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## Knowledge Management System: Organizational Innovation as a Solution for Dispersed Work, Tacit and Common Knowledge

Fadjar Setiyo Anggraeni

Universitas Wahid Hasyim, Indonesia

Correspondent: [fsanggraeni@unwahas.ac.id](mailto:fsanggraeni@unwahas.ac.id)

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Received : January 9, 2024

Accepted : February 19, 2024

Published : February 28, 2024

Citation: Anggraeni, F, S. (2024). Knowledge Management System: Organizational Innovation as a Solution for Dispersed Work, Tacit and Common Knowledge. Sinergi International Journal of Economics, 2(1), 13-24.

**ABSTRACT:** When managed well, an organization's workforce's diversity of abilities may be a huge strategic advantage, fostering innovation and aiding in problem-solving abilities. Employers may encounter difficulties when employees work remotely and possess implicit knowledge. It is possible to transform seemingly ordinary knowledge into extraordinary knowledge when trustworthy management is in place. Using a qualitative descriptive method, this research attempts to examine the best knowledge management concepts, particularly those linked to tacit knowledge management. In order to obtain relevant and reliable results, we employ discourse analysis and narrative analysis procedures after accumulating data from literature, articles, and prior study notes using documentation techniques. This will also assist in developing the concept into a large, clear, and understandable thought. These results suggest that only in organizations with robust knowledge management systems can organizational innovation and issue solving take place. These results support the knowledge management hypothesis and offer further evidence that entrepreneurs can overcome the challenges posed by distant workers who possess tacit knowledge by maximizing knowledge management.

**Keywords:** KM System, Solution, Innovation, Tacit Knowledge



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### INTRODUCTION

The process of delivering and enhancing individual knowledge creation, crystallising it, and integrating it with the organization's knowledge system is known as organizational knowledge creation. More than explaining how organizations maintain tacit knowledge through social practices, the goal of organizational knowledge creation theory is to explain organizational creativity, change, and innovation. Because it seems that organizational creativity plays a mediating role and leads to strengthening organizational performance (Riaz & Hassan, 2019). According to the notion of organizational knowledge production, practitioners interact with both new and

established practices, forcing them to consider the "rules" governing their performance (Nonaka, 1994).

Employing distributed teams to complete tasks presents unique difficulties and issues for the company. Knowledge creation will be facilitated by technology that gives geographically distributed organizational members access to knowledge (Assudani, 2009). However, not all technologies enable knowledge exchange, only technologies that facilitate dialogue such as text messaging and video conferencing. Meanwhile, email does not facilitate the exchange of tacit knowledge (Castaneda & Toulson, 2021). Although knowledge creation and knowledge sharing involve a lot of emotions in the human mind (Hornung & Smolnik, 2022), and it can be involved in any part of knowledge management, starting from the KMS interface and its usability (Wang et al., 2017), to the way employees interact and share or hide their knowledge (Abdillah, 2021; Ain et al., 2022; Peng et al., 2020). A lot of knowledge is obtained either via knowledge.

While not very useful, the discussion of different data, information, knowledge, and other relevant hierarchies nevertheless supports knowledge management. Hicks et al., (2006) established a five-level knowledge management hierarchy that incorporates individual and innovation levels. This hierarchy serves as a tool for assessing knowledge management activities inside organizations, highlighting the connections between various information sources and offering an evolutionary trajectory for these efforts. In addition to offering direction to the chief knowledge officer, the five tiers of the knowledge management hierarchy facilitate the knowledge life cycle. They can be used to plan and oversee the development of knowledge assets inside the company, inventory knowledge assets, and assess knowledge management strategies. To help managers interested in knowledge management, this article aims to improve the five-level KM hierarchical structure.

Little is known about how knowledge becomes a strategic resource, despite the knowledge-based approach of strategy having a highly developed understanding of the principles of competitive advantage (Nag & Gioia, 2012). How they apply that information to turn ordinary knowledge into unique and unusual knowledge in order to get a competitive edge. It is necessary to have at least two things: (1) the executive knowledge schema, which is the belief of top managers regarding knowledge as a resource; and (2) executive scanning, which is the process by which executives look for or scan knowledge. According to Nag and Gioia (2012), as knowledge is transformed into strategic resources, new ideas about how CEOs apply unique knowledge-specifically, by modifying knowledge and knowledge argumentation-are also discovered.

