

# Knowledge Management and Its Impact on IT Consultancy

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**Abstract:** This paper discusses the concept of knowledge management and its relation and impact on organizations within Information Technology (IT) consultancy and professional practice. Among the issues that are highlighted in this paper are the relation of knowledge management and its relevancy to IT consulting practice, why knowledge management is increasingly getting and being in the spotlight and how it impact businesses. Based on the discussed parts, this study has highlighted the importance of knowledge management in an organization. Additionally, the technologies, challenges and solutions for knowledge management are discussed. The advisory from IT consultants' emphasis on what businesses need to get, and that is an expert's insight before they truly understand and adopt knowledge management and making investments on this on-demand technology, as there are some challenges and issues in regards to KM that businesses need to be aware of and ready for.

**Keywords:** IT Consultancy, Knowledge Management, Information Technology (IT), Consultancy Services, Impact.

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## I. INTRODUCTION

In any organization, the management will do what it can to adopt different approaches in getting things done to achieve their goals and targets efficiently. With knowledge management, organizations are able to acquire or seek potentially useful knowledge and make it available for usage in the future and well used at a time and place that is appropriate for the organization; this maximum usage of knowledge will potentially lead to positively influencing the organizations performance [1]. It is highly believed that if an organization utilizes the knowledge it collects and manages it right, even in the slightest bit, without a doubt it can impact the organization positively and great benefits and outcome can come out of this. However, nowadays, in the age of knowledge worker, a lot of organizations usually go through huge restructuring, in order to eliminate redundant workers and jobs. In addition, organizations are faced with dealing with increasingly global and more sophisticated customers. For an organization to stay competitive in their business, they must be innovative in reducing their cost and expand their markets to meet the users' needs. Thus, organizations are streamlining their processes. And that's where Knowledge management comes in and enters the picture. Organizations are taking notice and realizing that there is a huge and largely unused asset in their hands in their organization. Knowledge management emerged not only because of the need to be cost efficient and effective in managerial related things, or problem solving, decision making, innovation and other aspect in order to maintain and develop a competitive edge, but also because specifically, to capture, catalogue, preserve, disseminate the expertise and knowledge that are part of organizational memory that typically belong within the organization in an unstructured method [2], with consulting companies advises on their expertise to executed the development of Knowledge Management of an organization success.

## II. LITERATURE REVIEW

### A. Knowledge Management:

Knowledge management was initially defined as the process of applying an efficient approach to capture, structure, management, and dissemination of knowledge throughout an organization to work faster, reuse best practices, and reduce costly rework from project to project [5]. A good definition of knowledge management would incorporate both the

capturing and storing of knowledge perspective and to value the intellectual asset of the organization. For instance, knowledge management is the deliberate and organized coordination of an organization's people, technology, processes, and organizational structure in order to add value through innovation [4]. This is achieved through the promotion of creating, sharing, and applying knowledge, as well as through the feeding of valuable lessons learned and best practices into corporate memory in order to nurture continuous organizational learning. It can be said that knowledge management is a systematic management of acquisition, creation and usage processes of explicit and implicit knowledge, which is of great importance to organizational decision making and needs. In other words, knowledge management is considered an important element to measure the success of any organization, and it depends on the quality of knowledge any organization can create on one side, and on how this infrastructure could be managed on the other side, which is focusing on the technical and human side of this integrated process [3]. A company, Dow Chemical Company had defined their knowledge management strategy to use intellectual capital to improve their capacity to add value to the business. Value chain model is used by Dow that starts with know-how, and other intangible intellectual capital assets which transformed into measurable, tangible intellectual assets through patents [6] other companies such as Siemens had linked their knowledge core competencies to organizational objectives and core products. Siemens developed their knowledge through R&D using Groupware to transform the knowledge into action [6]. An organization starts to realize the value of their knowledge assets only when it can be transferred between individuals. Based on Nonaka and Takeuchi, Dataware Technologies identify the four processes that are usually used by organizations for knowledge conversion which is socialization, capture, dissemination, and internalization.

- i. Socialization means sharing experiences through observation.
- ii. Capture is when the tacit knowledge is converted to explicit knowledge.
- iii. Dissemination is when the explicit knowledge is copied and distributed.
- iv. Internalization is a process of experiencing knowledge through an explicit source.

