



Mohammed Bin Rashid School Of Government

POLICY BRIEF

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Summary

As the UAE embarks on the challenging journey of smart city transformation, complex problems are expected to arise and the government should be prepared to address them. The cornerstone of any transformation is the human capital, thus effort should be made to efficiently and effectively develop their capabilities and competencies in order to achieve better results. The number of smart city initiatives that target people is considerably low (Smart Dubai Office, 2017) and this presents an opportunity to explore and enhance. Furthermore, as citizens' expectations are increasing rapidly, it may be the right time to explore and activate government collaboration models in order to deliver the ultimate goal of smart cities: smart citizen services. Research on the collaboration and human capital development in Dubai government entity, Smart Dubai Office (SDO) was done to analyze and assess the current state. Based on the findings, two major issues were identified: the lack of intergovernmental collaboration and the inefficiency of the current process of human capital development. A review of a few leading best practices worldwide in these two areas was done and then a number of recommendations which are applicable to the UAE context were proposed in order to enhance the current situation.

Realizing a Smarter City through Smarter Human Capital

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Introduction

The world is changing at a fast pace, and the UAE is no different. Governments are faced with complex problems such as smart cities that require carefully crafted models in order to cater for the increasingly sophisticated citizens' demands and expectations. It is becoming imperative for governments to be equipped with the relevant skills, crucial knowledge, and the ability to elevate its human capital capabilities in order to keep up with the challenges and demands of smart cities. More governments than ever are exploring collaboration and exploring partnerships opportunities to address resources scarcity and improved methods of human capital development. In the UAE, specifically in Dubai, collaboration efforts are beginning to materialize as the government embarks on its strategic goal of transforming the city into a 'smart city' which aims for continuous enhancements in public service delivery. In parallel, the government invests strategically in its people, which not only includes citizens, but residents as well. Smart Dubai Office – the body responsible for the overall strategy of smart city initiatives in Dubai – describes six dimensions for the smart city, one of which is the 'people' dimension which aims at "developing human capital with various forms of education" (Smart Dubai Office, 2017). However, the number of 'people' dimension initiatives are the lowest amongst all dimensions. This indicates the need to further explore the current state of human capital skills and development processes. Based on SDO's current data, further research was conducted to analyze and assess the current state and identify the challenges of government entities processes of collaboration and human capital development. Our main findings indicate a number of



challenges such as: lack of smart city awareness among government employees, ineffective skills and capabilities building processes and weak intergovernmental collaboration. Finally, we propose a number of recommendations that aim to enhance collaboration and create a government-wide competency framework which will consequently support smart city strategic goals. The suggested intervention aims to create a type of paradigm innovation in human capital management and collaboration in UAE public sector.

Challenges with implementing Smart Dubai Strategy

A smart city is a complex ecosystem of dimensions that work together to achieve the ultimate goal;

a city where people are serviced better. Although Smart Dubai’s strategy includes an entire dimension on 'people', only eight initiatives were implemented as of 2015 (Smart Dubai Office, 2017). While ‘people’ dimension targets citizens as a whole, it also focuses on elevating its human capital skills and learning capacity through different initiatives and programs. Furthermore, the ‘people’ dimension focuses on employees (particularly in the government sector); which is the focus of our research, and how to better utilize them. The low number of initiatives indicates that this dimension in the smart city strategy is lagging (compared to the ‘Living’ dimension with 48 initiatives – Figure 1 –) and can be significantly improved. Based on these data findings, the following hypothesis was proposed:

The process of elevating human capital capabilities is done in silos rather than a collaborative ecosystem in the public sector.