The various things described above raise big questions to find out what executives do in managing knowledge as a strategic resource to achieve competitive advantage. To what extent do executives use technology to facilitate geographically distributed team members' access to organizational knowledge?

## **METHOD**

This essay is a work using a qualitative descriptive method written with a creative, hermeneutical, conceptual, exploratory, and analytical approach, not an empirical approach. We used documentation methods in data collection referring to a series of articles studying knowledge

management (KM), with a focus on businesses whose employees have tacit knowledge, then we used narrative analysis and discourse analysis steps to obtain relevant and valid findings. This will help the idea become a big idea that is comprehensive and easy to understand.

## **RESULT AND DISCUSSION**

### **Knowledge Management as a source of Solutions and Innovation**

Knowledge becomes more useful when management recognizes the value of creativity that makes it possible to transform information into something else. Thus, independent learning has the greatest influence on the creativity of individuals with accumulated work experience (Tien et al., 2019). Understanding the relationships between several system elements leads to new interpretations and this means a different level of knowledge at which the value of new observations is created. This relationship shows that the highway of innovation depends on the development of knowledge (Carneiro, 2000). Temporary that concept of knowledge conversion as one that is fundamental to theories of organizational knowledge creation and important for organizational science, because it explains how new ideas emerge in innovation, not just how individuals utilize rich practices and gain tacit knowledge from these practices. Management in finding solutions or making decisions and carrying out innovation requires complete and valuable knowledge. Valuable knowledge comes from data and information resulting from reliable knowledge management (Hicks et al., 2006). Findings Hock-Doepgen et al. (2021) shows that external KM features stimulate business model innovation (BMI). This relationship is strengthened in companies with high risk capacity. While internal knowledge is only enough for organizations with a low willingness to take risks.

The integration of different data sources will supplant obsolete commerce information, and after that apply outside information as a unused trade show arrangement. In this case directors are energized to combine forms with recently changed data to unravel current issues, test with imaginative thoughts, and increment organizational viability (Hock-Doepgen et al., 2021). KM itself must give an data base for forms inside the organization in a broader point of view (Seyr & Hoffer, 2021) so that the choice of arrangements gets to be more shifted. In the interim, the discoveries from (Nghah & Wong, 2020) show that information administration encompasses a positive impact on competitive technique by leaning more towards a separation technique, compared to a fetched administration procedure that's adjusted with their commitment to investigate and advancement and development.

The role of the solution is to make decisions and implement them. A solution is defined as a shareable resource that contains a complete solution for a specific task and the authority to act. This implies complete and verified solutions for decision-making contexts combined with local data. Expert systems are an example of a solution-level system, because they contain all the knowledge necessary to solve the problem, access to local data, and the ability to make and execute decisions. A good decision making system is determined by individual knowledge and the existence of facts in the form of data, documents and data bases. Management will be correct in making decisions or finding complete solutions to problems that the organization desires if the decision-making system runs well (Hicks et al., 2006).

Innovation occurs when knowledge from any level is combined with strategy, facilitating reengineering processes, increasing organizational efficiency, increasing organizational effectiveness, or creating knowledge-based goods or services. Innovation dimensions include stakeholder contribution, knowledge reuse, mutation of existing knowledge, exploitation, outcome measures, and operating context (Edvinsson et al., 2004). Innovation can result from the integration of resources from various levels with organizational strategy. Innovation level and individual level are closely related to the intellectual agility and competency sub-divisions, respectively, of human capital by Roos et al. (1997). The importance of innovation for organizations causes knowledge to need to be protected, especially because it is closely related to the process and output of innovation itself (Nghah & Wong, 2020).