Takeuchi's three-step, three-spiral model includes a learning map that identifies questions to be answered and decisions made, an information diagram that specifies the kind of information that users need, and a knowledge chart explains what users can do with specific information. The knowledge chart represents the conversion of information to vision or knowledge. Once the three maps have been developed, a balanced scorecard evaluation is performed to assess what types of IT tools will be effective for leveraging the information repositories, and an information technology chart is created. Furthermore, these examples and steps show that knowledge management is indeed something that is crucial in organizations and can play a big role in its success and survival.

### ***B. IT Consultancy:***

A consultant, described by Shaikh, Habib and Ibrahim [7], is a professional with skills specialized in a particular discipline and acquired through different theoretical and practical experiences and provides advisory services to customers pertaining to a specialized area. An IT consultant on the other hand, concentrates on serving a professional advice on the use of Information Technology to achieve the organization's business objectives which includes writing, testing, and supporting software to meet the needs of customers. IT consulting companies often work on behalf of companies or provide expert advice and assistance to evaluate, manage, implement, deploy and administer systems [8], [9]. Freedman [10] has outlined the framework of skill sets that an IT consultant should possess to gain success. Due to the fact that IT consultants are selling billable hours that clients are willing to invest in, to get the best insights and advices on how they can meet their business needs; IT consultants need to have the technical expertise, understand the business context, and possess good communication skills, which, when converged, produces a trusted IT advisory.

IT consultants – by nature – are typically strong in the technical disciplines [10], but they should constantly upgrade their knowledge on the technology advancement that keeps on changing and spreading widely. Technology reaches people, with and without an IT background. Thus, constant learning and updating their knowledge of IT advancement is critical in order to be ahead of clients, as they are also becoming more sophisticated by the easy access to information and knowledge with just a few clicks. Consultants must have the know-how of technologies that would drive a competitive advantage and provide decision-making advices for clients around the world. As such, one should acquire an in-depth understanding of business issues [10] because clients expect that an IT professional would deliver a solution that contributes to his business. The IT consultants would propose technical solutions which gives value to their clients' business in return. However, rather than just focusing on general business understanding, a pre-project homework or

background check on the clients' company to know their nature of business is vital for a more engaging and meaningful advisory. In addition to that, IT consultants must have the communications skills [10] in order to convey their advices in the best and convincing manner. A clear, open, and effective communication between parties is what constitutes a smooth consultation. It takes communication to be able to help clients identify their needs and requirements, "understand the capabilities and constraints of technology, and create a clear and compelling project vision" [10] along the advisory process. IT consulting can help businesses in so many ways through providing IT solutions that best suit their business needs. As IT advances are on the rise and continually evolving, businesses are looking into shifting their business operations to be digitized and to adopt on-demand IT practices with proper advisory from the IT consulting and services industry. Knowledge Management, which is continuously evolving and expanding, is one of the current pervasive technologies that IT consultants can adopt in their professional practice.

### **III. KM PRACTICE TO CONSULTANCY SERVICES**

Consulting companies are typically knowledge-intensive organisations, transferring external knowledge to their customers by providing solutions [11]. Consultancies sell the expertise and knowledge by their well-educated employees, which are based on the past experience, competence and knowledge of newly hired employees, and newly gained experiences from accomplished tasks at the customers. Consultants not only provide knowledge for customers, but also develop the knowledge base of their own companies by processing experiences. Consultancies were not only the pioneers of popularisation of the idea of knowledge management, but also the first investors to knowledge management solutions for themselves [11]. The selection of organisations is not accidental: these companies used radically different approaches to introduce their KM practices. Although there are similar companies, the presented organizations have some unique and interesting features. Information gathering has been accomplished by personal interviews of members of organisations, observation and document analysis. Owing to the request of organisations for anonymity, names are altered. A research conducted by Adam et al. proved that companies and organizations need consultants in order to handle security issues [12]. Thus, knowledge Management becomes very relevant for IT solution providers with the proper experience, skill sets and know-how. IT consulting is a field that advise businesses on how best to use information technology to meet their business objectives. IT consultancy companies provide expert advice and assistance in the fields of writing, modifying, testing and supporting software to meet the needs of a particular customer. Experts in IT consultancy companies also plan and design different systems and integrate computer hardware, software and communication technologies.