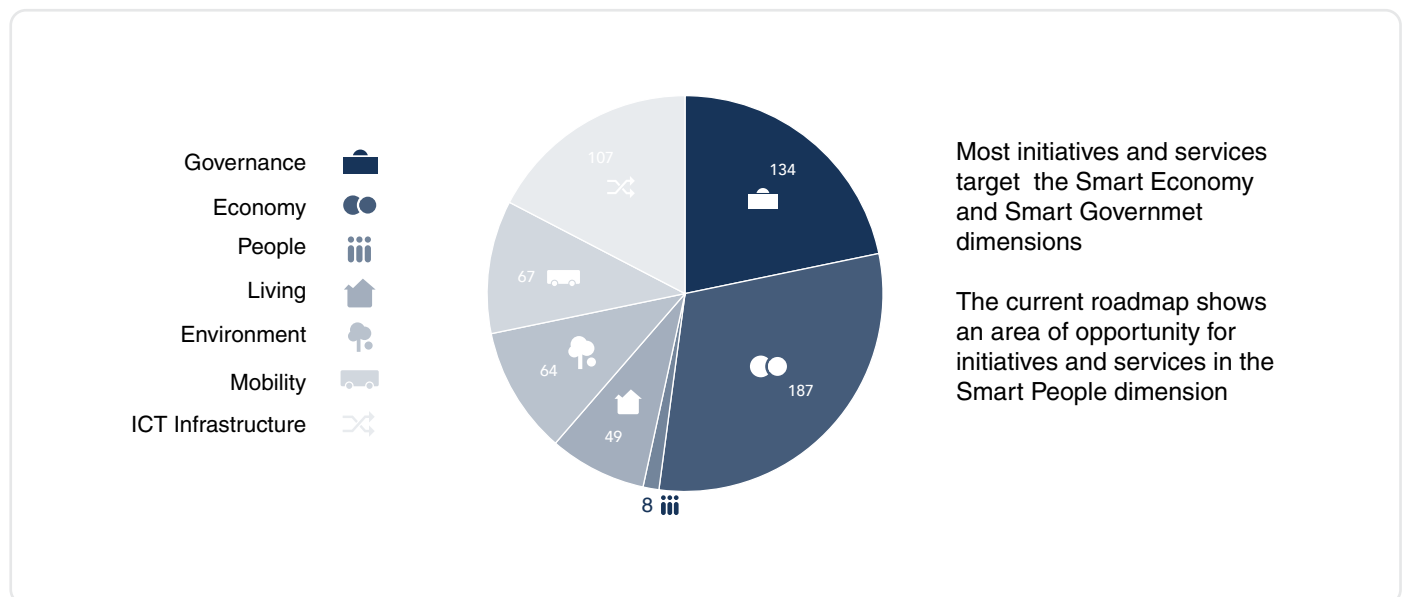


Figure 1: Smart Dubai initiatives per dimension (Smart Dubai Office, 2017)

The current problem can be described in three main dimensions:

1. the entities knowledge about the capabilities and skill sets they retain and require,
2. the employees’ awareness and knowledge about smart city strategies and goals and how

their day-to-day efforts are linked to the ultimate goal and

3. the lack of collaboration between government entities which causes resources to be under-utilized and knowledge being held rather than being shared.

It is imperative to address these problems since they directly contribute to quality of outcomes realized by smart city projects and programs. As discussed earlier, all of this begins with the capabilities and management of the human capital.

This policy brief is informed by the findings of three data gathering phases that attempted to challenge the hypothesis: a survey for government entities to assess the current state, an interview and discussion with Smart Dubai Office and the current landscape in three samples of government entities in Dubai.

Situation analysis

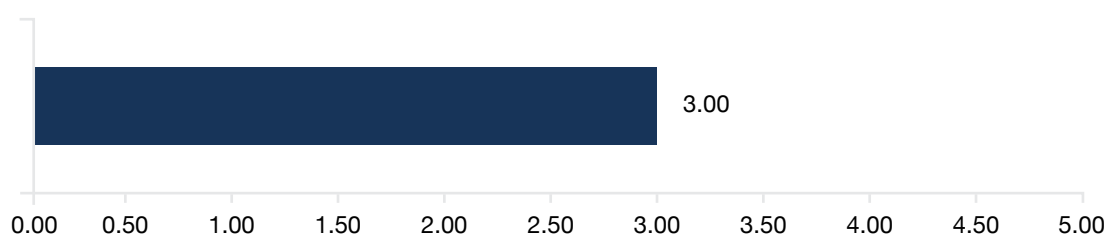
In an effort to analyze the situation, a survey was created to assess the current state of four major areas: smart city awareness among government employees, current training and development

processes, internal skill set building process and intergovernmental collaboration programs. The survey was targeted for all local and federal government entities and a total of 57 responses from 8 different government entities were obtained. The survey comprises a total of 15 questions, each of which can be rated between 1 (lowest) to 5 (highest). The survey questions can be reviewed in Appendix 1.