### **Unifying dispersed knowledge becomes intensive knowledge**

Despite increasing industrial use of distributed teams, understanding of how to manage knowledge effectively and efficiently in distributed structures still lags behind (Assudani, 2009). Assudani (2009) raises the issue of understanding the important dynamics of the fit between distributed versus face-to-face organizational structures and strategies for managing dispersed knowledge through codification versus personalization strategies. Virtual work is not necessarily beneficial for all types of distributed knowledge work. To realize the benefits of geographic distance, organizations need to consider their competitive strategy and the outcomes they care about.

According to (Assudani, 2009) technological resources and social interventions are needed for managers to carry out knowledge work in various types of knowledge-intensive organizations. The use of information technology to extract knowledge from the individual who developed it, make it independent of the individual, store this knowledge in electronic repositories and reuse it for various purposes conducive to performing those tasks (Hansen et al., 1999). In fact, the results of the study (Busho & Lena, 2020) show that technological orientation has a full mediating role in this relationship. Realized absorptive capacity has no impact on exploitative innovation if there is no technological orientation. Various studies have proven that the current era of digitalization will provide an increasingly strong and challenging environment for organizations that have a good strategy for utilizing knowledge and technology that will produce creativity and innovation that is superior to their competitors (Nghah & Wong, 2020). Moment this new, disruptive combination of technology and markets is largely supported by advances in information technology such as artificial intelligence, big data, and so on (Lee et al., 2018).

An organization can be called knowledge-intensive when knowledge in the form of an esoteric skill provides strategic advantages for the organization (Starbuck, 1992, Hansen et al., 1999). Categorization gaps among distributed workers depend on different types of knowledge strategies intensive (KI) applied. KI follows two types of competitive strategies: codified/ standardized, and personalized/highly customized/may require cross-functional and heterogeneous teams to innovate (Hansen et al., 1999). The gaps that occurred in the traditional information era were resolved with the presence of information technology which has acted as a glue between various scientific or technological disciplines. However, with the introduction of artificial intelligence today, the separation of intelligence and recognition and the blending of virtual space and real space are no longer a problem (Lee et al., 2018).

### **Convert tacit knowledge becomes explicit knowledge**

The concept of "tacit knowledge" is a cornerstone in the theory of organizational knowledge creation and includes knowledge that is unarticulated and tied to the senses, movement skills, physical experience, intuition, or implicit rules of thumb. Tacit knowledge differs from "explicit knowledge" that is spoken and captured in images and writing. The concept of "knowledge conversion" explains how tacit and explicit knowledge interact in one (Nonaka & von Krogh, 2009) Explicit knowledge can be accessed through awareness. Whereas knowledge related to the senses, tactile experience, movement skills, intuition, unarticulated mental models, or implicit rules of thumb is " tacit ". In fact the core findings of the study conducted, indicate that the emphasis placed by R&D managers on maintaining a high level of social interaction within their teams, also special efforts are required to maintain interaction at a level sufficient to encourage the generation and transfer of (Cecchi et al., 2022) tacit knowledge.

According to, Polanyi (1966) tacit knowledge/knowledge is impossible to communicate to others through articulation and it ranges from knowledge for inherent physical functions to insight or inspiration needed for acts of creativity. Whereas explicit knowledge is articulated, and therefore can be communicated to others. However, he also recognized that prior knowledge of true or partially correct conceptions of the nature of things is necessary for scientific discovery and investigation. Organizations need to realize that knowledge initially exists in each individual and in order for it to become the property of the organization, the organization must facilitate, support and stimulate individual knowledge to become organizational knowledge through dialogue, discussion, sharing experiences and observation (Alonso et al., 2008; March, 1991; Tushman & O'Reilly, 1996). Individuals are the most important component of the model. They are the ones who share what they have learned with others. However, individuals must have special attributes and be involved and devoted in order to produce and contribute freely (Alainati, 2022). Efforts to convert tacit knowledge becomes explicit knowledge, usually using metaphors that can be understood together. For example, the results of observations and observations of new machines that can be changed are in written form that is easy to understand, and can be discussed with colleagues.

