Knowledge Management in Dubai’s Public Sector: Opportunities and Challenges

By Mhamed Biygautane and Khalid Al-Yahya

Introduction

The recent global economic and institutional performance problems have triggered a serious debate about the capacity of both government entities and private sector firms to develop, incorporate and manage human capital and knowledge resources in a more strategic and sustainable manner. The GCC countries have historically faced critical challenges related to the formation and management of knowledge: the shortage of national skills and knowledge resources, the continued need for investments in these resources, and the reliance on large numbers of foreign workers and firms to fill the national skill-knowledge gap and shoulder the implementation of ambitious economic development goals. In part, the region was able to afford this reliance due to abundant financial resources, improved working and living conditions, and greater integration into the global economy. However, recently conditions have changed in terms of shrinking budgetary allocations for major expansion projects and human resource development, departure of talent from many sectors, and the quest for workforce nationalization.
and employment opportunities for locals. This highlights the limitations of previous approaches to organization and management development activities adopted by both public and private sectors in the GCC region (Al-Yahya 2010, 2009). These new conditions raise many questions about the importance of how knowledge—in its different forms and sources—is captured, organized, stored, disseminated, and used to achieve strategic developmental goals. As illustrated in the 2009 Arab Knowledge Report, knowledge is a pivotal lever in the service of growth and development. Hence, effective knowledge management is a necessary vehicle for realizing and maximizing the potential of knowledge for sustainable performance in work organizations, as well as in society at large.

Strategic knowledge management is of vital importance to GCC countries. Governments have invested generously in developing or attracting human capital and knowledge resources through education, research, and training. In spite of this expansion in human capital resources, recent studies suggest low returns in terms of capturing and transferring knowledge, as well as in improving performance. One factor is the prevalent high level of underutilization of knowledge and skills, especially in the public sector. One study found high levels of Underutilization of knowledge and skills Saudi Arabia, in Oman and in UAE (Al-Yahya 2009). This illustrates that almost half of the available skill and knowledge (and motivation) resources is not properly recognized and used for achieving organizational goals. Furthermore, the GCC countries have been fortunate in attracting expertise and talent from around the world, enabling the region to build its basic infrastructure.

This policy brief aims to highlight the importance of knowledge management and the factors that influence its implementation within the context of public organizations. Using the case of the public sector in Dubai, this study assesses the clarity of the KM concept in public sector entities, their ability to capture and store knowledge, and the reasons and the expected benefits from implementing KM programs. The lessons drawn from this study can inform guidelines for future initiatives or programs.

What is Knowledge Management?

The lack of a commonly accepted definition of KM creates considerable ambiguity and confusion about the concept and its significance. There is still no consensus on what the concept precisely means (Cong, Xiaoming and Pandya 2004). However, the various definitions in the available literature agree that KM is an ongoing, persistent, purposeful process that enables organizations to create, select, organize, conserve, disseminate and transfer knowledge to achieve its strategic objectives. The American Productivity and Quality Center provides a comprehensive definition that integrates the elements of the KM process: “Knowledge Management is the systematic process of identifying, capturing, and transferring information and knowledge people can use to create, compete and improve” (APQC 2000). One of the shortcomings in understanding and experiencing KM is reducing it to technical terms, as most organizations tend to limit its application to the use of information systems and automation. However, KM should not be interpreted in technical terms only. Any definition and implementation of KM should take into account that fact that knowledge is dynamic and social, and embedded in individuals, social experiences and interactions.

Significance of Knowledge Management for the Public Sector

Knowledge management is not a new phenomenon per se, but it has only recently emerged as an explicit area of enquiry for efficiently managing organizational knowledge, and as an evolving and debatable topic for both academics and practitioners (Wiig 1997). Since early 2000, governments in developed countries—particularly OECD members—have implemented many initiatives to encourage the utilization of knowledge in their organizations. These countries also have conducted annual surveys of their public and private sector organizations, and have found that KM is a key driver for organizational effectiveness and competitive advantage, as well as an effective way to address economic problems including losses related to high turnover and retiring workforces.
Organizations which have seriously examined their utilization and sharing of knowledge have discovered that they possess more knowledge than they realize (OECD 2003).

