A Model for Enterprise Global Knowledge Management in an Indian Electrical Company

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Abstract

This is a case of Havells India Ltd, manufacturers of electrical equipments for industrial and commercial electrical applications. It has over 6,500 employees working in more than 50 countries. Rapid expansion and complex environment of business and collection of raw materials, inventory of goods, assembly and delivery of products to the customers' requirements, and focusing on tacit and explicit knowledge to adequately perform in the competitive environment are the key features and basic tenets of Havells India Ltd. In the past few years the company realized that the existing system and the strategy exactly do not fulfill the demand and supply of products in international and national markets. Therefore, in this disruptive economy company requires to implement the knowledge management (KM) system which facilitates the creation, capturing, sharing, and utilization of knowledge.

Key words: *Knowledge Sharing, Knowledge Management, Technology, Project Collaboration*

Introduction

In a knowledge-based global era, most of the organizations run knowledge management (KM) programs for organizational survival, competitive differentiation, and organizational excellence. KM is aligning, executing, spreading, allocating, and revitalizing both the technical and cognitive skills as well as theoretical and problem-solving approaches of people to improve organizational competitiveness for knowledge building (Blackler, 1995). Havells India Limited is an independent leading fast-moving electrical goods (FMEG) company in India. Although, incorporated in 1983, trading under the Havells brand was done since early 1970's and during this period also has acquired a reputation as an electrical and power distribution equipment manufacturer in the international market. In the early years Havells entered into a technical collaboration with the German company M/s Christian Geyer GmbH & Co., for the manufacture of Miniature Circuit Breakers in India which helped it manufacture products in different electrical segments which are technically as well as aesthetically sound.

In 2006, Havell's introduced knowledge management system with the help of team of knowledge management officers (KMO's). Havells invested a considerable amount of resources in developing avenues of knowledge creation and innovation for their stakeholders, knowledge workers, and users. Purpose of KM system in an electrical company is to build and sustain knowledge base for its employees so that they can easily assess knowledge and its utility for achieving organizational objectives (Wiig, 1993).

Havells has designed a comprehensive approach for KM processes and has also evaluated its effectiveness in terms of four 'R' metrics; Recognition, Reaction, Return, and Results. This KM inventiveness resulted in improved intellectual stimulation and personal and professional relationship with all the stakeholders.

Literature Review

KM system is an organized system with collection of people, methods, software, data, information and other devices to create, store, share and utilize the knowledge through a knowledge portal (Zandbergen, 2012). KM system enables the employees to get the right information from the right persons at the right time which improves the knowledge as well as performance of employees (Nwobodo & Inyiama, 2013). It also accelerates the process of innovation and develops the environment through generation of new ideas (Parlby & Taylor, 2000).

More specifically, in such as the one under study, KM system refers to a process of capturing, acquisition, organization transfer and sharing the knowledge for innovation in production (Li & Li, 2010). According to Li & Li(2010), electrical companies use KM system as gatekeepers for conveying external knowledge across the organizational boundaries. There are various tools for knowledge sharing in electrical companies (Morrison & Meliza, 1999) such as:

1. After-action review: This aims to improve the future performance (Morrison & Meliza, 1999).
2. Elicitation interviews: This method supplements interviews with videos or photos that helps recall, recollect and transfer

knowledge among employees (Becerra-Fernadiz & Sabherwal, 2001; Henry & Fetters, 2012).

3. Taxonomy: Taxonomy creates the appropriate words for different knowledge categories (Krathwohl, 2002).
4. Newsletter (Dalkir, 2011).
5. Wikis: This provides a tremendous source of linked webpage for sharing information and knowledge (Wagner, 2004).
6. Portal: Portal provides a workspace for company employees for exchange of knowledge and information through extranet and intranet (Benya et al. 2004).
7. Decision support system: Digital computer based which is extremely helpful in addressing the critical problems (Ghodsypour & O'Brien, 1998).
8. Community of practice: Community of practice (COP) is useful for solving decision support problems through personal involvement of exchange of ideas and knowledge (Wenger & Snyder, 2000; Zboralski, 2009).
9. Reward and recognition: Reward and recognition is the motivational factor for successful implementation of KM system and knowledge sharing (Swan, Newell, Scarbrough & Hislop, 1999). Dell (2001) emphasized that Reward and Recognition programmes motivate the employees and they participate in KM programmes for

improving business values (Chua, 2009).