#### ***Importance and Impact of Knowledge Management:***

Being in the age of data, technology and information, managers and organizations are left with a large amount of data, making knowledge management that much important. There is a lot that comes with knowledge management but there are a few things that comes to mind when importance of knowledge management for any organization's success is discussed, which are, it helps and facilitates the process of decision making, it builds a learning curve or routine and encourages innovation and cultural changes[13]. As for facilitating with the decision making process, data leaves managers with a huge amount information, which is great but is quite the challenge to manage, thus affecting the decision making process, but implementing a knowledge management system can definitely help with dealing with the chaos, sharing information between several departments and improving the decision making process. Moreover, it build a much needed learning curve by having to always assess units, departments as well as people, successes and failures, leading to know what's effective and what isn't, all to improve the performance. Furthermore, knowledge management can also encourage innovation and change, by having programs that discuss things beyond information and knowledge updates to managers, but encourages change and new ideas, and corporate value, all which lead to innovation in the long run [13].

Before going through with knowledge management, the knowledge at hand must be assessed for competency, this to ensure the organization's readiness for knowledge management. Basically knowledge competency is all about giving managers and team leaders the ability to track critical knowledge working skills of workers and for individuals to identify where they are at and what they need to work on to improve their efficiency and competency. In addition, there are three levels of competence to become a great knowledge worker, which includes awareness of skills, practicing and applying those skills and demonstrated competence in practicing those skills [13].

One of Knowledge Management requirements is having technologies to support the strategies, processes and methods for better sharing and applying of knowledge across the organization. Moreover, any system is interdependent on a subsystem that helps it function better [14]. The main technologies are communication technologies that are web based as well as

mobile technologies. In order for knowledge management (KM) to be a success in an organization, some things need to be in place, such as, knowledge portal which helps with information access and navigation as well as containing software technology that supports communication and identify and distribute information to knowledge workers through or based on knowledge profiling [14]. Moreover, knowledge profiling is another technology that can improve the organization's performance, as each knowledge worker can update their profile which includes their knowledge needs, areas of interests and such, to have a better understanding of what they need to work on to be more efficient and productive. Furthermore, urgent requests is a useful part in knowledge portal, as it enables sending a request and receiving many responses from all over the organization, getting support and using the knowledge effectively [14].

#### **IV. KM IN ORGANIZATIONS CHALLENGES AND ISSUES**

KM is more important to enterprises that are working in knowledge escalated regions. Consulting firms are a definitive case of association offering learning specifically. However, there are sure pointers for an association's capacity to make, spread and apply information knowledge. In organizational reality, people and organizations are liable to experience more than one KM issue / challenge simultaneously [15]. Subsequently, from an organizations viewpoint, it is attractive to exhibit a far reaching picture to clarify KM challenges and arrangements since this can help organizations to accomplish focused advantage in the knowledge economy and future of KM. In spite of the fact that most organizations have perceived the presence of KM issues / challenges, the reasons for issues require cautious investigation if associations are to lead remedial activities. The challenges of KM issues distinguished can be grouped into three main measurements which are Structural (organizational), Human related, Cultural, Infrastructural , Technical related Issues / Challenges, Content Related Challenges, and Routines and Procedure Related Challenges [15][16][20].

##### ***A. Structural (organizational) Challenges:***

Numerous respondents specified that "lack of training", "restricted assets" and "absence of discussion time" add to knowledge creation, storage and exchange issues [15]. The absence of organizational motivation to make and exchange knowledge has all the earmarks of being the real clarification for KM issues. Some brought up that "The management does not care for the support/discipline system appropriately" [15][16]. The organizational hierarchical structure is another main driver of KM issues. One respondent designated "The progression of my organization is too flat and is not managed well. Such a structure makes knowledge exchange troublesome". Essentially, "the bureaucratic method for work" is too considered as proof for the foundation of obstructions to knowledge creation and exchange. The natural authoritative culture is a basic component adding to KM issues [15][17]. A few respondents showed that "there is no great correspondence environment in the organization, so there is insufficient sharing among departments". "Between departmental clashes block knowledge recovery and exchange, particularly for the information exchange among different divisions"[15].

