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STRATEGY OF MANAGING KNOWLEDGE IN ORGANIZATIONS

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Abstract: *In organizations, knowledge can be beneficial in the business process by save costs and time. Organization needs to understand its business, its mission and vision before strategy can be made. Increasing number of organizations have recognized the need for systematically managing knowledge, hence the application of knowledge management in their management system. This paper identifies and discusses the important of mission and vision to generate strategies and what strategy should be used for organizations to manage knowledge with some case studies.*

Keywords: *Knowledge Management, Knowledge Management Strategies, Knowledge Management in Organizations.*

INTRODUCTION

The emerging knowledge economy (k-economy) has produced significant changes in the way organization are operating. Increase in the usage of knowledge workers (k-workers) has replaced the labor workers, and many new titles such as Chief Knowledge Officer (CKO), and Chief Learning Officer (CLO) have been widely used in organizations.

Knowledge in organization is such a fluid commodity and its demands are changing from time to time. Therefore, in order to manage knowledge effectively, certain strategies are needed (International Development Research Centre, 2008). However, different organization operates differently and knowledge needs are also different (Bickelmaier & Ringel, 2010). As an example, universities achieve their goals by producing services to their students and their staff. Automotive industries achieve their goals by acquiring customers through their unique products and dominating their market, while project-based organizations deliver their projects on time to achieve their goals. Airlines industry provides the best offer for their customers in order to advance their mission. These different types of organizations possessed different types of workers, products, culture and environment.

Thompson & Strickland (1999) defined mission as what the organization seeks to do and establishes the organization's future course and outlines who they are, what they do, and where they head. Organizations differentiate themselves by stating their mission and vision as well as providing comprehensive guideline to every level of employees in organization based on their responsibilities. The mission is considered as a prior step in developing strategies in managing the organization, as well as managing their knowledge, and get the best out of their knowledge to advance their mission. According to Numprasertchai & Igel (2005), as research continues to generate economic growth of many developing countries, understanding how to manage knowledge has become increasingly important. Therefore, research and development is important process in creating new knowledge to gain organizational competitive advantage. Appropriate utilization of the new knowledge would give the organization some edge over its competitors. Parikh (2001) states that knowledge management also plays an important role in research and development by improving research efficiency and effectiveness.

To conclude, the strategy of managing knowledge in organizations depends on what business the organization is in. Even if the organization performs similar business, the size of the business also could differ the strategies. Mission and vision play crucial role in determining and implementing strategy. As an example, big organizations might need Chief Knowledge Officer (CKO) to manage knowledge in organizations, while in small organization, ICT personnel could perform the task. A possible strategy in managing knowledge in organizations is identified and discussed to provide managers, or employee guidelines in selecting strategy in managing knowledge effectively.

IMPORTANCE OF MISSION AND VISION IN ORGANIZATIONS

Implementing strategy to manage knowledge relates to the mission and vision set out by the organization as a strategy to achieve the mission. To effectively manage knowledge in organization, implementing the Knowledge Management (KM) mission, it is essential for organization to have clear mission and vision before applying any strategy. Pierce & Robinson (1991) defined mission as the fundamental purpose that sets a firm apart from other firms of its type and identifies the scope of its operations in product and market terms. Hax & Majluf (1984) said that the mission of the business is the starting point for the formulation of business strategy. Every organization has its own mission and vision as guidelines to its workforce and differentiates it from the other organizations. The organization's mission and vision, give insight to the employee about the organization before the strategy to achieve goals can be formulated.

According to David (2001), a mission statement broadly charts the future direction of an organization. It is the most generalized statement of the organizational purposes and can be thought of as an expression of its direction. A good mission statement describes an organization's purpose, products and services, markets, philosophy, and basic technology. Development of an organizational mission is an essential part of strategic planning and strategic management. However, there are some studies that say that there is no link between mission statements and performance (David, 1989). This statement is supported by McSherry (1994), who said that recent years have seen managers increasingly express doubts about the benefit of spending resources on formulation of mission statements in the absence of any tangible gains. This means organization should not spend too much time and resources in creating mission and vision statements as there is no link between the statements and organizational performance (David, 1989 and McSherry, 1994)

Eventually, the mission and vision statement should be treated as living documents so that its value to the organization can take place. This means that the statements should be placed at some place where it can be seen by employees while the managers need to be strict in ensuring the statements are followed. Top management commitment is crucial as training and education might be needed to ensure the statements are treated as living documents. Sidhu (2003), in agreement with this said that, since the inception of the business-policy discipline, scholars have emphasized the importance of formulating a mission statement as the first fundamental step in the strategic-management process. The mission statements are likely to be more or less valuable, depending upon how complete they are in terms of content, and its presence.