After analyzing the survey results the following key insights surfaced:

1. The average rating of the awareness level of Dubai Smart City initiatives and Dubai Plan 2021 is 3 (Figure 2), which clearly indicates the need for more awareness programs. This is not only important to understand the concepts of smart cities, it is also essential for public sector employees to understand how different strategies align to the ultimate plan of Dubai Smart City.

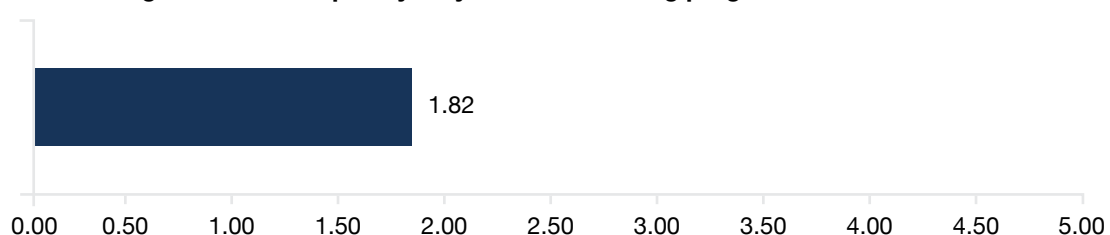
Figure 2: What is your awareness level of Dubai Smart City initiatives and Dubai Plan



2. The frequency of attending smart city related training programs is considerably low (average of 1.82 as in figure 3) which may be a direct reason for the lack of awareness. Conducting relevant trainings on smart cities is important because it is a mean of acquiring new skill sets

that better match the competency requirements for smart cities. Furthermore, such programs better align the need for projects with the overall strategy of smart cities.

Figure 3: How frequently do you attend training programs on smart cities?



3. Formal skill set audits are not conducted frequently as can be seen in figure 4. Skill set audit is a great approach towards identifying what each organization knows about its human capital and identify any gaps. While it is critical in understanding the organization's

shortcomings, having an accessible repository of these skills within the organization is essential and greatly complements the process of building the competency framework. Unfortunately, this is not the case as can be seen from Figure 5.

Figure 4: How frequently does your organization conduct skill set audits?

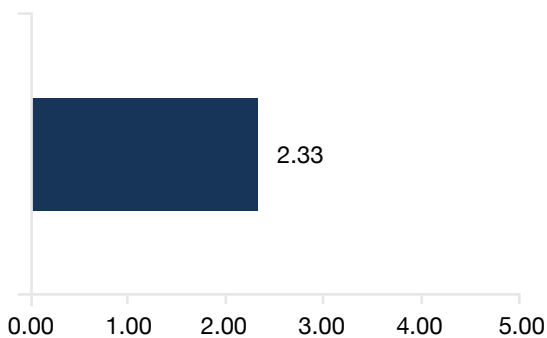
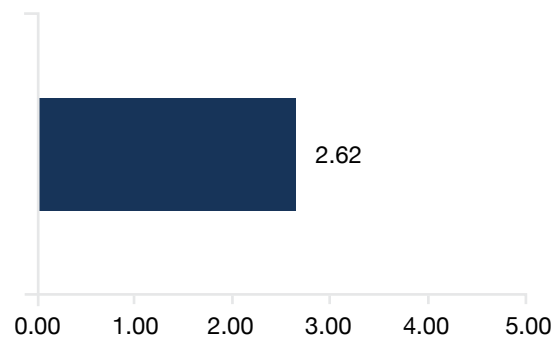


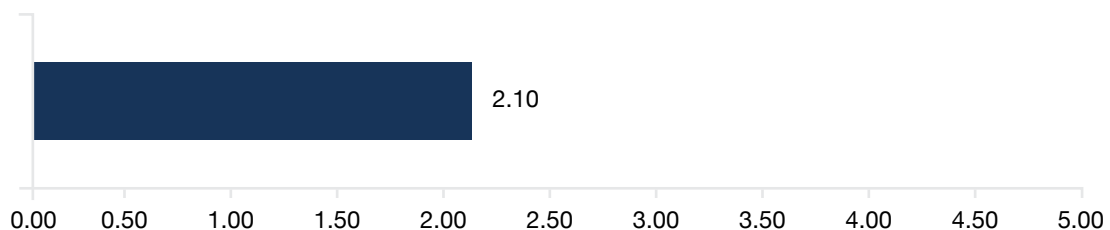
Figure 5: Do you have access to information about current existing skill sets available in your organization through a public source (e.g. online portal)?