The experiences of OECD countries show that knowledge management has become an essential instrument for improving the effectiveness and responsiveness of the public sector. Many managerial techniques were introduced to the public sector—mostly under the rubric of “New Public Management” theory—to improve efficiency, quality of decision making and responsiveness with the public, with result-based performance as the main driver of organizational and operational excellence. Accordingly, managers increasingly emphasized observable work and quality of output (Wiig 2000). Then, the role of information technology and use of computers added order and efficacy to the performance of public organizations. Now, due to numerous reasons—including economic, industrial and cultural, as well as the waves of globalization and the world becoming a “knowledge economy” or “knowledge society” (Wiig 1997 and 2000; Arab Knowledge Report 2009)—attention has shifted to knowledge management as the next key requirement for organizational excellence.

**Why is Knowledge Management Important for the UAE’s Public Sector?**

Recent developments in terms of shrinking budgetary allocations, departure of talent, and the quest for workforce nationalization and employment opportunities for locals has placed considerable pressure on the public sector bureaucracy’s capacity to function. Of the Dubai organizations surveyed, 66% agreed that they lose core competencies when their staff members move to other organizations or units. More importantly, Dubai relies heavily on the expertise of consultants, who provide “rented knowledge” to different private and government entities. This knowledge is often lost due to lack of a well-structured and developed system of knowledge management.

Implementing KM in Dubai’s public organizations creates benefits and opportunities at both the individual and organizational levels. At the individual level, employees get the chance to share their experiences and knowledge, and to learn from each other’s mistakes, therefore enhancing performance and improving skills. At the organizational level, efficiency, quality, productivity and better decision making are the product. Organizations witness substantial improvements in both quality and cost.
of their operations and the satisfaction of the public (Cong, Xiaoming and Pandya 2004).

Interviews conducted with major Dubai government entities that have incorporated KM into their organizations, including DEWA, KHDA, RTA, Dubai Courts (DC) and the Dubai Police (DP), confirm the above-mentioned benefits of KM, and also reveal other important insights.

As Table 1 demonstrates, the five organizations have very similar reasons for implementing KM programs. They all aim to enhance their organizational performance, improve internal efficiency and service delivery, facilitate communication among individuals and departments within or outside their organizations, and to better store their knowledge capital through proper mechanisms. RTA, DC and DP were aware of the importance of KM for their organizations and implemented it accordingly. DEWA and KHDA, however, implemented the KM program not only for organizational reasons, but also to satisfy the requirements of the Dubai Government Excellence Program (DGEP), which considers the presence of KM tools as one of the main requirements for winning the award. The DGEP seems to have succeeded in encouraging public organizations in Dubai to adopt best practices to enhance their effectiveness and service delivery.

Clarity of the knowledge management concept in Dubai’s public sector entities

Successful implementation of KM programs is contingent on the clarity of the concept to all members within the organization. One of the major obstacles that government entities have faced while running KM programs in Dubai is the vagueness of the concept to people. All the interviewed and surveyed organizations noted this challenge. For example, Dubai Courts states that it was hard to explain and clarify what KM meant to everyone within the organization. It was also difficult to decide which department should administer the program. KM was a new concept, and employees at the Courts had neither received any training on KM programs nor been exposed to it properly. That created difficulties in implementing the program, but with training programs, workshops and lectures, the Court managed to better clarify the meaning of the concept. Similarly, Dubai Police assert that the concept of KM is still vague to most employees at the institution, despite incessant efforts to make it clear. Dubai Police organizes workshops and training sessions to inform the employees about the importance and meaning of KM, and is confident that its efforts will lead to the desired outcomes in the near future.