STRATEGY OF MANAGING KNOWLEDGE IN ORGANIZATIONS

Perform Knowledge Auditing

Knowledge audit is the first part of any knowledge management strategy and by discovering what knowledge is possessed, it is then possible to find the most effective method of storage and dissemination of the knowledge. It can then be used as the basis for evaluating the extent to which change needs to be introduced to the organization to advance the mission or goals of the organization. Part of the knowledge audit is capturing tacit knowledge and in order to do so, some organizations use information and communication technologies and virtual teams, including groupware, discussion databases, video conferencing, data conferencing, and teamware (Liebowitz et al., 2010).

Evidently, knowledge audit relates to identifying the knowledge in the organization by evaluating organization components systematically to gain insight about what the organization possessed and what organization is lacking according to given standards by third party or the organization itself. Auditing leads to knowing what is already in there, and what is not available. Knowledge audit also acts as earliest step in knowledge management processes, followed by other processes, such as knowledge storage and dissemination. Other than that, knowledge audit is a tool to identify the knowledge gap which exists within the organization and strategically identify strength, weakness, threats and opportunities of the organization and in marketplace.

In the article written by International Development Research Centre (2008), there are four processes in knowledge auditing, which are; identify knowledge needs; conduct a knowledge inventory; analyze knowledge flows; and create a knowledge map. Knowledge is identified by using methods, such as questionnaires, interview, and facilitated group discussions to capture and understood what type of knowledge the organization need to have in order to be successful. After identifying the knowledge needs and knowledge assets, what knowledge is currently being possessed by the organization both tacit and explicit knowledge must be identified and located. To identify tacit knowledge, information of the employees is needed, such as where they are located, what they do, what they know, and what they may be learning. In the case of explicit knowledge, it means quantifying in-house knowledge, such as papers, reports, and databases by locating it, understanding how it is organized and accessed, analyzing how appropriate it is, and finally determining whether the resources available are in fact being used. By comparing against organizational needs, this inventory will reveal critical knowledge gaps that existed in the organization. The next process is

analyzing the knowledge flows. This is done by understanding how knowledge moves within an organization, from where it originates and to where it is needed. Determining questions, such as how do people find the knowledge they need to execute their tasks should be crucial. This type of analysis will include both tacit and explicit knowledge, and also covers people, processes and technologies. The last process defined by this author is creating a knowledge map. Comprehensive, abstract, or visual representation of an organization's knowledge can help show how it moves, how it's accessed, where it's created and how it's shared. This can be done by mapping knowledge resources and assets or, more comprehensively, by adding the details of how it flows from one point to the next.

According to Wang & Xiao (2009), this figure outlines the knowledge auditing process.