Scientific knowledge, by definition, can be shared among scientists. Meanwhile, to make scientific progress, scientists must have tacit knowledge in preparing and calibrating their equipment, organizing the laboratory, documenting experimental steps, selecting materials, using the senses to interpret results, and so on. However, scientific progress also assumes that scientists have awareness of explicit knowledge, such as conjectures, theories, research designs, analyses, and conclusions. So ultimately, scientific knowledge with its shortcomings in "representing" reality also shapes the individual scientist's search for new knowledge through tacit understandings that, in turn, feed into the social processes of doing science. As a social process, science provides scientific knowledge that is passed on to peers who receive it as such, and who are faced with "the same uncertain reality" and, therefore, can test this knowledge.

Thus, basically, "tacit" knowledge can be transferred into explicit knowledge, by rewriting details of experiences, habits and results analysis by experts, so that it can be studied by the next generation.

### **Changing common knowledge becomes uncommon knowledge**

Knowledge can be both a strategic resource and a non-strategic resource, depending on how confident the executive is and his or her ability to perform scanning. According to Hult et al., (2006) strategic resources must also be scarce, meaning that these resources are rarely found and replacements cannot be obtained. Strategic resources must be replicable, which means it is difficult to purchase or copy the resource. Managers can create uncommon knowledge when rivals have access to similar knowledge that is generally available to gain competitive advantage and innovate. The method is that managers must use knowledge schemas and scanning orientation to change common knowledge through the practice of using non-common knowledge (Nag & Gioia, 2012).

Knowledge exists both actually used and unused, through actions taken to overcome challenges or opportunities, to try to create uncommon knowledge and therefore competitive advantage. The use of “uncommon knowledge” as a label for this dimension is because our informants consistently refer to the “judicious” or “intelligent” application of knowledge, making the work performed more “knowledgeable” than that of their peers, thereby helping to develop insight and ability. unique that can give him a competitive advantage of some kind. Two different forms of using uncommon knowledge are “knowledge adaptation” and “knowledge addition”.

Knowledge adaptation, an uncommon mode of knowledge use that captures activities that provide the ability to apply knowledge to change and improve specific operational activities. This knowledge adaptation involves using knowledge to develop new solutions to specific problems (Nag & Gioia, 2012). The initial adaptation process allows the importation of extant operational capabilities from elsewhere, ensuring both short-term survival and providing a base from which to develop more explorative and pathbreaking activity in the innovation stage. The emphasis here is on finding solutions to local problems using ingenuity and creativity (Dixon et al., 2014). This exploratory adaptation involves experimenting with new approaches, ideas, technologies, and discovering new practices (Jansen & Volberda, 2003). In some organizations, this mode of knowledge use is seen as the ability to "change" standard technology, augmentation. An uncommon mode of knowledge use that involves problem solving with an orientation toward reflection, criticism, and questioning, in a way that generates new understanding by members of the organization. The emphasis here is less on resourcing a particular problem and more on using the organization's existing expertise and skills to go beyond the given problem to generate new insights, reframing, and enriched understanding that lead to principles for viable future action. benefit organizational competitiveness.

In organizational knowledge creation it is very important to investigate the sources of organizational knowledge and the sources of fragility in organizational knowledge creation. Political understanding is very necessary for management in organizations, the ability to adapt to a changing environment (Nonaka et al. 2006). Given that the creation of organizational knowledge entails risks, costs and personal rewards, the issue of motivation of organizational members to go beyond their social practices and the knowledge required in running a business efficiently needs to be considered (Nonaka & von Krogh, 2009).

In order to improve current practices, organizations must establish formal procedures, provide more training opportunities, allow time to participate in knowledge sharing and codification, and invest in improving internal communication and collaboration for knowledge sharing (Hwang, 2022). Collaboration is the key to the success of innovation in both financial and non-financial fields, in addition to utilizing employee knowledge Click or tap here to enter text..

### **Contesting Five -Tier Knowledge Management Hierarch ( 5TKMH )**

5TKMH includes all KM systems classified by Earl (2001). The individual level includes the socio-cultural components of the organization. The fact level contains the database and data warehouse of the organization. The 5TKMH influence level contains the KM components contained in the organization, the commercial school, and the groupware contained in the organization. The solution level contains the organizational systems and best practice components of the organization in Earl's taxonomy, and the innovation level contains organizational strategic and spatial organization. In short, 5TKMH includes all KM organizations identified by Earl, (2001).