Four key knowledge, people, processes, and technology (Desouza, 2001) components are very important for managing and leveraging knowledge effectively in any company. Electrical industry requires unique knowledge, technologically upgraded staff (engineering and resource and development professionals) with many other expertise skills. However, in electrical companies' the shortage of skilled manpower leads to knowledge drain when skilled manpower leave the organization (Singh & Yadav, 2009). It is also pertinent to realize the knowledge that resides in outer area of the organization such as customers, stakeholders, and communities. Therefore, the goal of the KM system is to create value for the organization while retaining and developing knowledge workers.

Research Methodology

Participatory research method was used which involved personal interaction with respondents engaged in KM practices within Havells. Data was collected through structured personal interviews. The participatory technique is considered to be most appropriate for in-depth learning and understanding of organizational transformation processes (Reason & Bradbury, 2008). Further, the participatory method allows researchers and respondents to interact in person which enables for a certain degree of openness that otherwise wouldn't be possible without personal interaction. Such personal interactions give researchers the opportunity to ask questions and exchange information as well as ideas that may not necessarily be a part of the

structured survey instrument. As such, this process may shed light on issues that were earlier not thought of, or may reveal facts that were not previously anticipated. Thus, this methodology argues in favor of the possibility, significance, and usefulness of involving research partners in the knowledge-sharing process (Bergold, 2007). Interviews were held over the duration of 1 week with 17 members of the top management (directors, general manager, and senior managers) and 89 employees in 2015. Respondents were randomly selected, and the researcher visited the organization to conduct these interviews. Additionally, documented information (periodical reports, financial documents, operational documents, human resource records) related to the period 2012-2015 were also collected for reviewing the KM process.

Background of the Company

Havells is an Indian founded company which manufactures electrical equipment's. In 2007, Havell's acquired the lighting business of Sylvania (brand of the Netherlands) and the company's turnover crossed US$ 1 Billion. It has taken over many groups across the national boundaries such as Turkey, Russia, Indonesia, Malaysia, China, and Africa. Such big business group required large pool of knowledge generation and information. Therefore, the company needs to improve its operational excellence by its employees and build a knowledge base ground where they encounter novel problems and created solutions across the globe.

Havells has several branches all over the world and its workforce needs to collect information from various sources for performing its job with excellence. There are few reasons for implementing

KM process at company. These are shown in **Exhibit 1.**

Knowledge Management Journey at Havells

Since 1994, Havells has been actively and systematically implementing KM processes. From the list of knowledge sharing tools described earlier, for the purpose of KM implementation Havells has implemented After Action Review (AAR), Taxonomy for knowledge categories, Wikis and Share portal, and Communities of Practice (COP) for interaction between different contexts of business and processes to share information and develop a sharing culture **(See Exhibit 2).**

Havells "Enterprise Global Knowledge Management" (EGKM) model is composed of two main components. These are

1. Socio-technical environment and value adding procedures, and

2. Models operating elements to bring vision alignment with the enterprises strategic orientations along with infrastructures, generic KM, and organizational learning (OL) processes and supporting tools.

Underlying elements of EGKM

The hard-core knowledge is exemplified in people's brains and their capabilities to utilize them and reproduce new knowledge at the same time. Nevertheless, the social interactions between people supported by ICT tools can help leverage employees' potentials to achieve results. Socio-technical environment and model operating elements are crucial essentials of EGKM model.

The Socio-technical environment: The socio-technical environment comprises of devices, tools, and techniques and social system components such as knowledge to enhance the

economic performance of the organization. The Social system of an enterprise consists of skills, attitudes, values and work environment as well as reward systems and authority relationships that exist in the organization.

A value adding process is an important context for KM initiative and helps achieves employee's potential. The process management concepts (internal customers and process ownership) are becoming one of the most important factors for competitive advantage through business process reengineering. It thereby makes it relevant to consider KM activities to identify knowledge along with achieving goals effectively.