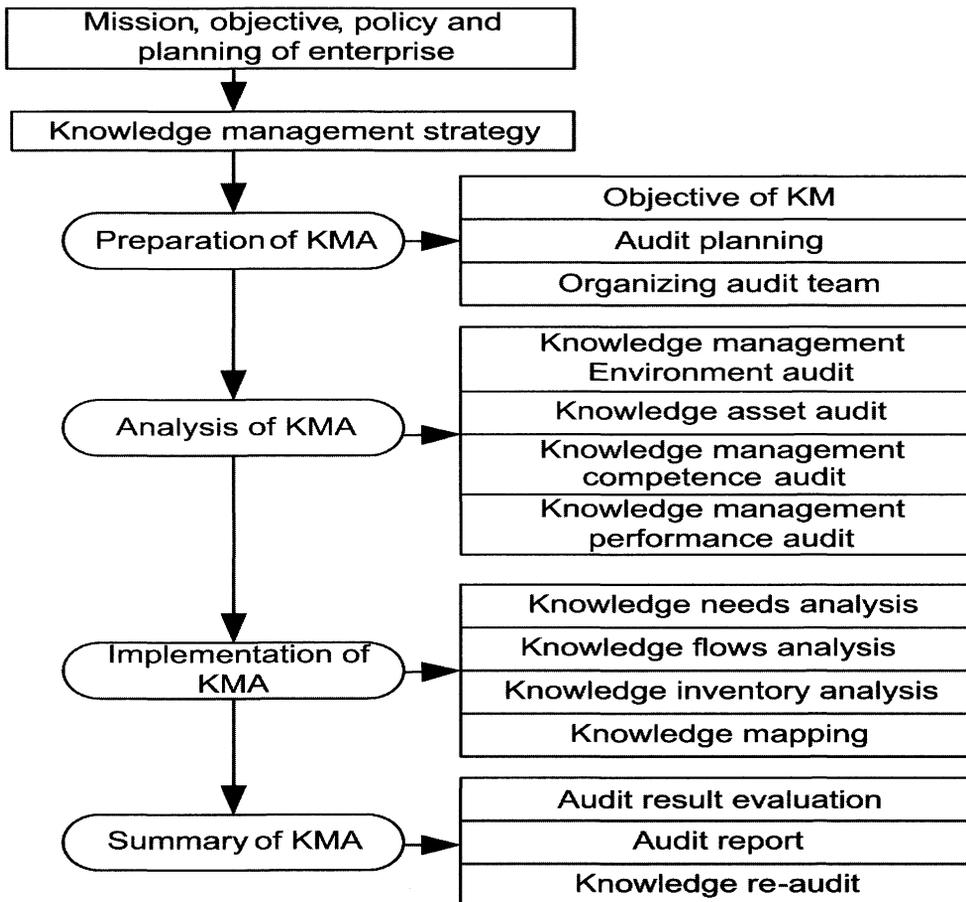


Figure 1: Knowledge Management Audit Model

Source: Wang, J., & Xiao, J. (2009). Knowledge management audit framework and methodology based on processes. 246.

The authors stressed that in performing knowledge auditing, the implementers need to understand the mission, objective, policy and planning of the organization before developing the knowledge management strategy. After clearly understood the organization mission, objective, policy and planning, then the knowledge management objectives are stated. This is to ensure the knowledge management and organization objectives are well aligned. When successfully executed those 2 processes, preparation, analysis, implementation, and summary of knowledge management audit executed.

As we can see in the implementation of knowledge management audit, Wang & Xiao agreed with International Development Research Centre in which, all the four processes stated by International Development Research Centre which are: Identify the knowledge need, conduct knowledge inventory, analyze the knowledge flows, and create the knowledge map are included in this process. However, Wang & Xiao provide more detailed and comprehensive model if it is compared to International Development Research Centre model as they stressed the understanding of organizational mission, objective, policy and planning as the first step in executing the knowledge audit in organization.

According to Roberts (2008), knowledge audit should start with understanding of strategy, goals, and policies and aims of organization as it is stated in his article entitled "Recording knowledge-related activities in practice: Methodological bases and a method of knowledge auditing." He also agreed with both authors that knowledge mapping must be included in the model as through mapping, other areas of management and policy will be supported and the results of the auditing can be fed across organization. Therefore, it is understood that knowledge auditing process has some relations with the organizational understanding and the outcome of knowledge audit is about to produce knowledge mapping to promote knowledge and clear understanding of knowledge in the organization among employees.

However, the argument is that, knowledge audit requires some time, and how many times this process has to be performed to identify the gap? Who is responsible to perform this process? Is there any budget required to perform this process? Without knowledge audit, will the organization survive or not? According to Jashapara (2004), performing knowledge audit should enable the organization to have direct influence on the prospect and mission, help to achieve organization's comprehensive success, increase the organization's value, meet customer needs and have the important manpower, technology, information resources. Auditing should be done according to the mission of the organization, or when is needed. This process is conducted by internal or external auditor and minimum budget is required to perform this process.

Lingham (2006) said that knowledge audit can reveal the organization's knowledge management needs, strengths, weaknesses, opportunities, threats and risks. Knowledge audit is done when there is a knowledge gap identified, yearly, or every six months. Some organizations use internal auditors in order to keep the organizational knowledge confidential, while some hire external auditor for expertise. Knowledge audit helps the organization to clearly identify what knowledge is needed to support overall organizational goals and individual and team activities. Other than that, knowledge audit will also provide knowledge map of what knowledge exists in the organization and where it exists, revealing both gaps and duplication. Knowledge audit can result in the development of the list of knowledge items both explicit and tacit in the form of spreadsheets and knowledge network map which show the flow of knowledge items. The listings can be used as clear guideline to strategically plan the organizational knowledge (Orna, 1991).

For organization, it is crucial to implement knowledge audit as Jashapara said that knowledge audit provides organization with direct influence on its mission that will help the organization achieve success. According to Lingham, identifying strength, weakness, threats, and opportunities will help the organization to strategically plan their resources by reviewing the list of knowledge items in a clear form, such as spreadsheets which is stated by Orna as gaining competitive advantages among competitors that will ensure success in the marketplace. It can be said that, implementing knowledge audit is a must for organization to achieve or maintain its success in strong marketplace.

Hire the Chief Knowledge Officer (CKO)

According to Desouza & Awazu (2004), CKO is the person who leverages the technical infrastructure to better manage the transfer and flow of explicit knowledge assets, foster and develop social mechanisms to enable exchange of tacit know-how, skills, and abilities, and manage the flow of knowledge between an organization and its business partners. Leitch & Rosen (2001), on the other hand describe that knowledge management success requires a holistic approach, and the most effective leader will possess solid technical, business, and social skills. The CKO is someone who could lead an enterprise wide knowledge management program. They are responsible in creating a knowledge management vision, integrating knowledge management into the strategic plans of the enterprise, selling knowledge management to senior managers and creating a shared vision. Additionally they are involved in getting buy-in from competing initiatives and advocates, mentoring knowledge management initiative leaders, managing multiple projects, vendors, and consultants, delivering measurable knowledge management benefits that significantly contribute to the success of the enterprise.