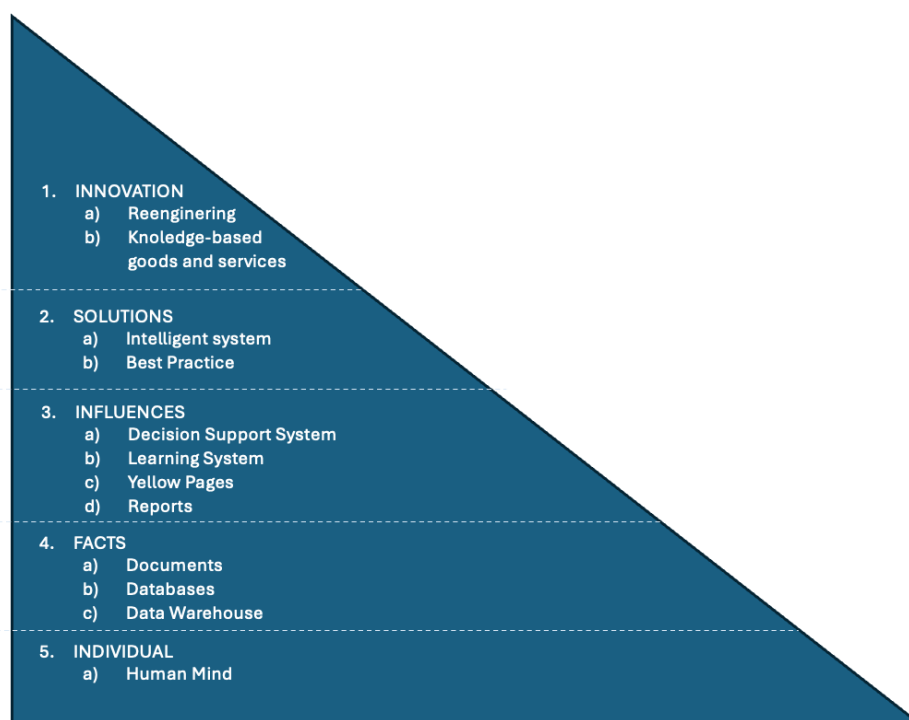


Image: The five-tier knowledge management hierarchy

Source: Hicks et al. (2006)

In our opinion, KM should not form a hierarchy as described Hicks et al. (2006), but rather form a process which is divided into three parts, namely input, process and output. KM input includes the knowledge of individuals or groups within the organization and databases owned by the organization, including databases from outside the organization. The process of producing solutions, decision making and innovation is produced from a system knowledge management, for example applications, DSS, or learning system.

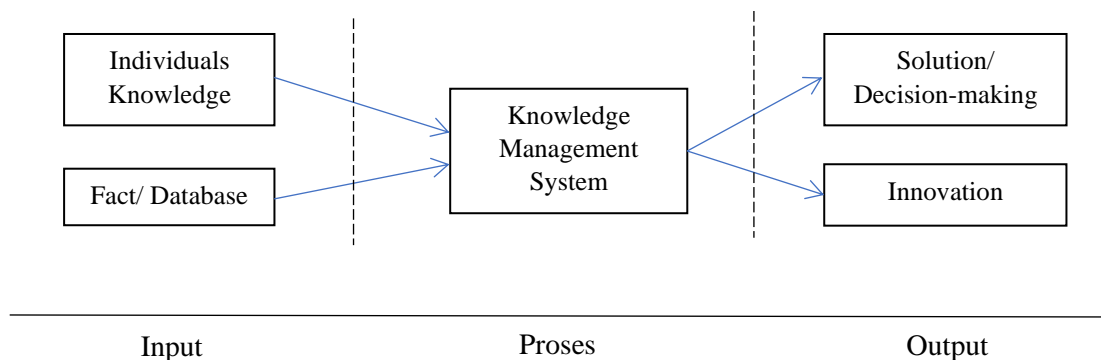


Image: Knowledge Management Process  
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### Reorienting the Use of Uncommon Knowledge

