# Knowledge Management Model Implementation in Electronic Devices

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**Abstract**

**Some of the knowledge management (KM) enablers documented include leadership operations in the form of a KM officer, financial aspects, and the organisational culture. On the other hand, the major barrier involves resistance to change due to the traditional culture emphasisingsocialisation and the establishment of trust before fostering business operations. From the gap analysis, some of the strategies that the Emirates Group could embrace include investing more in training sessions and workshops, designing the KM program in a manner that enables it to protect tacit knowledge from loss, and engaging in virtual team formation to foster an awareness of the value lying in KM program support. In so doing, it is projected that the company's employee operations will be closely linked or aligned to the leading goals and objectives, upon which desirable degrees of productivity and competitiveness might be achieved. In large scale sensor networks, asymmetric links tend to be significant. The implication is that robust protocols are required to handle the asymmetric links appropriately, especially via mechanisms that include sub-routing layers, hence achieving bidirectional abstraction.**

## 1        Introduction

According to Yozgat and Rofcanin (2015), sustainable and long-term competitive advantage in the information technology context lies in skills as the leading resources towards surviving stiff competitive in the local, regional, and global marketplaces. Operating as an aviation holding firm, the Emirates Group is based in Dubai and headquartered in Garhoud. The company operates fleets that exceed 250 wide-bodied aircrafts and the latter fly to more than 140 destinations in six continents. The company has also employed more than 62,000 workforces in all its associated firms and business units, becoming a renowned employer in the region of the Middle East (the Emirates Group 2017). In relation to knowledge management, the Emirates Group (2017) observed that the process entails the practice of handling knowledge assets towards value creation to meet the strategic and tactical requirements of a firm. Therefore, it can be inferred that knowledge management seeks to foster the flow of knowledge and information between and to the right people in a company (Bin Nordin et al. 2020). The motivation is to deliver information at the right cost, in the right format, and at the right time for effective and efficient acting towards the organisation's value creation. At the Emirates Group, the leading knowledge management initiative lies in the practice of a movement level constituting the decision-support system and the management information system. According to the Emirates Group (2017), the management information system at the Emirates Group focuses on internal information sources in which data is taken from transaction processing systems before being summarised into management reports that assume a series. Indeed, management information systems as knowledge management practices at the Emirates Group occur at the organisation level and involve data regarding articles, presentations, reports, and memos that are stored in repositories where they can be retrieved with ease (the Emirates Group 2017). At the group level, the company utilises an operational information system to guide daily operations of this airline firm. Specific data entails crew, passengers, and lights. Lastly, knowledge management at the individual level assumes the form of the ezRez software that enables travelers to add destination activities, car rentals and hotel rooms to their flights during online booking (the Emirates Group 2017).

## 2        Methodology

This model of KM advocates for the existence of two types of knowledge. On the one hand, tacit knowledge is acquired via the people's experience and communicated indirectly through analogy and metaphor. On the other hand, explicit knowledge is perceived as that which is contained in procedures and manuals (Nonaka& Takeuchi 1995). During knowledge conversion, the model holds that socialisation entails sharing tacit knowledge via participation in informal and formal communities, practice, imitation, and observation. At the Emirates Group, knowledge management at the individual level could be steered by ensuring that senior leaders walk the talk and act as role models before allowing other employees to act in the required manner, having

observed and imitated these senior leaders. The model proceeds to indicate that externalisation entails tacit knowledge articulation into concepts that are explicit (Sabherwal & Becerra-Fernandez 2003). At the Emirates Group, this step could be achieved by holding seminars and conferences to foster knowledge creation and sharing via feedback provision. The third step in the selected model involves combination whereby concepts are integrated into knowledge systems. Lastly, internalisation implies that explicit knowledge is embodied in to tacit knowledge. At the Emirates Group, knowledge management at the organisation level could assume what is advocated in this model by fostering brief executive summaries, conducting trend analyses, and producing review reports.

## 3        Results and Discussion

Various reasons or perceived benefits account for the endless effort to foster knowledge management at the Emirates Group. For instance, the motivation to promote KM has been found to lie in the attribute of improved service delivery, productivity, and efficiency. According to Chen and Huang (2009), knowledge management at the Emirates Group is also motivated by the perceived benefits of facilitating effective communication of knowledge among task forces, an avoidance of overlap while performing certain tasks, the capacity to assure sound policy making and improved internal decision-making, and increased transparency. Various KM enablers exist at the company level around Africa nation. These enablers range from leadership to financial aspects and organisational culture (Dalkir 2011).