4. The frequency of internal job rotation is low as shown in figure 6. While job rotation is highlighted as a form of training in the human resources management manual of Dubai government (article (94) law no. (27) 2006) (Dubai Government Human Resources Department, 2006), each entity has the right

to design the rotation system as they see fit. Job rotations require a carefully designed process in order to ensure that performance is maintained at the desired level on one hand, and employees are exposed to different skills and experience on the other hand.

Figure 6: How frequently have you been involved in job rotation?



5. Figure 7 and 8 clearly highlight that exchange programs are not a common practice neither between public-public entities nor public-private. The reason may be that today's world knowledge is perceived as a form of power

thus entities tend to be reluctant to share information. The Dubai Data Establishment was launched to directly address this issue and change the focus to collaboration rather than solely competition (Salem, 2016).

Figure 7: How often does your organization conduct knowledge exchange programs with other government entities?

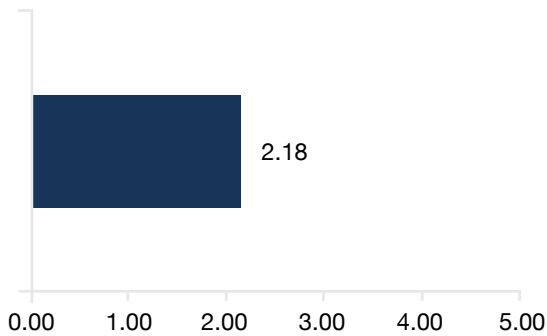


Figure 8: How often does your organization conduct knowledge exchange programs with private sector entities?

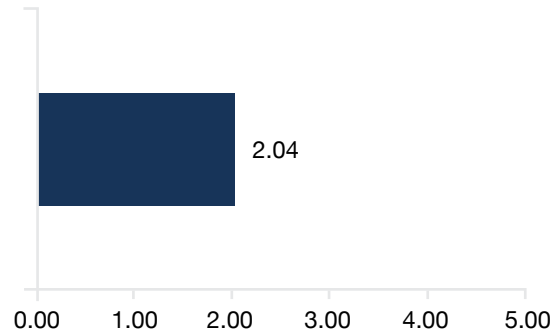


Figure 9: How frequently does your organization request knowledge transfer from other government entities?

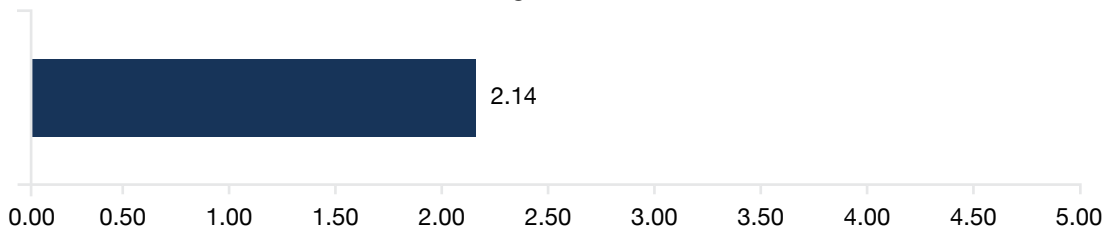


Figure 9 further supports this finding as the average frequency of knowledge transfer is also low.

The survey provides empirical evidence that supports our hypothesis of weak government collaboration and inefficient human capital development in the context of smart city framework. There are a number of reasons why this is the case; firstly, the low level of awareness of smart cities' objectives and skills required amongst government employees. Secondly, the frequency of smart city relevant training programs that are designed to elevate the knowledge and skills of employees on smart cities. Thirdly, the lack of a proper skill set and competency framework building process which does not allow government entities to fully utilize its employees towards the smart city strategy since they are not aware of 'what they have'. Furthermore, knowledge and human resources exchange programs are not being utilized to elevate competencies and leverage experiences. All of these reasons cause government resources to be under-utilized, and increase unnecessary investments.

