a business context.

In contrast, tacit knowledge is personal and hard to formalize, it is rooted in action, procedures, commitment, values and emotions. Tacit knowledge is the less familiar, unconventional form of knowledge. It is the knowledge of which we are not conscious. Tacit knowledge is not codified, it is not communicated in a language, it is acquired by sharing experiences, by observation and imitation (Kikoski, 2004; Hall & Andriani, 2002).

Tacit and explicit knowledge are complementary, which means both types of knowledge are essential to knowledge creation. Explicit knowledge without tacit insight quickly loses its meaning. Knowledge is created through interactions between tacit and explicit knowledge and not from either tacit or explicit knowledge alone (Nonaka, 2000). Competitive advantage will only be gained if companies value their tacit knowledge, as explicit knowledge can be known by others as well. Tacit knowledge creates the learning curve for others to follow and provides competitive advantage for future successful companies (Kikoski, 2004).

Creating knowledge requires the existence of a person or group of people who come up with specific information, skills, abilities or competences in order to get new ideas, new concepts, innovative product or process, etc. Creating new knowledge is always linked to the processes used to knowledge sharing.

Knowledge Sharing is the communication process in which one or two parts of organization participate in knowledge transfer to develop new technologies, new products (Matzler, 2011; Yang Chen, 2009), In summary we could see the processes as a way to create knowledge.

Knowledge sharing is the fundamental means through which employees can contribute to knowledge application, innovation, and ultimately the competitive advantage of the organization (Jackson, 2006). Knowledge sharing between employees and within and across teams allows organizations to exploit and capitalize on knowledge-based resources (Cabrera, 2005). Research has shown that knowledge sharing and combination is positively related to reductions in production costs, faster completion of new product development projects, team performance, firm innovation capabilities, and firm performance including sales growth and revenue from new products and services (Hansen, 2002; Cummings, 2004; Arthur, 2005; Collins, 2006; Lin, 2007; Mesmer-Magnus, 2009).

Because of the potential benefits that can be realized from knowledge sharing, many organizations have invested considerable time and money into knowledge management initiatives including the

development of knowledge management systems which use state-of-the-art technology to facilitate the collection, storage, and distribution of knowledge. However, despite these investments it has been estimated that at least \$31.5 billion are lost per year by Fortune 500 companies as a result of failing to share knowledge (Babcock, 2004). An important reason for the failure of knowledge management systems to facilitate knowledge sharing is the lack of consideration of how the organizational and interpersonal context as well as individual characteristics influence knowledge sharing (Carter, 2001; Voelpel, Dous, & Davenport, 2005).

It has been shown in the knowledge creation and knowledge sharing stages that there are certain barriers, which are important challenges to optimize the organizational knowledge management. There is a strong relationship in between these two, as when the knowledge is shared (within different contexts), the explicit and implicit knowledge are also included, and within this exchange new concepts (which allow creating new knowledge) might arise, which are of key interest for an organization. Sharing knowledge constitute a strong skill to create knowledge if the company works in the appropriate way. In fact, these two stages should be well integrated, aligned and can provide simultaneous feedback. For this reason, the aim of this research is first of all to analyse the studies carried on up to date within the fields of creativity and knowledge sharing, in order to establish a framework to integrate both stages, based on the resolution of the main walls which exist within both stages, and which the company can exploit using different tools.

## **2. Knowledge creating process**

As Argote (2003) suggested, knowledge creation became one of the important outcomes of knowledge management in organizations. According to Nonaka (2000) organizational knowledge creation and conversion is based on two dimensions. The first dimension shows that only individuals create knowledge. The second dimension relates to the interaction between explicit and tacit knowledge. These two dimensions form the basis for defining the four processes of creation of knowledge:

- Socialization: tacit knowledge is converted into tacit knowledge during discussions, meetings.
- Externalization: tacit knowledge is converted into explicit Knowledge and outlined in documents, manuals, etc.
- Combination: explicit knowledge are converted into another form of explicit knowledge
- Internalization: explicit knowledge is converted into tacit knowledge by individuals.