From the leadership perspective, the presence of a KM officer at the Emirates group is seen to play a leading role in facilitating the practice. On the other hand, the financial resources as KM enablers have ensured that sufficient allocation is achieved to allow for the establishment of institutional, technological and human capabilities required towards the successful operation of the KM program (Dobre 2012). Hence, a sufficient annual budget targeting the KM program is seen to promote the initiative and has ended up creating necessary conditions through which employees are prompted to share knowledge. Technological instruments in terms of sophisticated IT systems form another KM enabler due to their capacity to store knowledge that has been captured. For instance, the company relies in data mining and data warehouse tools to foster knowledge storage and sharing. Online collaboration tools have also played an additionally beneficial role. Human resources via the presence of an adequate employee group form an additional KM enabler at the Emirates Group (Holsapple& Wu 2011). Indeed, the central objective lies in the exploitation of a varied talent pool towards improved quality in the wake of a diverse knowledge base.

Despite the aforementioned promising trends, knowledge management at the Emirates Group has not gone without challenges. For example, knowledge transfer and sharing is seen to be hindered by the dominant organisational culture characterising the Arab world. The eventuality has been a state of severe resistance among sections of workforces. According to Vaccaro, Parente and Veloso (2010), Arabs are among populations perceived to be the most resisting when it comes to knowledge sharing. The resistance is attributed to issues such as the traditional culture emphasisingsocialisation and trust establishment prior to engaging in business activities (including KM), the difficulty and complexity of knowledge sharing in the Arab environment, and hindrances emerging from cultural and social beliefs (Yang, 2010). The overall outcome has been a situation in which the lacking interpersonal trust between the management and employees has stalled progress in the Emirates Group's KM program.

At the Emirates Group, the leading dilemma is the state of lack of clarity and vagueness of the KM concept to the majority of service users. This trend is attributed to the fact that the concept has been introduced recently and is yet to gain an in-depth adoption and implementation in the selected context, as well as wide-scale acceptance among community members served by the airline company (Yozgat&Rofcanin 2015). Therefore, the fact that KM has been introduced recently implies that the program calls for time not only to become clear to the service user groups but also to mature. These mixed outcomes imply that there is a need for the company to invest more in the organisation of training sessions and workshops that involve task forces. In so doing, an understanding of what KM stands for might be achieved and its resultant and beneficial or crucial role emphasised towards firm sustainment and development. The recognition of the crucial role played by tacit knowledge is also seen to be lagging behind the expected level and the eventuality has been a failure to acknowledge the critical role it plays when capture, documented, and shared at the Emirates Group (Chen & Huang 2009). To address this gap, this paper recommends that the company the design of the KM program seeks to protect tacit knowledge from loss, ascertaining its existence at the firm even in situations where sections of workforces decide to leave or are transferred. In so doing, the expected outcomes of the KM program will be achieved.

Based on the findings above, this study's results pose or could gain application to practical situations such as vertically integrated experimental methodologies and dense large scale network modeling. Regarding the specific parameter of flooding, the results demonstrate that with distance, there is likely to be decreased packet reception, hence a relatively long tail. On the other hand, an increase in the number of nodes is seen to yield a scenario whereby the transmission is likely to reach certain nodes found at farther distances. It is also at the MAC layer that the collision effect of stragglers is explained. In particular, the combined effect of collisions and long links is seen to cause backward links. For long links, they are seen to translate into faster flood propagating in some directions. In areas with slower propagation, there is also rebounding to fill them, with a similar outcome reported for scenarios where stragglers might have remained; hence, backward links.

Additional findings demonstrate that in large scale sensor networks, asymmetric links tend to be significant. The implication is that robust protocols are required to handle the asymmetric links appropriately, especially via mechanisms that include sub-

routing layers, hence achieving bidirectional abstraction. From the previous literature, some of the documented routing protocols include ZRP and DSR. For these protocols, they can route through asymmetric links successfully. However, other protocols such as TORA and AODV tend to filter out asymmetric links and even assume that all links are symmetric in some cases.

It is also notable that this study utilized two metrics towards characterizing the application level features of a tree established from flooding level. These metrics included cluster-size and node level. Indeed, the node level entails the number of hops experienced between a node on the tree and the base-station. From the figure presented earlier, there is wide distribution around the mean. Specifically, nodes found to be physically close to the base-station are seen to be several hops away from the mean compared to the nodes found to be far from the base-station, which are seen to be few hops away from the mean. Regarding the attribute of cluster-size, it is notable that it constitutes the number of children that tend to be attached to a given tree's parent and reflects the parent selection algorithm's property. From this study's findings, it is worth inferring that at different transmit power settings, there are large clusters. The result could be linked to the MAC layer behavior.

## 4    Conclusion

In summary, this paper has examined the aspect of knowledge management by gaining specific insights from the context of the Emirates Group. Whereas KM at the firm level comes in the form of articles presentations, reports and memos, group levels have seen KM emerge via an operational information system responsible for guiding the airline company's daily operations. On the other hand, individual-level KM at this company exists in terms of the exRez software through which travelers can add destination activities, car rentals and hotel rooms to their flights, a process that occurs during online booking.

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