Insights from Smart Dubai Office

In addition to the survey an interview with executives from the Smart Dubai Office (SDO) was conducted, as it is the official government entity that handles planning and overseeing, setting strategies and policies, laws and regulations and facilitating transformation of Dubai smart city initiatives. The interview questions (appendix 2) were targeted to understand the current situation and effort being done in the same areas of the survey: smart city awareness among government employees, current training and development processes, internal skill set building process and intergovernmental collaboration programs. During the discussion, a new critical area was added which is knowledge management. The discussion highlighted a number of key challenges that should be addressed.

Initially, SDO explained that its definition of a smart city is adopted from ITU's definition as their strategies and initiatives aim to transform the city into a 'smart and sustainable city' (SSC) by utilizing ICT as the main driver. When smart city awareness was discussed, it was agreed that awareness of citizens and government employees about smart cities is a main challenge facing SDO towards their transformation strategies. The office is working on programs to address the awareness challenge, and one example of such a program is the Dubai Smart Cities Forum which was launched in collaboration with the Mohammad Bin Rashid School of Government (MBRSG) targeting key decision makers in efforts to raise awareness of smart cities' trends and terminologies. Such collaboration efforts achieved good results by raising the awareness level at the targeted audience (i.e. top leadership) however it did not address the awareness issue entirely. SDO relies on the entities' leaderships to spread the awareness within respective organization as it cannot cater to the entire government sector by itself.

In the context of existing employees training and development programs and processes; SDO discussed the challenge of aligning employees' interests and organizations needs when it comes to training programs. This is not a straightforward task since organizations have budget constraints that are allocated for employees' development and in most cases these are aimed to elevate expertise which are relevant to the organization's business path only. SDO is also exploring 'smarter' approaches towards building employees capabilities and organization's competency frameworks. Their target is to establish channels with different entities in order to further understand their needs related to smart cities and support in identifying the skill sets required to achieve smart city objectives. This includes employee eligibility and capacity for acquiring new skills and utilizing them internally.

In the context of knowledge management, the office launched the "Dubai Solves" initiative that aims at documenting best practices and models being developed by Dubai's entities smart city project and share them nationally and globally. Moreover,

as the model is slowly changing towards openness, government entities are still not fully aware of the importance of sharing data and knowledge which creates a challenge.

On collaboration, while SDO agrees that currently collaboration between the cities' entities is weak (public-public or public-private), they have set strategies to bridge these gaps and create more public-private partnerships (PPP) and public collaboration programs to achieve better results for the city. For instance, a strategy for utilizing the private sector's expertise in offering advanced training programs, knowledge management platforms and sharing best practices is being developed in order to utilize this for the public sector as a win-win offering. Finally, SDO highlighted another challenge in the lack of collaboration with the educational sector which they are also targeting to address.

The current landscape in three entities

An analysis of the current situation in three sample entities to gain greater clarity and to further challenge the hypothesis was carried out. A number of drawbacks in the current practices were identified. Beginning with that fact that training plans are heavily dependent on annual budget and are more focused on enhancing soft skills rather than building more complex, smart city related skill sets. This is by no means an incorrect practice, it just needs to be revisited in order to cope with an ever-increasing demand of new skills and competencies required to achieve smart city objectives. Furthermore, training programs are outdated and are not being revisited to be more aligned with the Dubai Plan 2021. Also, the practice of a centralized human resources department apparently does not create the best effect on training and development, especially in larger entities. This is because it does not facilitate the process of correctly building competencies and skill sets and it does not allow employees to fully understand how their tasks

align with the overall strategy of smart cities. In these entities, intergovernmental collaboration practices are seldom and not driven by structured and measurable processes. Internal job rotations are also not being utilized to enhance employees' exposure. While someone might argue that these entities do not contribute directly to the smart city objectives; it is suggested that the challenge of human capital development and collaboration should be addressed regardless, as each entity caters for some contribution in the overall strategy, however small that may be.