The four ways determines a spiral of knowledge conversion without beginning or end. This continuous and dynamic process is rooted in people's behavior, the main agents that create knowledge. For example, when people try to combine explicit knowledge (this happens, for example, when someone uses mathematical formulas and physics to solve a complicated problem) they can at the same time, to discuss with their colleagues as exchanging tacit knowledge with them. Instead, they can visit different forums to find solutions, the forum will have to outsource or to explain the problem, seeking help. Nonaka consider a model consisting of five phases for the creation of organizational knowledge. The five phases are:

- Sharing tacit knowledge: correspond socialization.
- Creating concepts: knowledge shared is converted into explicit knowledge by constructing new concepts.
- Proof of concept: the justification for new concepts allow the organization deciding whether continued.
- Building a model: the concept is transformed into a model, prototype or operational mechanism.
- Dissemination of knowledge: at this stage, the knowledge created is spread throughout the company.

Making personal knowledge available to others should be the central activity of the knowledge and innovation creating organization. It takes place continuously and at all levels of the organization. Through

these interactions an organization creates a knowledge process, called knowledge conversion. A prerequisite for the evolution of tacit knowledge is an open culture in an organization which supports innovation. Interaction with others, as opposed to isolation is important if knowledge conversion is to take place. It is found common characteristics among successful tacit knowledge conversion companies such as resolution of ambiguity through communities of practice, tacit complicity among employees, informal matrices of relationships among employees and reliance on collective knowledge (Stover, 2004).

So, a climate of openness and trust amongst organization members is the basic condition that allows tacit knowledge to be created, shared and used in the innovation process. Sharing tacit knowledge will be more successful in informal settings than in formal ones. Therefore, it is important for the management of organizations to cultivate a commitment to motivate the creation of tacit knowledge, and to create an atmosphere in which organization members in an organization feel safe in sharing their knowledge.

### **3. Knowledge sharing process**

Enabling knowledge sharing among individuals in organizations is fundamental to innovation and organizational success. Knowledge sharing has been identified as a major focus area for knowledge management. The importance of this topic lays in the fact that it aims to link the individual level, where knowledge resides, and the organizational level, where knowledge is applied and attains value.

This dichotomy between the individual and the organizational level causes that, in practice, the integration of individual knowledge into organizational knowledge encounters many barriers (Riege, 2005) rooted in both the individual and the organization such as: lack of time to share knowledge; concern about hazard job security; little awareness; dominance of explicit knowledge over tacit knowledge in sharing; inadequate capture, evaluation, and communication of previous mistakes that may improve individual and organizational learning influences; differences in experience levels; lack of interaction, social network; poor communications and interpersonal skills; age, gender, cultural, and educational differences; little trust to the accuracy and credibility of knowledge due to the sources. Some of these factors have the individual reasons and some have other reasons related to environment of organizations, cultures and etc.

So, it is important to remove most barriers. This means in detail that organizations have to focus on the so called human-related factors like motivation, commitment, hopes and rewards, which is a combination of an intrinsic and extrinsic value system. Employees must be given the time, space and opportunity to transfer and therefore share tacit knowledge which is transmitted verbally. This is supported by the culture and organization structure of a company, through the decision making process, HR policies, performance measurements etc. (Cook, 2004). These success factors are also mentioned by Hall (2005), who strongly underline a fit between the reward systems and the organizational roles and structure, along with socio cultural factors such as culture, power relations etc. as well as industry dynamics. Good relationships between sender and recipient which is the precondition for planned, formal, informal and coincidental communication. The use and transfer of tacit knowledge will depend on the behavior of the management leaders as role models and to offer reward for imitation. Trust and openness between sender and receiver will often result in automatic absorption which must be backed up by the whole organization structure of the firm. Also Cavusgil (2003) vote for mutual trust and frequent and close interactions within and between organizations. Companies with great collaborative experience will benefit more than others. Organization structures have to be modified in different industries so that the organizational structure of a company or a department supports transfer and transmission of tacit knowledge in the best way. Li (2003) recommend identifying knowledge hierarchies in order to efficiently and effectively explore the transfer of tacit knowledge within an organization.

Chen (2011) studied to understand the organizational and personal factors motivating employees to share knowledge. This study shows that internal marketing - Internal Communication, Leadership, Management Support, Inter-departmental Interaction, Training and Openness-, and organizational culture- Trial and Innovation, Cooperation and Trust, Fairness, Social Network, Open-mind and Participation- influence Knowledge Sharing attitudes - Self-worth, Symbol of Power, Expected Return - and perceived behavioral control - Facilitating Environment, Self-efficacy.

The behavioral variables of individual level play an important role in the KS in organizations. While the behavior does not happen accidentally, it depends on different variables in the levels of individual, group (team, communication, power, leadership, and etc.), and organization (structure, culture, technology, and etc.). Therefore, consideration of relationships among these variables with KS and the prioritization of them would help to KS diffusion in organizations.

