Government Innovation and Creativity

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Chapter 7

Government Innovation and Creativity: A Case of Dubai

*Immanuel Azaad Moonesar, Melodena Stephens, Mark Batey and
David J. Hughes*

There are significant changes happening in the management of governments. The fundamental change is that the traditional vertical solutions provided by government entities are unable to solve horizontal problems and provide co-created public value.¹ Innovation and creativity in the context of the UAE is defined as, 'the aspiration of individuals, private institutions and governments to achieve development by generating creative ideas and introducing new products, services and operations that improve the overall quality of life'. There is often confusion between what the meaning of the two terms is – innovation and creativity, as they are often used together. While creativity is often associated with new ideas, innovation seems to involve more, as it is the successful implementation and the creation of value.²

Arabic is the official language for government purposes in the UAE and totally 25 countries in the world and is recognized as a minority language in six other countries. It is one of the six official languages of the United Nations. Arabic is the fifth most spoken language in the world. The topic of innovation research in the Western World is a more recent phenomena, and though the world first appeared in the thirteenth century, it can trace its roots in history to the pursuit of scientific discovery, novelties, letters, privileges and patent.³ The concept of innovation and creativity, parallelly existed in Islamic history and these terms were already operational in the language. This case

¹Goldsmith, S., & Eggers, W. D. (2005). *Governing by network: The new shape of the public sector*. Brookings Institution Press.

²Mulgan, G., & Albury, D. (2003). Innovation in the public sector. *Strategy Unit, Cabinet Office, 1*, 40; Sundbo, J. (1998). *The theory of innovation: entrepreneurs, technology and strategy*. Edward Elgar Publishing.

³Godin, B. (2008). *Innovation: The history of a category*. Working Paper. Project on the Intellectual History of Innovation. Quebec.

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offers insights on what these words mean and some of the opportunities and challenges in adopting an innovation and creative mindset in a government institution.

A survey of Government of Dubai employees about creativity and innovation offered interesting insights on areas of strength and improvement. The data demonstrated the importance of taking a systems perspective which would facilitate the interaction at three levels: organization, team and individual. It highlighted the significance of supporting mechanisms like leadership, culture and processes.

How do governments use creativity and innovation to encourage employees yet help co-create, participate and embrace radical and disruptive change? The Dubai Government has embraced an initiative called Dubai10X.⁴ The mission is to create change that is 10 years ahead of others through ideation, sharing resources, strategic partnerships and transforming work. The idea is to create the future now. What is required for the Dubai government to succeed?

7.1. Introduction

The UAE leadership's and access to resources is a driving force for its continuously innovating systems, processes and organizational structures. This foresight is framed in the UAE Vision 2021: 'Innovation, research, science and technology will form the pillars of a knowledge-based, highly productive and competitive economy, driven by entrepreneurs in a business friendly environment where public and private sectors form effective partnerships'. While it is clear that effective leadership is a crucial component of innovating governments (Batey, Moonesar, Hughes, Salem, & Burd, 2018), you cannot ignore the necessity of a supportive system,⁵ which is about the sharing of philosophies, ideas and thoughts by individuals and organizations that are guided by the vision outlined by the leader. Innovation and creativity as a government concept are not new in the UAE and predate its formation in 1971.

In October 2014, HH Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of UAE and Ruler of Dubai, launched the UAE National Innovation Strategy with the aim of making the UAE one of the most innovative nations in the world within seven years (*see Exhibit 7.1 for the four main tracks and pillars of the UAE Innovation Strategy*). Innovation was the main theme for the United Arab Emirates government in the following year of 2015. The Prime Minister's Office at the UAE Ministry of Cabinet Affairs defined the word 'innovation' in the context of the UAE, as (Moonesar, 2015): 'the aspiration of individuals, private institutions and governments to achieve development by generating creative ideas and introducing new products, services and operations that improve the overall quality of life'.

⁴More about Dubai10X. Retrieved from <http://dubai10x.ae/10x-approved-projects/>

⁵Abdurrahman, K. (2010). *Leadership and Innovation in Government organization in the UAE*. Doctoral dissertation, British University in Dubai.