International best practices

In order to propose interventions that would address the current problems, international best practices were explored. There are multiple instances in the context of government collaboration that may be worth exploring. The concept of "joined-up government" initiated in the UK in 1997 (Efficiency Unit, 2009) – and refers to a set of policies that target enhanced collaboration and coherence between government entities on one hand and between the public sector and other sectors on the other hand. This model – also known as whole-of-government (Christensen & Lægreid, 2007) – aims to establish integrations and linkages at multiple levels in the public sector and create partnerships with private sectors for the ultimate goal of better service delivery (Christensen & Lægreid, 2007); which is the essence of smart cities. This concept is being explored by reforms in a number of countries including Singapore, Canada, Australia and New Zealand (Efficiency Unit, 2009). Similarly, the concept of 'open-government' also aims at establishing networks between government entities instead of working as isolated departments and using these networks to make better decision for the public (Lathrop & Ruma, 2010). All these models target collaboration within the government because this creates a strength that can be utilized to achieve the desired results more efficiently.

On the other hand, organizations around the world showcase different best practices which adapts smarter approaches of managing and developing human capital. Starting with General Electric's Crotonville, a worldwide leading training center,

established to cater for all training and learning needs of GE's employees which are not only designed to align with the business needs and strategies, but also with the personal goals of employees. The platform allows all employees, anywhere in the world, to access job related and personalized trainings and programs. This is generated from the firm belief that investing in human capital is the main driver for business success (Philippidis, 1997), (General Electric, 2017).

In the USA, Flour Construction and Engineering Consultancy maintains an accurate database of their high-potential employees which includes their expertise, experience, and training offerings; and then adapt these data to their future strategies and needs. Another example can be seen in Skanska Incorporation, a Sweden based organization specialized in construction. Skanska has implemented an organization-wide, cloud-based training system to facilitate easier learning and skills development processes for the employees throughout their career life cycle. The system allows their executives to monitor progress in specific areas and adjust training and individual development plans accordingly (World Economic Forum; The Boston Consulting Group, 2016).

Policy Implications and Recommendations

Based on our research and the issues identified, a number of recommendations are proposed to improve the competency building process and intergovernmental collaboration which will consequently create an even more efficient ecosystem to achieve the ultimate goals of smart cities.

1. Regular skill set audits – one suggestion is to establish a government-wide standardized process for building skill sets within entities. Then ensuring that this process is applied regularly (e.g. quarterly) in every entity. This is an essential step towards understanding the strengths and weakness of each entity and then analyze the opportunities and challenges and

work towards addressing them. Moreover, it will help entities understand the competencies within their human capital and how well they are aligned with the strategic goals and then enhance their recruitment process to cover shortages. Furthermore, the audit outcomes will be a great input to enhance the training and learning process to create and/or introduce new training programs to address skills and capabilities' gaps within the entity. The benefits of these audits can be measured by analyzing the gaps (over time) between the skills needed to execute projects and goals. Such a process should be governed by an executive/governance body within the government (e.g. The Executive Council) in order to ensure compliance and progress monitoring.

2. Competencies portal – in order to fully utilize the outcomes of the skill audits; a portal, accessible by all government entities, that maintains personnel information about every 'set' of skills available in each entity should be developed. The goal of this portal does not stop at having information about human resources; it allows multiple collaboration opportunities between entities. For example, if the RTA knows that DEWA has in-house expertise in obtaining ISO certificates, they can approach them to establish exchange and/or knowledge sharing programs instead of investing in external resources. Furthermore, the governing body (which should also be the body who manages the portal) can utilize this portal to create a government-wide competency framework and align it to the strategic goals of smart city initiatives in order to address any skills gap within the government. The benefits of this portal could be measured by the number of expertise exchange programs between government entities.
3. Education sector collaboration – a collaboration mechanism that will enable government entities to utilize the expertise and research capabilities of educational bodies (i.e. universities and research centers) should be implemented. Entities could establish a research and development arm within their organizations by creating partnerships with universities. This can assist them in exploring the advances and innovations in sciences and technologies related to smart cities and hence improving products and services and achieve their respective smart city goals more efficiently. Furthermore, entities can utilize the training expertise of educational bodies and create programs that are focused on the specific skills required for smart cities and enhance their employees' capabilities in that area. Another benefit of such partnerships lies in creating better alignment, in the medium-long run, between the needs of the entities and the educational sector's outcomes in terms of study programs.
4. Smart employee paths – while current individual development plans are considered satisfactory, a few enhancements to the process that will support intergovernmental collaboration and also elevate the employees' capabilities and skills should be explored. First of all, introducing an enhanced rotation process which allows employees to work in different divisions and acquire further 'horizontal' expertise and exposure. This will benefit the entity by stretching and employee's knowledge footprint and thus creating a better capability pool within. Secondly, activating rotations between entities will open further collaboration channels within the government and increase resource utilization towards achieving smart city goals. The outcomes of these processes should not be measured solely by the number of rotations per year or number of exchange programs; it should rather be measured by the impact and enhanced capabilities per employee. Indirectly, such enhancements would also yield positive impact on employees' passion for the job since it will reduce the 'routines'.
5. The smart human capital index – in order to measure the compliance of the above recommendations and more importantly the impact magnitude, an index system which sets clear targets for each entity to meet in terms of managing their human capital and collaboration efforts should be developed. There are multiple significant benefits of such an index; firstly, it creates a healthy competition between government entities towards being the