Due to the importance of behavioral variables in KS, also the role of KS in organizational KM, the development of a new and innovative framework based on theories of organizational behavior is needed to expand the scopes of researches and applications. Behavior of individuals, groups, and structure within organizations are considered to improve the organization's effectiveness in the organizational behavior science (Robins, 2009). Also in individual level, this science considers to the behavior of the personnel and staff in organizations.

#### **4. Framework proposed**

As it has been shown in the previous sections, knowledge sharing is a key process while creating knowledge. It promotes innovation and creation of values within a company. However, there are certain problems while creating a sharing knowledge culture within a group or organisation, which could be approached from different angles such as organizational, team or individual level.

With the proposed framework we want to give an approximate solution to these problems, by establishing the sharing-creation (as a cyclic process and where there are strong feedbacks) as the core of the knowledge management systems. We want to promote individual competences to create a new (knowledge transfer) culture starting from the individual and going up through the team to the organisational level. In addition, this framework pretends to be an approximation to the processes to create knowledge within company environments and to share knowledge.

In the following section we explain the framework core process. In addition we describe the different stages with compose it and which constitute an approximation model to standardize processes in order to create and share knowledge within an organization. Organizations do not often have a documented processes for explaining how to share knowledge. Therefore this framework aims to be a framework with this target.

##### *4.1. The framework core process for creating and sharing knowledge. Establishing a cycle for creating values for a corporation*

To date, most of the research within corporations has considered separately the knowledge creation stage and the knowledge sharing stage. The lack of efficiency within this stages of knowledge management is likely due to a lack of alignment and interaction between the sharing and creation processes. Therefore, It is necessary to integrate these stages, in addition to a strong feedback in between them as well as alignment following the company targets, as these are the most important parts to develop new knowledge, create value for the company and establish an adequate procedure for sharing and creating knowledge. Establishing an environment where sharing knowledge is promoted will help to develop new ideas, which will turn into new knowledge which can be also potentially shared and also

promote other new ideas, which can be incorporated as a new knowledge and applied to specific sectors to increase productivity. Therefore, this generates a feedback process between the two stages, this is why it is important that both are aligned.

Within this cyclic process, we propose different stages which focus on the individual and the different competences that an individual can develop within an organization.

As a standard competencies model, which can be developed by an individual within a company, we chose the ICB (IMPA Competences Baseline) model from the International Project Management Association (IMPA). In this model most competences which can be developed within the project management (including contextual and behavioural competences) are very well established. It explores 46 competence elements, covering the technical competence for project management (20 elements), the professional behavior of project management personnel (15 elements) and the relations with the context of the projects, programs and portfolios (11 elements).

Each of the stages is guided by a series of questions, which are considered necessary to reach the desired aims explained in previous sections. The questions are developed depending on the maturity of each individual, in terms of her/his self knowledge related to her/his skills, so that the process could be sped up in the case that the level of maturity is high.

There are different environments where this framework could be applied. At the team level, the unit level, the area and division level and at the global organization level. The ideal situation is to start at the team level, and where this methodology is well developed at this level to upgrade to higher levels so that the method will be established at the organization level as process integrated within the dynamics culture of the company.

#### *4.2. Identification of competencies which need to be changed or optimized at the individual, team and organizational level*

The aim of this stage is to provide a collaborative working environment, where the knowledge can be shared in an effective way so that new knowledge is created. With this purpose we propose the identification of competencies that "should be changed" as an starting point. This requires a previous and rigorous observation process.

Once these competences are identified, it is adequate to boost them, using different learning methods such as workshops, starting from the individual level and finishing in the organizational level. Organizational knowledge acquisition involves knowledge amplification and expression of individual company level, so that they are internalized in the firm knowledge base. Organizational knowledge acquisition involves knowledge amplification and expression of individual company level, so that they are internalized in the firm knowledge base.

We propose different individual questions to help the development of this stages: which are the main drawbacks found while sharing knowledge? Does it depend on the context? Does it depend on the people? Does it depend on the organization?.

#### *4.3. Identification tacit knowledge*

The aim of this methodology is to be able to extract the tacit knowledge that people bear and share with other members of the team, using the workforce as a storing means. We refer to all the different individuals associated to different projects, areas and multidisciplinary teams with are part of an organization. Within an organization, each individual within develops different tasks daily. This involves the use of different personal skills, which belong each particular individual, and which have been acquired by using different methods that perhaps only each individual understand. A personal assessment

is proposed through several questions, which will be chosen so that each individual can identify their skills.