##### ***B. Human related Challenges:***

The managers perceive that, in KM system (KMS), the facilitator plays a critical part. At the point when this part is feeling the loss of, the KMS is destined to flop: "no particular individual is in charge of the knowledge upgrading work. The data in the system is obsolete and no more extended appropriate to current work rehearse"[15][18]. As per the findings, people may not will to contribute records of documents to the KMS since they are "hesitant to share their knowledge given the likelihood of losing their energy and position"[17]. Also, "every staff might want to keep their knowledge in their own particular place", which prompts to an absence of standardized practice in knowledge storage and exchange. Another noteworthy concern identified with the knowledge change issues lies in the knowledge externalization forms [15]. The respondents suspected that "staffs feel excessively troublesome, making it impossible to express their encounters; in spite of the fact that they know their encounters are extremely helpful for junior staff. Knowledge is excessively troublesome, making it impossible to be meant content". In China, Guanxi or individual connections, is a deciding impact in many regions of human action, including KM [19]. Respondents brought up that "between individual clashes", "rivalry among staff", "and absence of trust and connections" and "intra-departmental clashes" confuse knowledge exchange [19].

##### ***C. Technical Related Challenges:***

People agree that IT is helpful in overseeing knowledge and consider it as an empowering agent for KM. However, it creates the impression that from the junior knowledge specialists' point of view, IT based KMS have not yet been embraced in most organizations, in any event for low-level alternately operational-level work, as by the following

quotations [17]. "The system is obsolete and some work must be done physically / manually " which adds to KM storage issues."The present IT system can't support the progressions of KM ideas in the organization". "Organizational IT systems do not support knowledge management"[15][17]. Although a few organizations have utilized data system generally intranets, the poor convenience and the non-value of the KMS add to the slacking KM rehearse, by the following quotations: "The limit of the equipment and programming backing is most certainly not enough". "The system is moderate and constantly occupied; here and there it hangs". "Security of the KMS is a major concern". "The stream of utilizing the KMS is not advantageous". "The KMS is too complex to use"[17][19]. Keeping up with technology. Deciding how knowledge should to be apportioned and exchanging it rapidly and adequately is an enormous test. Continually evolving structures mean figuring out how to be smart, quick, agile and responsive – all things a KM instrument must have the capacity to finish [18].

#### ***D. Content Related Challenges:***

Content collection for knowledge inventory can be hard work for the organization. To transform implicit knowledge to explicit information requires special skills and creativity to conduct the activity. [20] Some communication and information processes are very difficult to describe. Few possible content e.g. a description on how to gain special and restricted information, could even be illegal or against organisational rules. Other examples could include unauthorized informal meetings or exchange via software that is not authorised within the organisation (e.g. Instant Messengers). The other challenges that is related to the individual skill where the content delivered may simply not be understood. Mapping of information only make sense if people know how to read them which is not always the case in southern Africa. To work with digital or analogue audio files as well as video files, people must have the experience or know-how on using a suitable media player.

#### ***E. Routines and Procedure Related Challenges:***

Some process and procedures that are only claimed to exist for example the regular department communication and department meeting. In addition, work plans or strategy and progress papers may only represent ideal situations that have no link to reality. Certain routines may not be known as routines. Several processes may work in certain cases but not in others which makes them unreliable. For example you need to ask a particular person for access to the staff library but if this person does not respond to your request you are stuck without the info you require. Some work is carried out instantly without planning that may lead to inventing the wheel again and again. This could be due to a culture of 'last minute 'or 'hands on' crisis management. Thus strategic and planned work frequently has a low priority, while variable ad-hoc processes become 'routine', and 'quick and dirty' becomes being 'business as usual'.

## **V. CONCLUSION**

In conclusion, knowledge management without a doubt has a lot to offer and can lead an organization to success, but certain elements needs to come together for it to be successful from top managers to employees, because an organization does not only need to care of the technology part but also the heartware (the staff ) from motivating and rewarding and guiding, and though it has its challenges just like any approach and technology, the potential and benefits that comes from it exceed the risks and in this study for those challenges, recommendations were proposed. This study shows the impact and importance of knowledge management in organizations, how it makes it more getting with the times and dynamic as well as making use of that knowledge through gathering and seeking as well as sharing it. It has also impacted the IT consultancy business, with many organizations wanting to leverage on it but not having the skills within their company to do so, opening the doors for IT consultants to meet those needs. The great thing is that not only that you have this knowledge but being able to share it makes it that much meaningful and useful as the benefits are distributed to all those who access it. This will surely have a great impact on an organization's performance making it more efficient and a force to reckoned with, an edge that is needed in these modern times with IT consultancy involvement.