Hershel & Nemati (1999) identified CKO as the newest title hitting many organizations. These jobs cover a broad range of activities in areas, such as research, training, and information coordination, They say that most CKOs agree that their main objective is to bring together and leverage pockets of business and technical knowledge. They further said that knowledge officers must find out what both technology and information officers need to do their jobs better. However, the argument is whether the CKO is really effective for organization? CKO is someone who is really experienced and their salary could be high, and will hiring CKO provide satisfactory return on investment? Zack (2003) questions this issue in his article, entitled "Rethinking the knowledge-based organization."

Knowledge assets are crucial for organization to keep pace with economic, technology, and business changes in the marketplace. It is a good practice to have CKO that possess postgraduate education in knowledge management, or information management field. This is because the program includes managing information systems subjects which give the CKO knowledge in determining what technology should be used to manage knowledge. Former academicians, such as professors in the areas of information and knowledge management should have many tacit know how, skills and abilities to manage the flow of knowledge in organizations and its business partner. Investing on appropriate technology could produce satisfactory ROI and CKO is the man behind this.

CKOs should also have decent communication skills as they work closely with other executives, such as the Chief Information Officer (CIO), General Manager, consultants, and Chief Executive Officer (CEO). Almost all CKOs are frequent speakers at industries and academic meetings and they may have many years experience in areas, such as management consulting, corporate planning, change management, customer research and marketing, human resource planning, information technology and systems, and, last but definitely not the least, knowledge management.

In line with other author's insight, CKO is a corporate title for the person responsible for overseeing knowledge management within an organization. The CKO position is related to, but broader than, the CIO position. The CKO's job is to ensure that the company profits from the effective use of knowledge resources. Investments in knowledge may include employees, processes and intellectual property. CKO can help an organization maximize the return on investment (ROI) on those investments. CKO should directly report to CEO and have some accredited certificates such as Certified Knowledge Manager Program. Hiring CKO in organization is essential strategy in managing knowledge in organizations as this person can work closely with other

managers. CKO can develop KM mission and vision, determine KM budget, allocate resources, and provide training and motivation, and promote KM innovation in organization.

Encourage Knowledge Sharing Culture

Knowledge sharing is the most crucial part of managing knowledge in organization as the key objectives of KM is to have employees sharing of knowledge with each other. Having the strategy to promote knowledge sharing, or injecting knowledge sharing into organizational culture might be the critical success factor of KM. As reiterated by Johnson & Kruger (2009) in their article, "one of the aims of knowledge management is to promote knowledge sharing." Having precious knowledge but without distributing it, gives only little value to the organization as one of the objectives in managing knowledge is to share it across the organization. Some kind of interaction has to take place between individuals in order for the knowledge to be shared (Argote & Ingram, 2000). In order to achieve KM missions, employees must share their knowledge. However, sharing knowledge is a difficult aspect of KM because knowledge is generated and initially stored within the employees. According to Chow & Chan (2008), early initiatives in KM focused on providing electronic databases, network systems, and software to encourage the distribution of knowledge but these mechanisms have proven far from satisfactory. More recent efforts have focused on socio-cognitive approaches to motivate behavior that would help in promoting knowledge sharing, including factors such as incentive rewards, trust, and relationships. Relationships will build trust,

Li, Montazemi, & Yuan (2006) said that organization can put some efforts in promoting knowledge sharing, such as introducing rewards system and anticipating relationships. This can be done by offering some lucrative offers to employees who are active in knowledge sharing activities, such as organizing social programs, such as dinner, family day, and sports carnival. By having this kind of activities, barriers of communication between employees, regardless of their level, will be minimised.

Wong et al. (2001) agreed that building a long-term positive relationship with employees helped generate organizational knowledge while Ramasamy, et al. (2006) believe that relationship building played a significant role in knowledge sharing between organizations. These authors agreed with the relationships as the bridge for employees to share knowledge with each other, hence across the organization. However, White (2004) said that there are organizations that do not understand the knowledge sharing culture in which the boss or top management acts as dictator and

dictates the operational staff with anger, arrogance, and frequent wrong attitude. This creates stress between both parties, and will elicit poor communication between employees. By having culture like this, knowledge sharing is just a dream with operational level employees feeling hatred towards the boss. They will not participate as the boss will not give them the chance to express opinions or ideas as the boss is always right. Employees will have mindset to perform their work just for the salaries and do not enjoy their work. In this case, it is the boss who creates the gap with the employees. Figure 1 below shows how the gap is created.