The aim of identifying each negative and positive skills for every particular individual is to allow the person to perform, boost and transfer the positive skills to the rest of the team, and to identify the negative ones and learn from others so that he/she can improve them. This process will enhance her/his skills which will have a positive feedback on his/her own productivity.

We propose some interesting questions to reach the targets of this stage: Which are your daily tasks?; Which are your strongest skills?; Within your daily tasks, Are there any tasks which are very easy for you to develop, or where you stand out?; Which your favorite of those tasks?; Is there any task which you don't perform because you don't feel identified with it?; Which of your daily skills are the hardest to perform?; Do you consider that those difficult tasks could be performed in a different way?

#### *4.4. Analyzes tacit knowledge*

The aim of this stage is that each individual would be able to get how was able to develop her/his competences/skills by means of questions that let them to recreate situations, iterative activities in his/her personal and professional life and could be sharing with others members of the team and the whole organization. There are some questions which could be use as a guideline for this stage: what would be the simplest problem that could serve as an example of this skill (think about your professional or personal life)?; To which activities do you associate each skill?; Could you give an example which relates a given activity with your skills?; Could you isolate that activity to create a building process of that skill? Think about how you started the main activity which is related to that skill.

#### *4.5. Knowledge creation*

Translation of tacit knowledge into a form explicit or understandable called encoding, facilitates other knowledge management processes, such as storage or dissemination of knowledge

This staging proposes a defined structure so that the knowledge (held by each individual) could be transferred to others members of the team and the whole organization. For this, a good practice is to prepare a report, in order to this implicit knowledge could be sharing with new workers into the organization. The objective is create a process for transmit implicit knowledge.

In this stage we intend to develop a performance to transfer the implicit knowledge related to an activity that an individual has extracted though coaching in the previous stages. The performance needs to have certain characteristics so that the person can transfer her/his implicit knowledge clearly and accurately. Among these characteristics are: to establish a statement which allows to define the skill development process, to explain the skill development process extracted from the environment, to perform it within a time no longer than 30 minutes.

#### *4.6. Selection, application and evaluation of Knowledge creation*

An important amount of new knowledge can be extracted from the previous stages. However, only some of it will be adequate for the company. Therefore, a filtration/selection stage is needed to align the knowledge with the organizational context. For this a deep knowledge of the company, its processes and projects is necessary to achieve the best selection.

Once the knowledge is selected, it needs to be applied to different projects and processes in order to evaluate its contribution to that particular project or process. For this purpose it is adequate to establish

productivity indices to confirm an increase or decrease in productivity and allow an assessment within a convenient deadline.

Once the application period is finished, the assessment is carried out using the productivity indices. If the productivity has increased the knowledge is validated and excluded if the productivity decreases.

Once the knowledge is validated, it goes through the knowledge management stage, in which the knowledge is organised within the informatics knowledge management systems in order to share and apply this knowledge within the organization.

In order to achieve this framework, not only tools which allow to reach the aims proposed are needed, but also training. Between the tools that could be applied, the most adequate is the organization of periodic workshops at the different levels which allow to build up a culture of sharing and creation of knowledge within a company. These workshops will allow to direct and work with the knowledge, to build a communities which work with knowledge, to redesign and retain the knowledge, to build and pass on skills, to evaluate knowledge efficiency and finally to build a culture which supports the knowledge. These are the personal Creating and Sharing knowledge workshops, which allow to extract the personal knowledge from each individual, each group and the company as a whole discovering the natural knowledge that every individual has through a series of questions. By doing this the can discover which kind of activities led to those skills/knowledge, isolate them (if possible) from other environmental variables and also perform them in a short amount of time.

## 5. Conclusions and future work

We have develop a framework which allows to improve knowledge creating and sharing corporate culture, to extract the implicit knowledge which every individual belonging to a company has. Its aims is to share the knowledge with others, create new knowledge and get to build teams more multidisciplinary and collaborative, to establish synergies within the team and build highly productive environments which ultimately will boost the efficiency within the project management field and within the whole company.

One of the object of this research is testing this new approach in different corporate environments. Therefore, the next step in this research will be the testing of the proposed framework in organizations of different kinds in order to extract conclusions about the efficiency in the methodologies across different sectors and environments.

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