EGKM model operating elements: The operating elements of EGKM model consist of managerial principles, required infrastructure, KM and Organizational Learning Process, methods and other supporting tools. These are discussed as follows:

1. **Managerial Principles:** The managerial principles are aligned with the strategic intent such as vision and mission to achieve the enterprises' strategic orientations. Havells KM governance is guided by KM indicators. There are two main categories of indicators to monitor a KM initiative. First, KM indicators focus on the initiation of intellectual capital. Second, category of indicators ensure monitoring and coordination of KM activities, measuring and evaluating the results.

In addition to learning processes, various activities such as Plan (action strategy), Do (action), Check (understanding) and Act (improving) aim at continuous improvement in

organization with the help of single-loop learning and double-loop learning which contribute further to the process of KM. In the single-loop learning, people organizations or groups modify their actions according to the difference between expected and reached outcomes. Double-loop learning will deepen understanding of assumptions and decision-making in everyday operations (Argyris & Schan, 1996).

2. **Suitable infrastructure:** Suitable infrastructure is important to sharing and creating knowledge. Suitable infrastructure brings the dynamism to create new knowledge through a cycle of converting tacit knowledge into explicit knowledge and then recycle it into tacit knowledge

The Generic Knowledge Management Processes

The Generic Knowledge Management processes define the company's knowledge and how it contributes to increasing the company's capital. Havell's identified four generic KM processes as a solution (**see Exhibit 3).** These processes are as follows:

1. Detect/determine process to identifying crucial knowledge (either explicit or tacit) that is essential for decision-making processes.
2. The Retaining process deals with the retaining of know-how and skills of employees. It is necessary to acquire knowledge, represent it, formalize it, and to conserve through community of practice or any other types of networks for retaining knowledge.

3. The Amplify process upgrades technology and competencies of employees to disseminate, share, and use of knowledge to combine for creating a new knowledge. The amplify process basically links KM processes with innovation.
4. The Enactment process is the actualization process of knowhow and competencies of employees. Companies for up gradation of employees appraise them, make available new up dated actions, standardize them and enrich their staff to create, and contribution of external knowledge. The enactment process links with business intelligence processes (**see Exhibit 4).**

Organizational Learning (OL) Processes

The OL processes are the basic foundation of the generic KM processes. The main objective of the OL process is to increase individual competencies and their abilities into collective knowledge through interactions, dialogue, discussions, exchange of experience, and observation. The main aim of the OL processes is to break barriers which come during training and change processes.

Company needs supporting tools for implementing KM initiative. Company has its own portal named as e-GKM and other tools to access global information and other applications to meet the needs of KM. Havells specified three perspectives for designing KM activities in the company. These are technology, people and process. Beside this, other components like KM strategy team of knowledgeable people, and KM metrics are important factors for running KM initiatives in Havells. Basically, knowledge is assessed

through knowledge capture and created by people to make use (assess) through sharing and dissemination. Through expanded knowledge networks all employees at all levels of the organization are expected to share a fundamental level of common knowledge.

The whole KM model focuses on enterprise maturity level and adapting their KM programs. Identifying the KM system components included into the EGKM's model enable to measure the maturity level of the enterprise. This enterprise KM maturity level is set up by the company's top management team.

Knowledge has been transformed from a stable commodity to a dynamic and ever-changing asset. This presents many challenges to organizations that rely on efficient and effective knowledge transfers. Knowledge workers continually review their knowledge strategies, programs and activities to ensure they meet the needs of the employees. Knowledge workers must further ensure that their knowledge programmes are aligned with the strategy of the organization and continue to support the changing goals and objectives with their knowledge transfer capabilities. Though the status of a KM system is within the enterprise, however when combined with the characteristics of the IT Governance Maturity Model suggested in COBIT (2005), it enables to assess the enterprise's KM maturity level (**see Exhibit 5**).