## **REFERENCES**

- [1] Mohammad Q. Ahmad Al-Qarioti, The Impact Of Knowledge Management On Organizational Performance, Eurasian Journal of Business and Management, 3(4), 2015, 36-54, DOI: 10.15604/ejbm.2015.03.04.004
- [2] W.R. King (ed.), Knowledge Management and Organizational Learning, 3Annals of Information Systems 4, DOI 10.1007/978-1-4419-0011-1\_1



- [3] Lueg, C., 2001. Information knowledge and network minds. *Journal of Knowledge Management*, 5(2), pp.151-158. <http://dx.doi.org/10.1108/13673270110393194>
- [4] Carneiro, A., 2000. How does knowledge management influence innovation and competitiveness?. *Journal of Knowledge Management*, 4(2), pp.88-96. <http://dx.doi.org/10.1108/13673270010372242>
- [5] Pfeffer, J., and R. Sutton. 1999. *The knowing-doing gap: How smart companies turn knowledge into action*. Boston, MA: Harvard Business School Press.
- [6] Lloyd, B., 1996 "Knowledge Management: The Key to Long-term Organizational Success", *Long Range Planning*, Vol. 29 No. 4, pp. 576-580.
- [7] H. Shaikh, K. W. Habib and J. Ibrahim, "The Impact of Social Media on Consultancy," *SINDH UNIVERSITY RESEARCH JOURNAL (SCIENCE SERIES)*, vol. 46, no. 3, 2014.
- [8] N. F. Fakhri and J. Ibrahim, "The Role of IT Consulting Practice: A Successful Enterprise Mobility Solution," *International Journal of Management and Commerce Innovations*, vol. 3, no. 1, pp. 197-203, 2015.
- [9] Advisen, "Industry Analysis: IT Consulting and Services," Advisen, 2012.
- [10] R. Freedman, "The IT Consulting Skill Set," in *The IT Consultant*.
- [11] Wiig, K.M. (1999) What future knowledge management users may expect, in: *Journal of Knowledge Management*, Vol. 3, No. 2, pp. 155-165.
- [12] M. E. Adam, M. A. R. Omar, M. Barzak, M. A. F. Salah and J. Ibrahim, "IT Security Consultancy in Malaysia: Hindrances and Impacts," *MIDDLE EAST JOURNAL OF BUSINESS*, vol. 8, no. 3.
- [13] L. Quast, "forbes leadership," 20 August 2012. [Online]. Available: <http://www.forbes.com/sites/lisaquast/2012/08/20/why-knowledge-management-is-important-to-the-success-of-your-company/#520f9f375e1d>. [Accessed 22 February 2017]
- [14] R. Sanchez and J. T. Mahoney, "Modularity, flexibility and knowledge management in product and organization design," *Strategic Management Journal*, no. Knowledge and the Firm, pp. 63-76, 1996.
- [15] Carol X.J. Ou and Robert M. Davison. "Knowledge Management Problems, Causes, And Solutions: Junior Knowledge Workers' Perspectives," 11th Pacific-Asia Conference on Information Systems 2007, pp. 11-17.
- [16] Murray E. Jennex "Current Issue In Knowledge Management: Addressing Contextual Issues in Knowledge Management: A Guiding Framework," *Information Science Reference (an imprint of IGI Global)* 2008, pp. 12-33.
- [17] Alavi, M., and Leidner, D.E. "Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues," *MIS Quarterly* (25:1) 2001, pp. 107-136.
- [18] Sambamurthy, V., and Subramani, M. "Special Issue on Information Technologies and Knowledge Management," *MIS Quarterly* (29:1) 2005, pp. 1-7.
- [19] Fu, P.P., Tsui, A.S., and Dess, G.G. "The Dynamics of Guanxi in Chinese Hightech Firms: Implications for Knowledge Management and Decision Making," *Management International Review* (46:3) 2006, pp. 277-305.
- [20] Hasler Roumois, Ursula (2007), p 43-44, Describes Two Strategies To Transfer Knowledge: Via Code Or Via The Interchange Between Humans.