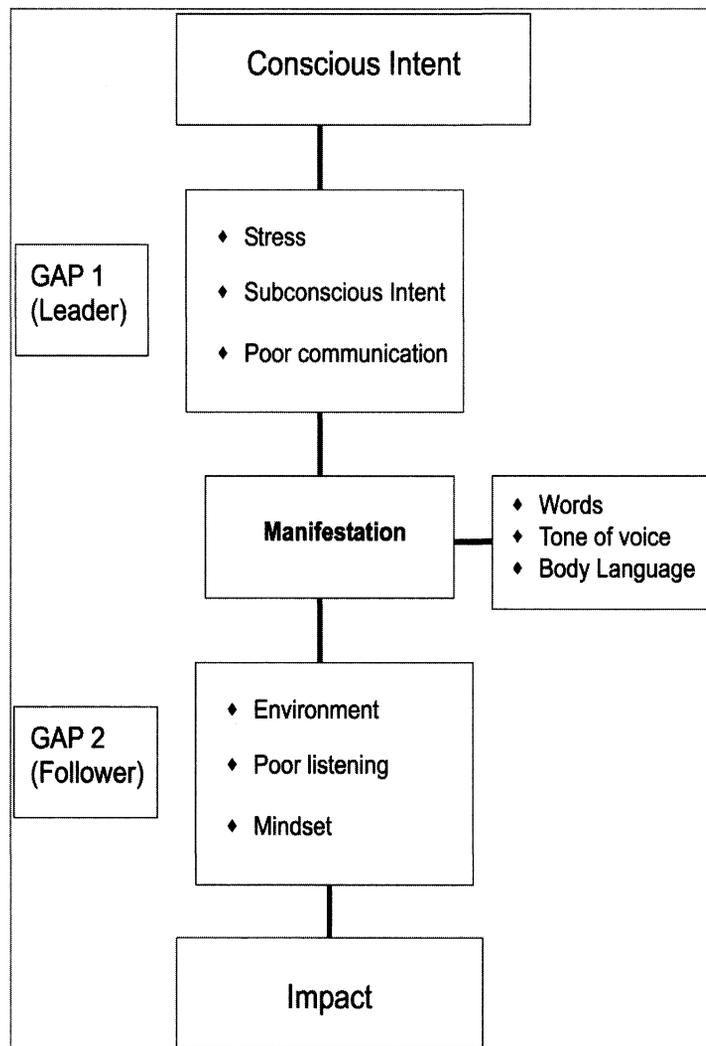


Figure 2: Gaps between Boss and Employees in Organization

Source: White, R. (2004). *Eliminating Perception Gaps*. 235.

From the figure above, it can be seen that manifestation of words, tone of voice, and body language from the leader or the boss itself could create an unhealthy environment that affect the employees' mindset as explained earlier. The argument is how to reduce this gap and how to implement the knowledge sharing culture in this situation? One of the ways is to organize non-formal social activities, involving all level of management.

In example, Malaysian Administrative Administration Planning Unit (MAMPU) is one the leading public sector organization in Malaysia. In their bulletin, it is found out that they actively conduct this kind of activities such as annual dinner, in which their employees are required to involve in activities such as role acting drama, singing, and sports. This includes their employees at all level of management and this requires teamwork. The outcome of this program is the relationship between directors and lower level employees is improving as they started to communicate in and off the work matters. Other than that, social network is created, and this builds trust among employees.

If the barriers among the management levels are diminished, it could promote knowledge sharing culture where the boss and employees have a good relationship, and their employees are treated with effective soft skills, instead of using arrogant methods. The employees' morale would increase and provides a long term benefits as it will motivates them to give their best work performance with positive attitude. They will always give their best, and more importantly, will participate in giving opinions and ideas as there are no barriers between the management levels. Moreover, they will have the same objectives which is to help their organization achieve the missions. Although organizing these kinds of activities requires some budget, the intangible benefits in creating highly motivated employees will instill a knowledge sharing culture and increase efficiency in the business process of the organization. The figure below shows how social network, trust and shared objectives contribute to knowledge sharing culture.