The analysis of survey data shows that when asked about the main difficulties that their organizations faced while trying to implement KM programs, 30% of the respondents “strongly agree” and 36% “agree” that lack of awareness and understanding of the KM concept was one of the main obstacles (Figure 1). Moreover, 19% of the respondents “strongly agree” and 53% “agree” that another challenging factor was the lack of awareness of how to use KM tools.

In fact, the majority of government entities in Dubai are aware of KM, but refer to it with different terms interchangeably. Figure 2 illustrates that four terms are predominantly used by these entities in their strategy and general management documents. Respondents were required to indicate which of these concepts they use, and were allowed to choose more than one answer. Results indicate that 51% of respondents confirm that they use the term “knowledge management,” 46% use “knowledge sharing,” while 41% indicated that they use “information management” and “capacity development.”

In fact, using these different concepts in such a manner can further fuel the ambiguity and confusion among individuals and hinder an organization’s attempts to implement a KM program. Therefore, it is crucial to clearly define what the concept of KM stands for and what each term means.

From data to knowledge

To clearly understand the concept of KM, it is crucial to first distinguish between data, information and knowledge. Too often, the terms “data” and “information” are used interchangeably with the word “knowledge,” fueling the ambiguity
associated with knowledge management. Figure 3 demonstrates the processes of “data’s evolution to knowledge.” Data are raw facts; they can be numbers and/or words, but they carry no meaning and present little value for decision making or any other activities (Sebran and Luan 2002). For data to be meaningful, they have to be processed and molded in a certain context. This leads to information, which is an organized and contextualized set of data.

Knowledge, however, is “information in action” as O’Dell et al (1998) put it, or “meaning made by the mind” (Marakas 1990). Knowledge without clear meaning is information or even data. Hence, knowledge is the combination of an individual’s judgment, reflection and analysis of the information perceived. The transformation of information into knowledge goes through four processes in the individual’s mind: comparison, consequence, connection and conversation (Davenport and Prusak 1998). The aggregated knowledge guides the decision maker to take the right steps for planning and action.

**Tacit, explicit and organizational forms of knowledge**

Knowledge is embedded and manifested in various forms. It has been categorized into four main classes: individual, structural, organizational (Edvinson and Malone 1997) and social/cultural.
Individual knowledge (mostly known as tacit knowledge) resides mostly in people’s minds. It is the personal, unspoken and cognitive knowledge that individuals in organizations do not easily share or communicate among each other. The salient component of tacit knowledge is “the know-how and know-what” that people acquire through years of experience in a certain organization, yet is not well recognized, captured or documented. When these individuals (knowledge creators and carriers) leave their organization for another, they take with them this immeasurable and priceless knowledge that they had accumulated over the years. In contrast, structural knowledge (explicit knowledge) is well documented in numerous sources like instruction manuals, books, newsletters and magazines. It is easily captured, codified, accessed and shared among individuals. Table 2 clarifies the differences between the characteristics and sources of both tacit and explicit forms of knowledge.

Organizational knowledge refers to the learning activities that take place within the boundaries of a certain organization; its main components are the tacit and explicit forms of knowledge. The intricate task, however, rests in transforming tacit knowledge to explicit knowledge. Tacit knowledge is a fundamental asset to organizations, as studies have shown that managers get two thirds of their information and knowledge from informal and formal face-to-face meetings or phone conversations (Davenport and Prusak 1998). Moreover, the exchange of tacit knowledge provides employees with first-hand experiences and ideas about successful or failed endeavors. It fuels their confidence when they conduct a particular task as they learn from the mistakes of their peers and try to avoid them. Finally, the social/cultural form of knowledge refers to what individuals unconsciously acquire through the social or cultural values of their societies. This knowledge affects their attitudes and behavior in the work environment, and determines the level of trust bestowed on their colleagues. It is crucial to appreciate this form of knowledge to better guide and motivate employees to share knowledge. Hence, the role of KM is to ascertain that organizational knowledge is appreciated, systematically organized, maintained and shared. This leads to effective use of the organization’s intellectual capital, and eventually contributes to the creation of new knowledge.