Strategies Fostering Sharing Cultures

Havells understands that knowledge is a valuable asset for crafting and sustaining competitive advantage, sharing of knowledge, collaborative effort, trust and appropriate reward system, etc. Essentially, sharing of knowledge is always a challenge for many organizations with the rest of the employees. Creating a

sharing culture requires a well-trained KM team to embark and facilitate the knowledge sharing activities. Therefore, for this KM tools such as community of practices and seminars on KM are required which tries to develop environment of knowledge share and reuse the information and knowledge. KM team implements the Power of Culture program in company and its main attributes are discussed below:

1. Giving reward to employees for sharing knowledge;
2. Increase participation through words of curiosity;
3. Value trusted information and knowledge; and
4. Ensure validity and relevancy of information.

Crafting Evaluation

Company's top management team evaluates KM strategies as the next phase of systematic design for its model. Evaluation of model and its components is based on the four Rs metrics of Recognition, Reaction, Return and Results. At this stage, company designs four Rs for KM strategies to evaluate their effectiveness and feasibility. Basically it is a process to clarify and sift to maintain transparency and demonstrating a high level of persistent work effort **(See Exhibit 6)**.

1. Recognition: Employees are rewarded or appreciated for their behavior, hard work, and accomplishment which helps achieve the organization's goals.
2. Reaction: It is a process in which employees give reaction to a particular situation or event. It is mainly related with change process of either the organization or an individual.

3. Return: Return implies to evaluate projects, program, and policy on a large scale. Return can be understood with measuring the business performance of the company while achieving the net profit, reducing risk, and maximizing return-on-investment.
4. Results: Result is contribution of the employees and the organization either directly or indirectly to achieve strategic goals.

Knowledge management factors such as knowledge capture and creation, knowledge sharing and dissemination, knowledge acquisition and application and its functional areas are evaluated to know how the system is functioning and to know the impact of KM practices on individual and organization. The key issues when evaluating KM system within the organization include set standards, balancing knowledge sharing, and building the relationship of collaboration and trust.

Conclusions

In this knowledge economy, both global and local multinational companies are turning into knowledge-based systems. The importance of successful deployment of KM system within organizations has increased to accelerate business processes that facilitate collaboration and knowledge activities across the organization. Company develops a knowledge system which shows how knowledge should flow to improve decision-making of employees and their work processes and cultural norms in a global context. The implementation of KM system includes tools (content creation and content management) and strategies used for creating and capturing the knowledge in

company. AAR, elicitation interview, taxonomy, wikis, portal, decision support system, CoP, and knowledge lectures are held to provide platforms for employees to get experience of real-time knowledge sharing of KM implementation. The goal of implementing KM is not only knowledge transfer but also removing the difficulties of outsourcing the business and increasing organizational preparedness to deal with knowledge drain in nearby future. The unique business model of Havell's focused on identifying knowledge, creating knowledge, and taking over the knowledge to ensure that knowledge is stored and shared throughout the organizations. These knowledge activities through sociotechnical improve knowledge and employees shows higher participation and involvement on knowledge sharing platforms.

Questions

Q.1. Describe what KM is and what the forces are that drive KM at Havell's.

Q.2. Discuss organizational issues related to KM.

Q. 3. Explain knowledge management systems (KMS) and their role in the organization.

Q.4 Discuss the relevance of KM in today's dynamic environments augmented with increasing technological complexity.

Exhibit 1: ***Decisive Reasons for Implementing KM Program***

Causes	Descriptions
1. Operational excellence, and organizational survival	Effective KM system facilitated dynamic environment and competitive marketplace over their rivals.
2. Competitive differentiation	Knowledge system plays a pivotal role for achieving competitive advantage. It enhances the ability to innovate which makes companies different from their competitors.
3. Effect of globalization	Due to globalization (connected and interdependent) and outsourcing of work there is an urgent need to develop KM system across different locations of company across the globe
4. Graying workforce	Managers may anticipate when large number of workers want to leave the organization, there was need to prepare knowledge transfer to future generations.