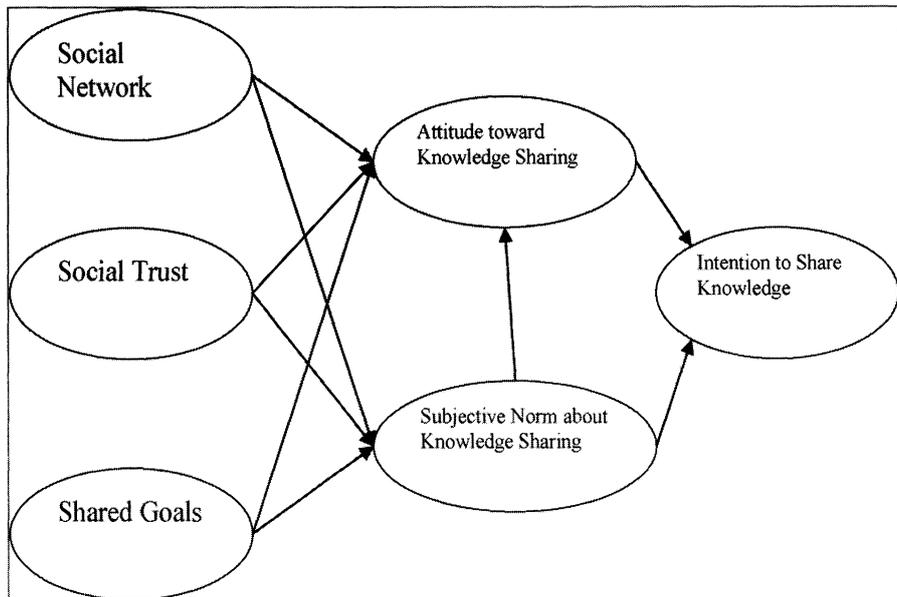


Figure 3: Factors Contribute to Knowledge Sharing Culture

Source: Chow, W. S., & Chan, L. S. (2008), *Social network, social trust and shared goals in organizational knowledge sharing*. 460.

Knowledge Retention Technique

Another strategy in managing knowledge in organization is to perform knowledge retention. The longer the workers remain in organization, the more staff gain experience and knowledge that have been captured and stored in his or her mind. One this knowledgeable workers leave the organization, their knowledge as also lost. According to Johansen (1998), to avoid this from happening and organization the organization should focuss on the critical knowledge that is at risk of loss, prioritizing what is at risk, based upon potential knowledge gaps and their impact upon overall organizational performance, and then developing actionable plans to retain that knowledge. It is known that Knowledge Retention efforts which can have real return on investment effects on the organization. Snyder & Wilson (1998) identify three specific questions that must be asked when considering knowledge retention and any potential risk of loss of knowledge:

- i. What knowledge may be lost?
- ii. What are the organizational consequences of losing that knowledge?
- iii. What actions can be taken to retain that knowledge?

However, the argument is, whether knowledge retention is really needed. Why need to retain knowledge? New blood or fresh graduates with high spirit can be hired with less salary. Training and motivation could sharpen their skills, and they can acquire knowledge at ease, especially the younger workers. Knowledge is needed at the right time, for the right person and failure in this could result in ineffective business process and time consuming process. Below are the examples of the impact of missing knowledge:-

- A number of employees, groups or departments in an organization work on similar problems. They do not know about the activities and expertise of the other, resulting in the duplication of work.
- One team has developed an extremely efficient system to solve their problems. Other employees in the same organization could profit from their method. However, there is no official policy to transfer this knowledge which results in knowledge not being utilized and will be forgotten in a short period of time.
- An employee tries to negotiate a business transaction with a customer. The deal does not come through. The report usually mentions that the transaction has fallen through. The reasons for this failure are not always documented and communicated which results in other employees not being able to learn from this lesson.
- A customer complains about a product but also gives suggestions for its improvement. This information is usually appreciated by the service department or call centre, but it is seldom communicated to the design or development departments which results in user-related knowledge cannot be utilized for product enhancement.
- A project has come to a conclusion. The project management has all the findings and results. But the whole business process with all the trials & errors, the faults, the negative results and lessons learned are usually not documented which results in important expertise and knowledge cannot be communicated and transferred to other projects.
- An employee is leaving the organization. His /her knowledge has not yet been transferred to the others which results in this knowledge being lost. For example, personal notes and documentation is also useless unless the others know about it and were trained to use them.

- An employee suddenly gets ill and happen to be the only worker who, through experience knows what to do when a certain machine is not functioning properly, resulting in an expensive search for that expertise and knowledge.

According to APQC (2010), there are many ways to perform knowledge retention, to ensure the knowledge is there when needed. This is done by leveraging retirement, storytelling, mentoring and apprenticeship programs, lessons learned, structured interviews. Leveraging retirement knowledge retention and transfer does not stop with retirement. Universities always use this method to retain their professors which they believe are still reliable and can still contribute significantly to the universities. As an example, in MARA University of Technology (UiTM), management offers flexible working hours, dentist treatment, and lucrative salaries to their professors in order to leverage their retirement. This is happening because UiTM need professors, especially their expert knowledge and their tacit experience to achieve their missions. By achieving their missions, the investment is regarded as justified.

Best-practice organizations use their retirees to provide needed skills and experience on specific projects, to mentor junior employees, and as participants in storytelling and training activities that allow them to share their experiences. Michelin's retiree employee designation is used for individuals who retire from the organization and then are re-employed in capacities where their skills, training, and availability can be used to supplement the regular work force as required by business needs. Employees must have been retired for at least three months before returning to work, and each is paid at a rate consistent with the established rate for his or her job.