The challenge of capturing tacit knowledge within government entities in Dubai

Government entities in Dubai vary in their capabilities and efforts to capture and store their tacit knowledge. Figure 4 reveals that 19% of respondents “strongly agree” and 47% “agree” that capturing tacit knowledge is a major difficulty they face in their organizations. Insufficiency of
Table 2: Explicit and Tacit Knowledge

<table>
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<th>Characteristics</th>
<th>Explicit knowledge (Documented)</th>
<th>Tacit knowledge (Not documented)</th>
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<tr>
<td></td>
<td>• Easily captured and codified</td>
<td>• Highly personal</td>
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<tr>
<td></td>
<td>• Well documented</td>
<td>• Non verbalized and inspoken knowledge</td>
</tr>
<tr>
<td></td>
<td>• Easily communicated and shared</td>
<td>• Difficult to capture and share</td>
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<tr>
<td></td>
<td>• Formal and systematic</td>
<td>• Intuitive and unarticulated</td>
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<tr>
<td></td>
<td>• Accessible</td>
<td>• Topic specific</td>
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<tr>
<td>Sources</td>
<td>• Instruction manuals</td>
<td>• Informal face-to-face meetings and discussions</td>
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<tr>
<td></td>
<td>• Written procedures and books</td>
<td>• Personal experiences</td>
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<tr>
<td></td>
<td>• Databases and reports</td>
<td>• Telephone conversations</td>
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<td></td>
<td>• Research findings</td>
<td>• E-mails</td>
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<td></td>
<td>• Best practices</td>
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Time does not seem to be the driver for this, as only 19% “strongly agree” and 22% “agree” that lack of time is the reason behind the difficulties encountered in capturing tacit knowledge. Interviews confirmed the survey results.

Dubai Police recognizes the significance of tacit knowledge, and has established the necessary mechanisms to capture and store it. It adopts the Japanese model in sharing and transferring knowledge within the organization, by establishing cross-organizational and self-managing teams, arranging weekly meetings among its employees, organizing workshops and lectures that target specific skills, and calling each policeman to share their experiences and ways in which they dealt with a specific issue. More specifically, each Thursday employees are required to meet for two hours to discuss the new techniques they have learned and explain them to new employees.

Moreover, policemen are strongly encouraged to write about the new cases they have encountered, and how they solved them. Financial incentives are provided for those who regularly write articles about their experiences. In the Police Aviation department, pilots are required to document their experiences and mistakes they make, and to explain how they solved problems. Also, there are regular training workshops where pilots are introduced to new practices. Pilots are also obliged to use certain manuals that carefully capture details about the most recent techniques in the aviation industry. This allows the transfer of knowledge from the experienced to the less experienced among the police, and ensures that their tacit knowledge is exchanged among all employees.

Dubai Courts also proved to have adopted very efficient practices to share and store the tacit knowledge of its employees. For example, judges are required to meet regularly to discuss cases and share their experiences and opinions with others, especially with new judges. This technique helps judges learn from each other and, more importantly, gives new judges the chance to acquire the skills and expertise of older and more experienced judges in Dubai Courts. Moreover, when judges finalize a case and announce the verdict, they are required to electronically store the case details and explain how they reached a certain decision. This way, when other judges face a similar case, they just examine how previous judges reached a decision on a similar case and build on that. Other techniques of storing judges’ tacit knowledge are through informal seminars, weekly meetings, training workshops.
and booklets that judges publish frequently. According to interviews with Dubai Courts personnel, if a judge permanently leaves the court, his knowledge and experience are properly stored and easily accessible by the other judges.

RTA raised very important points regarding the crucial role of tacit knowledge for their organization. They stated that their heavy reliance on international consultants makes the knowledge created very vulnerable to loss once they leave. Consultants are a rich source of rented knowledge, but if their experiences, observations and recommendations are not well documented then the organization risks the loss of expensive knowledge. RTA has been trying to establish a system that essentially captures the tacit knowledge of these consultants through different methods like mentoring, coaching and informal meetings. KM specialists were hired to facilitate the transfer of knowledge from these consultants to the organization, and to hold weekly presentations of two to four hours each to teach employees at RTA how to benefit from and exchange knowledge.