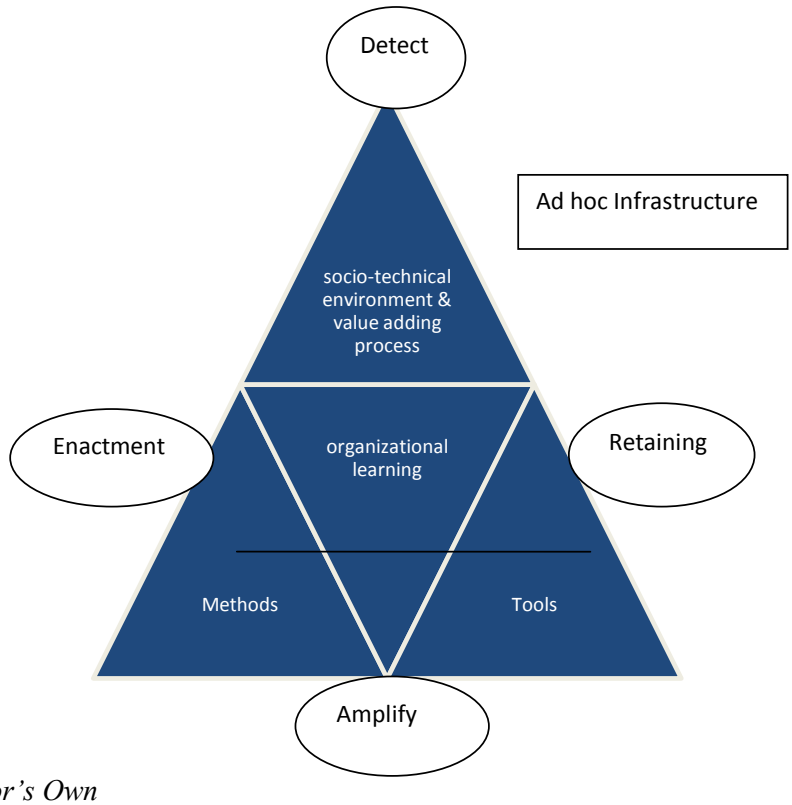
Source: *Author's Own*

Exhibit 2: ***KM Journey in Havells***

Year Active for Knowledge management activities	Main Activities
1994	Developed collaboration and experience sharing culture
1998	Developed project review committees
2002	Gathered information from different people or source (knowledge elicitation) through interview, case study, protocols, role playing, simulation, observation, document analysis, and sorting
2009	Implementation of AAR and community of practice exercise
2010	Developed wikis, e-map and share portal
2015	Attained global knowledge capability, competency, and capacity (CCC) award