Aerospace has had a long-standing interest in rehiring employees to work on an as-needed basis. In 1984, it formalized this practice in a program it calls retiree casual to ensure that all returning retirees would be treated in a consistent manner. The retiree casual program allows employees to work part-time, to continue to save for retirement, and to gradually transfer key knowledge and insights to younger employees minimizing the loss of organizational knowledge. In addition, the program allows management to use retirees to meet contract obligations which vary on an annual basis without incurring additional hiring costs.

Storytelling is another powerful tool for knowledge retention and transfer. Stories can supply context for organizational successes and lessons learned, and each story has the potential to personalize an issue by bringing it alive for listeners or readers. Stories are also an effective way to bridge generational gaps, communicate important information

about an organization's culture, and help employees develop a sense of organizational identity. The storytelling process at NASA's Jet Propulsion Laboratory (JPL) focuses on providing an informal and experiential environment for both the storyteller and the listeners. Stories can take place in the past, present, or future and they can be historical or fictional, and they can be light-hearted or serious. The only criterion is that the speaker must present a personal story about his or her JPL experience. Storytelling sessions last for one hour, consisting of 45 minutes of storytelling followed by a 15-minute question-and-answer period. This latter portion is often the most important part of the hour because it allows listeners to ask questions that help put the story into context.

Fluor uses storytelling to capture successes, lessons learned, and related knowledge in an explicit fashion. The stories are instrumental in raising awareness about knowledge sharing and collaboration: They document the value proposition for KM by providing context, which is something that statistics cannot convey. Fluor's storytelling process connects to the organization's global success story campaign, which ties directly into its Knowvember campaign an annual, month-long promotion to raise awareness of KM within the organization.

In the past few years, APQC has noticed a resurgence in mentoring and apprenticeship programs. Traditionally, these programs have focused on leadership, behavioral, and skill development. However, they can also be used as a means to transfer knowledge, especially tacit knowledge, from a more experienced employee to a more junior employee. Fluor's apprenticeship program pairs subject matter experts (SMEs) with high-potential individuals who have interest and/or limited experience in a subject matter area, but who are in need of further development and training. The apprentices are responsible for extracting information from the SMEs and then incorporating what they learn into the organization's Knowledge on line portal so that it will be available for reuse. In addition, each apprentice helps his or her SME respond to community questions, find documents for sharing, and perform other KM-related tasks.

In Aerospace's shadowing program, a new hire or junior employee follows a more experienced employee through his or her job, after which the shadower writes down information about the experience for future reference. This technique provides unique opportunities for veteran employees to share their experiences, thought processes, and decision-making strategies with junior members of the staff.

Lessons learned is the very name of this knowledge-sharing approach implies that knowledge is being reused that each lesson drives an action designed to improve a policy, procedure, process, or practice for future users. Unfortunately, this is often not

the case. Many organizations have lessons learned processes in place, but admit that what they actually have are lessons captured but not yet applied. So, what prevents organizations from optimizing and reusing these valuable lessons to reduce risks, lessen costs, minimize reinvention, and improve key business processes? (Lemons, 2009).

The objective of NASA's Lessons Learned Information System (LLIS) is to facilitate the integration of lessons learned into NASA policy, standards, procedures, and training. At major project milestones, technological reviews, or other key decision points, employees are asked to review key lessons learned, determine their relevancy to the current project, and assess project compliance with lessons learned recommendations.

At Rolls-Royce, lessons learned review teams hold review sessions at the end of each phase of a project. The reviews follow a structured agenda that asks questions pertaining to the objectives of the project in order to learn what worked well, what didn't, and why. Collected lessons are submitted to Rolls-Royce's official Lessons Learned Log, which is an online repository accessible to anyone in the organization. Once submitted, a lesson undergoes a defined review process before being published.

Certain Rolls-Royce retirees undergo an extensive interview process, called a leaver's interview, prior to their retirement from the organization. A panel of experts conducts each interview using an extensive interview guide. Before the interview, the retiree works with the knowledge team, refining the list of questions to those most pertinent to his or her role and guiding the selection of experts to participate on the panel. The knowledge team digitally records each interview and then extracts bullet points for publication on the intranet. The full interview results are published in the corporate library, where they are accessible via the intranet.

Recognizing that it would not be productive to ask individuals to try to regurgitate everything they know about a particular process, Michelin uses a structured interview procedure to capture critical knowledge in an organized fashion. The interview covers specific topics and scenarios that allow the expert to explain how he or she would solve particular problems. The facilitator is usually someone with enough experience to ask clarifying questions of the expert, but the facilitator should not be an expert him- or herself. The interviews are videotaped and processed for indexing to make the end product searchable. Eventually, knowledge retention is not a new thing as there are many big name organizations that have realized the importance of retaining important knowledge and implement this technique years and years ago. Why knowledge retention? Why do they invest so much in efforts to retain knowledge? Other than intangible benefits, knowledge retention also contributes to tangible benefits, such as satisfactory return on investment. Below are the sample of 4 case studies taken from McManus, Wilson, & Snyder (2004).