The two main elements of an executive's knowledge schema are closely related – first, beliefs about the significance of knowledge (significance for the strategic health of the organization) and second, beliefs about the value of the knowledge source (judged usefulness to the organization). The significance of knowledge consists of two sub-themes, namely, knowledge that is considered critical and/or distinctive is important knowledge in the eyes of key decision makers. Valuable sources of knowledge consist of three sub-themes; these are beliefs about the external accessibility of knowledge, the personal competence of focal managers in retaining relevant knowledge, and/or the value of knowledge of lower echelon employees. Differential emphasis in these subthemes tends to be associated with the amount (intensity of scanning) and quality (proactivity of scanning) of subsequent knowledge searches, as well as with how knowledge is then used within the organization (either through knowledge adaptation or knowledge augmentation ).

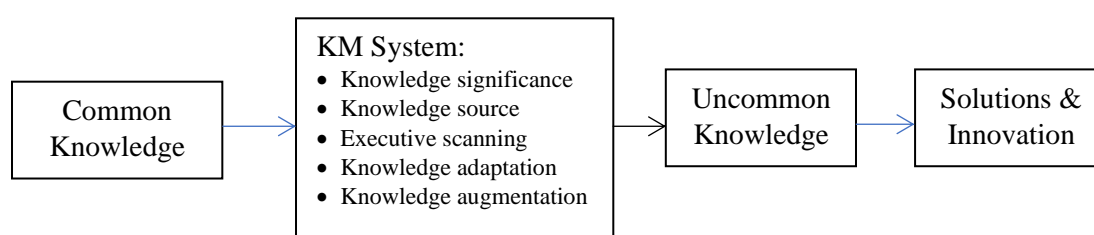


Image: Birth Process of Solutions and Innovation  
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According to Nag & Gioia (2012) uncommon usage knowledge involves two important ways: knowledge adaptation which includes the use of knowledge to develop new solutions to specific problems; Knowledge augmentation involves using knowledge to reflect on a problem to develop new understanding and principles for future action. Nag & Gioia (2012) in his study also found two plausible paths to creating unconventional knowledge-knowledge adaptation and knowledge addition.



The purpose of the KM System according to Alavi & Leidner (2001) is to support the construction, sharing and application of knowledge within the organization. An important implication of this definition of knowledge is that systems designed to support knowledge in organizations may not appear much different from standard information systems, but will be geared towards enabling users to assimilate information into knowledge. In our opinion, this KM System is an important tool for processing commons knowledge becomes uncommon knowledge that will later produce solutions and innovations. An illustration of the process we describe can be seen in the picture "the process of birthing solutions and innovations".

## **CONCLUSION**

Organizational knowledge creation aims to define, create, explore, and experiment with new solutions. Technological resources and social intervention are needed to unite the knowledge of organizational members spread over geographical distances into intensive knowledge for the organization. There is a need for a KM system in the form of applications, decisions support system, and learning a system for processing knowledge so that it can be used for solving problems and producing innovative output. A KM system is needed in the form of the ability to see the significance of knowledge, obtain knowledge sources, scan, adapt and add knowledge to obtain truly valuable knowledge that an organization needs to maintain its competitiveness. Only organizations that have a good KM system are able to solve organizational problems and create innovation.

### **Limitations and suggestions**

Individual limitations are more of a barrier to creativity and innovation than limited capacity to process available information. Individual limitations are not overcome by adherence to a rational information processing superstructure, but by intensifying interactions between organizational members who, thereby, can expand the boundaries of their knowledge. Here, there are similarities between the social practice view of organizational knowledge and the theory of organizational knowledge creation.

Future research on organizational knowledge creation and social practices should seek to contribute to the question of how leadership can motivate and enable individuals to contribute to organizational knowledge creation by going beyond social practices. How individuals recognize and discuss diverse knowledge and how individuals interpret and discuss different perspectives are key issues that are highly relevant in innovative tasks.

In addition, it is important for organizations to pay attention to the role of leadership in driving collaboration between individuals. Leadership that encourages discussion and diverse understanding can enrich perspectives and broaden horizons, thereby facilitating a more innovative knowledge creation process.

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