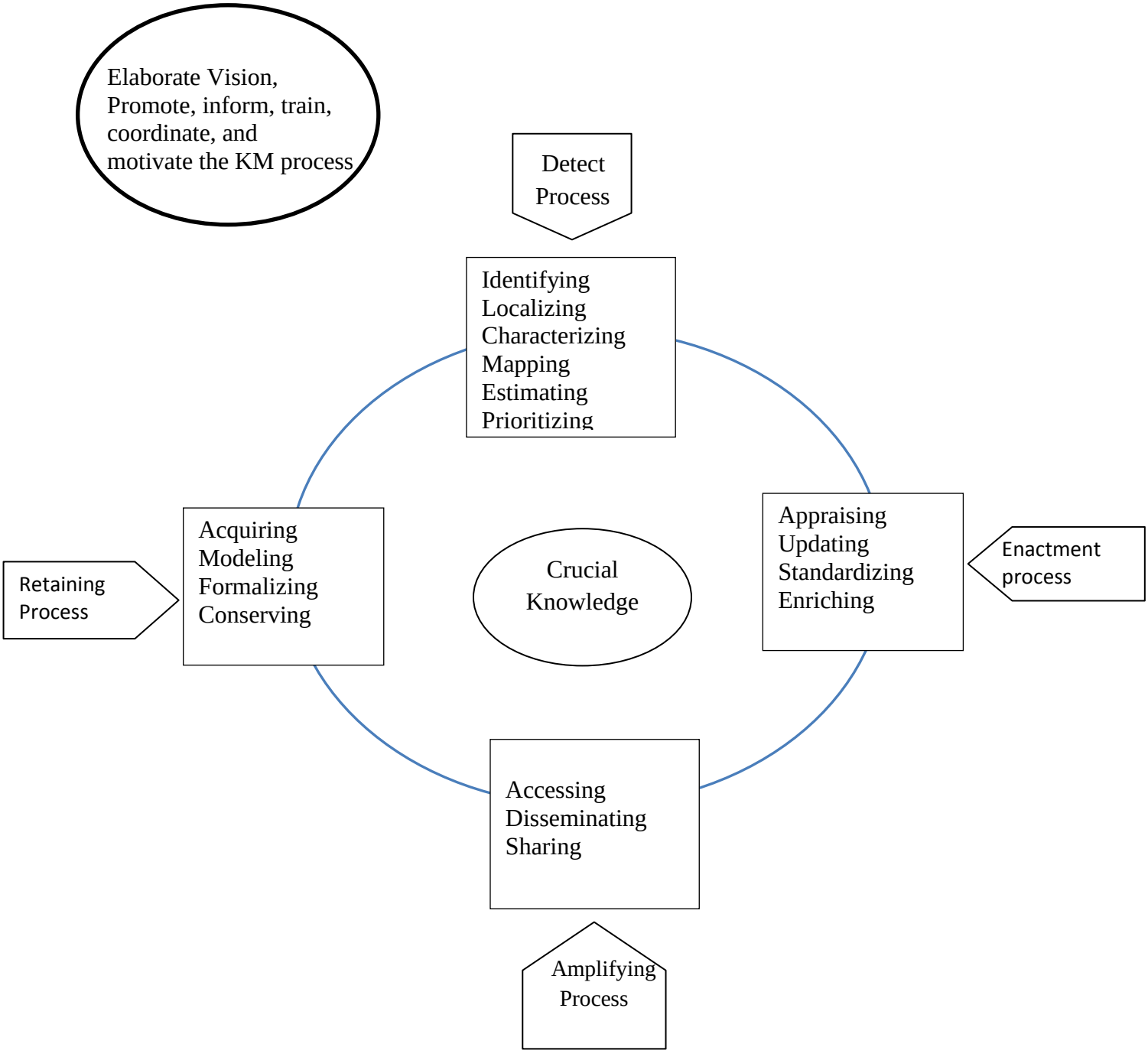
Source*: Author's Own*

Exhibit 3: ***Model for Global Knowledge Management Within the Enterprise***



Source: *Author's Own*

Exhibit 4: ***The Generic KM Processes***



Source: *Author's Own*

Exhibit 5: ***The Enterprise KM Maturity Levels***

Maturity Level	**Characteristic**
Level 0 Non-existence	Here, company is not aware of KM program. Total absence of recognizable KM system
Level 1 Initial/Ad-hoc	The company became aware of the importance of KM. But company has no global vision for the same.
Level 2 Repeatable but initiative	KM system is introduced without any planning such as no formal training or no communication of standard procedures. Though processes are developed but stages of KM are not clear
Level 3 Defined process	KM system is well-identified and is characterized by a partial implementation of the EGKM's model. Methods and procedures were standardized, informed, and communicated by way of session of training. Procedures are not sophisticated but formalize existing practices.
Level 4 Managed measurable	KM system is well-identified and is characterized by a partial implementation of the EGKM's elements It is possible to control and measure correspondence to procedures and act when processes seem not to work correctly. Processes are in constant improvement and correspond to a good practice. The automation and the use of tools are made in a limited or partial way.
Level 5 Optimized	KM system is well-identified and is characterized by a total implementation of the EGKM's element. Processes reached the level of the best practices, further to constant improvement and a comparison with the other companies.

Source: *Author's Own*

Exhibit 6: ***Key Components of Evaluating KM Process***

KM Process/Model	Functional Areas	Areas to be Evaluated
1. The Detect/Determine processes	• Knowledge discovery; • Knowledge creation and knowledge capture; • AAR report and elicitation interviews; • Knowledge portal.	• Individual level knowledge creation; • Organizational level knowledge creation.
2. The Retaining process	• Communication pattern; • KM websites, blog, etc.; • Practice of knowledge sharing and spreading information.	• Evaluates multiple channels of communication; • Technology used; • Changed business process.
3. The Amplify process	• Analyzed practice of developing/obtaining a skill; • Analyzed practice of improving the innovation.	• Evaluation of decisions making system of KM
4. The Enactment process	• Competencies of employees; • Available updated actions, to standardize them and enrich their staff to create, and contribution of external knowledge.	• Link with business intelligence processes.

Source. Author's Own

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