DEWA acknowledges that they have no formal internal systems or procedures to capture tacit knowledge, due to lack of awareness about its significance among most of the employees. However, the organization recognizes the importance of this knowledge and intends to invest in it in the future. Being a relatively new organization, KHDA holds that they still need to focus on developing the capacity and human resources to generate knowledge inside the organization. The next step would then be to create the necessary mechanisms to store the generated knowledge within the organization and set up a solid KM program.

Knowledge Management Processes

The KM literature reveals that there are several "interactive" and intertwined processes that construct knowledge management. These processes involve the human, technological and operational interactions that drive the creation, capture, organization, access and use of knowledge (Serban and Luan 2002, Bhatt 2001). Table 3 summarizes these processes and specifies the role of people in collaborating, finding, facilitating and sharing knowledge. Knowledge creation refers to the ability of an organization to generate innovative solutions and ideas (Marakas 1990). This can take many forms, like discovery of new techniques and methods for solving a problem, borrowing certain practices externally, and contextualizing and integrating them into the organization. This process requires collaboration, discussions and articulation of new knowledge among individuals. The second step is capturing that knowledge and documenting it. This is very critical, because most organizations lose that knowledge if they do not extract and store it properly.

At this stage, the role of technology in codifying and digitalizing the acquired knowledge is vital. Establishing the proper technological infrastructure enables organizations to effectively organize and store knowledge, and
at the same time create coherent channels for accessing and displaying it. However, if an organization finds it hard to localize the needed knowledge in the needed time and format, or a context in which to utilize it, then it will be very difficult for this organization to benefit from its knowledge repository. Yet Bhatt (2001) argues that organizations can overcome this problem by training their employees, incentivizing and familiarizing them with the whole process of knowledge management, and by showing them ways they can be creative in the organization. The last process is knowledge sharing, which Bukowitz and Williams (1999) describe as “one of the toughest nuts organizations have to crack.” This is especially the case with tacit knowledge, as has been mentioned earlier. Therefore, organizations ought to create an environment which incentivizes and rewards employees for sharing their knowledge.

**Implementing knowledge management processes in Dubai**

A well-developed, systematic and coherent process for KM is a prerequisite for its success. Dubai government entities also differ in institutionalizing and implementing a structured process for creating, capturing, organizing and sharing knowledge, and this significantly affects the outcomes of their KM programs. Dubai Courts, Dubai Police and RTA have been pioneers in adopting well-established KM processes. DC fosters knowledge creation by incentivizing judges and employees at the Courts to be innovative in handling the cases they deal with. Then, they are required to document how they reached a certain verdict or decision within a sophisticated internal portal. Judges have direct access to this portal, and can upload their ideas, opinions or suggestions regarding their cases and learn from the experiences of one other.

Likewise, Dubai Police adopts a clear process for its KM program. It adopts the Japanese model to capture, store and share knowledge by frequently organizing meetings, workshops and seminars where the police exchange their experiences and share their knowledge. Creative ideas and new practices are documented in a report that is published every six months by DP and shared among all its departments. Another method to create knowledge is through applied research conducted by student employees. DP strongly encourages and supports its employees to pursue higher education and participate in national or international training workshops to gain new skills and insights. The recommendations of the dissertations and reports produced by these student employees are taken very seriously by DP to improve its efficiency in service delivery.