‘smartest’ entity in managing human capital. Secondly, it allows the governing body (i.e. The Executive Council) to document best practices exercised by different entities and share these at the national level. Finally, such an index will be useful for fresh graduates to select entities to join, and for educational bodies to collaborate further and establish partnership and sponsorship programs.

These recommendations are proposed to target all dimensions of the current problem and if applied properly will achieve significant results and facilitate a paradigm shift in human capital management and collaboration. The ultimate aim is to elevate the entity’s knowledge of ‘what they have’ by introducing the skill set audits and competency framework which will enable all entities to know exactly the capabilities of their own and other entities. Moreover, this will enhance identifying and acquiring smart city related skill sets and allow government employees to better understand how their efforts support smart city strategic goals. Finally and most importantly, by introducing collaboration processes and policies, government resources and budgets will be better utilized by making use of intergovernmental experiences and expertise rather than solely relying on competition.

Conclusion

Human capital is the basic building block of any development including the complex paradigm of smart cities. As citizens’ demands increase in magnitude and sophistication, governments will be forced to explore newer approaches to address these challenges. The UAE’s government is embarking on a national journey of smart city transformation and is not excluded from such challenges. In this policy brief, research findings which indicate an issue in the areas of smart city awareness among government employees, government competency framework and intergovernmental collaboration was presented; all of which are critical to analyze and address. A number of recommendations are proposed to address these issues in order to elevate the quality of public sector human capital development and achieve smart city strategic goals through government collaboration.

The scale of our research is considered a limitation as having more data from more government entities will allow us to further assess the current situation and propose even finer recommendations. The topic is of utmost importance as SDO (as is the entire government) is focusing on increasing the number of initiatives targeting the people dimension in order to achieve global leadership in smart city transformation.

References

- Christensen, T. & Lægheid, P., 2007. The Whole-of-Government Approach to Public Sector Reform. *Public administration review*, 67(6), pp. 1059-1066.
- Dubai Government Human Resources Department, 2006. [Online]
Available at: http://dghrqa.dubai.gov.ae/admin/Documents/hr_laws1.pdf [Accessed 20 May 2017].
- Efficiency Unit, 2009. *Joined-up Government*, Hong Kong: Efficiency Unit.
- General Electric, 2017. *GE Crotonville The future of leadership*. [Online]
Available at: https://www.ge.com/sites/default/files/GE_Crotonville_Future_of_Leadership.pdf [Accessed 20 May 2017].
- Lathrop, D. & Ruma, L., 2010. *Open government: collaboration, transparency, and participation in practice*. s.l.:O'Reilly Media, Inc.
- Philippidis, A., 1997. GE renovates trend-setting training center. *Fairfield County Business Journal*, 36(23), p. 12.
- Salem, F., 2016. *A Smart City for Public Value Digital Transformation Through Agile Governance - The Case of Smart Dubai*, Dubai: Mohammad Bin Rashid School of Government.
- Smart Dubai Office, 2017. *Dimensions*. [Online]
Available at: http://smardubai.ae/foundation_dimensions.php [Accessed 20 May 2017].
- Smart Dubai Office, 2017. *Smart Dubai Roadmap 2015*. [Online]
Available at: <http://roadmap.smardubai.ae/highlights.php> [Accessed 20 May 2017].
- World Economic Forum; The Boston Consulting Group, 2016. *Shaping the Future of Construction*, s.l.: World Economic Forum; The Boston Consulting Group.

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