Credit Management Case

In 1999, the forest products company experienced the loss of a senior manager (expert) in the area of delinquency and bad debt management. Due to a serious illness, the manager notified the company that he would be seeking medical treatment and would be leaving in two weeks. The company realized immediately that they have a critical need to capture the expertise of the manager; thus, a project plan was developed to capture the expertise of the senior manager. Two knowledge harvesters gathered information on the financial collection process over a six-week period, including follow-up interviews with the expert after his departure. During the knowledge harvesting process, the knowledge harvesters discovered that the loss of this valuable employee has the potential to negatively impact the efficiency and effectiveness of the department, which is indicative of risk. A knowledge retention risk mitigation orientation project is defined as the gradual depletion or complete loss of valuable knowledge that is essential to the success of the organization. The primary purpose of this orientation is to sustain the current level of productivity and mitigate any risks associated with employee migration. The business result of harvesting the expert's knowledge was a single source for understanding how to manage delinquent accounts and how to respond to bad debt events, e.g., bankruptcy, collections, etc. The final deliverable was an interactive tool that was developed to capture and disseminate the key decisions relating to the management and response to delinquent/bad debt events.

Call Center Case

Database Systems Services was challenged with maintaining and supporting an increasingly critical Call Center Management tool with only one technical expert. The company realized that they were experiencing a decreasing capacity to grow the Call Center, with a potential result of losing all ability to manage the existing volume. To address this issue, the stakeholders needed to a project plan that included capturing the expertise of the technical expert supporting the system. The business result of harvesting the expert's knowledge provided a single source for running the call center management tool called eGain. The primary characteristic of this project to enhance operational efficiency and diminish cost per transaction indicated that it was an efficiency orientation scenario. A knowledge retention efficiency-oriented project is one that yields the same amount of work with less cost and less time. The purpose of this project is to enhance operational efficiency and diminish the cost per transaction while moving work from a high-cost group to a low-cost group. The deliverable captured the expertise from the technical expert and developed an interactive tool around the key decisions relating to the call center, eGain

Data Reference Library Case

The company was challenged with maintaining and supporting an increasingly critical portfolio management tool with two technical experts. At best they would be faced with a decreasing capacity to add critically needed functionality to a growing information technology management tool. At worst, they could lose all ability to maintain the system as it stands today. Therefore, they had a critical need to capture the expertise of the Senior Systems Analyst supporting the system. The knowledge harvesting process indicated that this case was an efficiency orientation scenario. The business result of harvesting the expert's knowledge provided a single source for troubleshooting the IT portfolio management tool called Focus. The deliverable captured the expertise from the Senior Systems Analyst and developed an interactive tool around the key decisions relating to troubleshooting the Focus tool.

Troubleshooting Case

Currently, one of the manufacturing plants spends a substantial amount of time training shop personnel how to troubleshoot their Thermoforming process. Troubleshooting expertise is distributed among a few process experts with no single view of the process available. The plant is interested in developing an expert system not only to solve problems with the thermoforming process, but also to be leveraged across other Thermoforming process facilities. The knowledge harvesting process indicates that this case is a productivity orientation scenario. A knowledge retention productivity-orientation project is one in which the same amount of effort yields more work results. The purpose of this type of project is to improve the overall productivity and facilitate knowledge transfer in order to extend the abilities of others. The expected business result of harvesting the expert's knowledge will provide a single source of troubleshooting expertise for the Thermoforming process. The short-term deliverable was an initial evaluation of the process to determine feasibility, scope, and broad requirements for an initial project to capture select Thermoforming expertise and distribute the expertise using eGain as the engine. The expected long-term deliverable is to engage a project to capture expertise, train individuals at the facility to "harvest" knowledge, deploy the expertise to the production floor, evaluate/enhance the effectiveness, and establish a plan to continually renew/refresh expertise.

CONCLUSION

Managing Knowledge in organization is not a simple task and it requires strategies to ensure satisfactory return on investment. A knowledge management program can be pursued and successful if there is a clear strategy and benefit to the company. As with many IT and large projects, basic project management skills tied with strategic direction and a clear business case can lead to a successful outcome. Knowledge management is more than creating a knowledge archive and invoking retrieving mechanisms. Those who say that organizational knowledge cannot be managed are wrong. However, it may not be easy to design and implement a knowledge management policy that serves an organization's needs in full. There are two important considerations to face when considering a knowledge management scheme. What do we need to know about the knowledge resource in order to manage it effectively? How will knowledge management improve the organization? What exactly is knowledge and how do we want to manage it?

The first point is about asking the right questions concerning the organization's knowledge resource before designing the framework for a knowledge management scheme. The second point is about knowing what the organization is going to manage and understand the management approach to this task. Knowing the gap, understand the gap, develop framework to deal with it, is the way to improve the knowledge management activities in organization.

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