RTA’s knowledge management team developed a methodical process framework based on KM best practices that aims to capture, evaluate, categorize and share knowledge across the organization. Like DC and DP, knowledge within RTA is captured though trainings, meetings,

**Table 3: Knowledge Management Processes**

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<th>Knowledge content</th>
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<tr>
<td><strong>1) Create</strong></td>
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<td>- Discover</td>
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<td>- Realize</td>
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<td>- Discuss</td>
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<td>- Articulate</td>
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<td><strong>2) Capture</strong></td>
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<tr>
<td>- Document</td>
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<tr>
<td>- Extract</td>
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<tr>
<td>- Store</td>
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<td>- Represent</td>
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<td><strong>3) Organize</strong></td>
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<td>- Structure</td>
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<td>- Categorize</td>
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<td>- Analyze</td>
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<td>- Catalog</td>
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<td><strong>4) Access</strong></td>
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<td>- Present</td>
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<td>- Display</td>
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<td>- Profile</td>
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<td>- find</td>
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<td><strong>5) Use</strong></td>
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<td>- Disseminate</td>
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<td>- Improve</td>
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<tr>
<td>- Perform</td>
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<tr>
<td>- Learn</td>
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**Collaborate** | **Find** | **Facilitate** | **Augment** | **Share**

Source: Adapted from Gartner research, as cited in Serban and Luan (2002)
workshops and personal discussions. Newly created knowledge is then classified, indexed, stored and shared through monthly newsletters and the intranet portal. Also, an electronic data management system (EDMS) was created to facilitate the sharing of documents and knowledge among RTA employees.

DEWA and KHDA indicated that they have not adopted any institutionalized processes for their KM programs, but they have incorporated many practices to foster knowledge sharing among their employees like holding occasional meetings and organizing lectures and workshops. However, for their KM programs to be successful, they should consider implementing focused and systematic processes that will enable their efforts to reach fruition.

Conclusion and Recommendations

The advent of the financial crisis and its repercussions—especially the departure of highly skilled human capital—makes KM a vital instrument to achieve Dubai’s ambition to be a world class hub of financial and service excellence. This policy brief finds that Dubai government entities fully recognize the importance and benefits of KM, but implementation is still in the infancy stage. These organizations recognize that change takes time, and that the KM programs will fulfill their desired outcomes once they have tackled the difficulties associated with implementation. Moreover, this brief identifies areas where these organizations can focus their attention and strengthen their efforts to improve the quality of their KM programs.

Improve clarity and understanding of the concept

One of the main challenges that government entities face with their KM programs in Dubai is the vagueness of the concept to most of their employees. This is a phenomenon that is found in other countries as well, and only time and focused strategies will cure it. Moreover, KM has only recently been introduced to the Middle East, and needs more time to become ingrained in the workplace. Recognizing this, however, these organizations need to invest more in organizing workshops, training sessions and involving their employees more in understanding what KM stands for and its crucial role for the development and sustainment of the organization. Also, in order to avoid confusion and uncertainty about the meaning of the concept, one term should be used for KM, instead of using many words and terms interchangeably. More importantly, KM is about enhancing interaction and communication among people, and within organizational units and levels. This calls for avoiding the tendency to reduce the definition of KM to technical terms by simply relying on new IT solutions. KM is a dynamic and social system, and its success hinges largely on the quality and frequency of human interactions, both within and outside the workplace.

Effect programs to retain tacit knowledge

Among the five major Dubai government entities surveyed, only two (Dubai Police and Dubai Courts) seem to have seriously tackled the issue of tacit knowledge, implementing the necessary tools to capture, document and share it. The other three organizations still lag behind, and need to take the necessary steps to implement a process that insures that tacit knowledge is properly maintained and easily accessed. KM programs are mainly designed to protect against the loss of tacit knowledge, keeping it within the organization even after the departure of employees. Therefore, organizations in Dubai should strongly consider its importance and create the tools to share it.

Prioritize implementation of effective KM systems

Dubai Courts, Dubai Police and RTA have implemented systematic and coherent KM processes which show direct impact in capturing both tacit and explicit forms of knowledge. DEWA, KHDA and other entities in Dubai, however, should prioritize the implementation of these processes to successfully run their KM program. The effective interaction between the human, technological and operational components of these processes vastly improves the chances of success for KM programs.
## References


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- executive education for senior officials and executives; and,
- knowledge forums for scholars and policy makers.