Exhibit 7.1: Types of Innovation.

Source: Stephens (2018).⁶

This strategic focus was implemented and promoted through awareness programs, workshops, seminars, conferences, forums and debates. This drive for innovation became one of the many vital dimensions within government to improve existing systems. It was clear that due to increasing citizen expectations, obsolete government and public service models needed to be revamped or undergo a process of creative destruction to creating new ideas and public value by utilizing available cutting edge knowledge and technology efficiently and effectively.^{7,8} With so much focus on the topic, with government entities creating 'innovation departments', there was a need to audit and explore the meaning, implications and barriers to making the Dubai government sector innovative and creative. A survey was

⁶Stephens, M. (2018). Lecture Notes-Frontiers of Innovation MIM 711: Mohammed bin Rashid School of Government, Dubai UAE.

⁷Moonesar, I. A. (2015). Innovation in the UAE public sector. Innovation days series. Mohammed Bin Rashid School of Government and SAP.

⁸Batey, M., Moonesar, I. A., Hughes, D., Salem, F., & Burd, M. (2018). *Creativity and innovation in the Dubai Government: Exploring underlying factors at individual, team & organizational levels*. Mohammed Bin Rashid School of Government: Dubai, United Arab Emirates & Alliance Manchester Business School, The University of Manchester, UK. Mohammed Bin Rashid School of Government: Dubai, United Arab Emirates. doi:10.13140/RG.2.2.28661.06881

conducted in and over 979 employees responded. The purpose was to address the following five questions:

- (1) What does creativity and innovation mean?
- (2) What is the unique context for working in the UAE country?
- (3) What are the natural strengths that will encourage creativity and innovation?
- (4) What might be the barriers to creativity and innovation?
- (5) What can we do to encourage more creativity and innovation?

7.2. Creativity and Innovation

Arabic is one of the five most spoken language in the world. The terms *Al-Ibda'* and *Al-Ibtikar* are used in Arabic for creativity and innovation, respectively. *Al-Ibda'* is a more modern evolution for the word creativity and is linked to the concepts of development (*tatawwur*), progress through a series of steps (*taqaddum*), renaissance (*nahda*) and renewal (*tajdid*).⁹ *Al-Ibtikar* is understood to be innovation and overlaps with inventions. *Ibtikar* refers to 'intellectual ideas which are the product of one's labour, effort and expenditure, these ideas being new and not being invented by a prior person'.¹⁰ For example, *Haqq al-ibtikar* means rights of origination.¹¹ Arabs have always been known for their innovations – and the Islamic Golden Age pushed science, technology, architecture and culture to the forefront. On the surface, in Arabic, creativity is the bigger all-encompassing word, than innovation.

In Western research, creativity requires originality (newness or novelness) and a degree of effectiveness.¹² Newness need not be fully original but can involve the regeneration or new combinations of existing knowledge or materials.¹³ The effectiveness part of creativity is the ability to deliver value. Creativity should or could change or transform existing domains and hence is a subjective judgement of its potential.¹⁴ The challenge lies with the question – value to which target audience? In the process of encouraging creativity in an organization, the social judgement of value needs to be streamlined to separate personal creativity (person) from organizational creativity. Because of this fact that creativity is often associated with sporadic and abstract concepts, it is most seen applicable in the ideation stage though this is not technically true as creativity has been considered a heuristic, a process,

⁹Cornell, V. J. (2007). *Voices of Islam: Voices of art, beauty, and science*. London: Praeger Perspectives.

¹⁰Al-Darini, F., et.al. (1984). *Haag al-Ibtikar fi al-Figh al-Islami al-Mugaran*. Beirut: Muassasah al-Risalah.

¹¹Azmi, I. M. B. T. A. G. (1995). *Intellectual property laws and Islam in Malaysia*. Thesis. Queen Mary & Westfield College, London.

¹²Runco, M. A., & Jaeger, G. J. (2012). The standard definition of creativity. *Creativity Research Journal*, 24(1), 92–96.

¹³Stein, M. I. (1953). Creativity and culture. *Journal of Psychology*, 36, 31–322.

¹⁴Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention* (p. 28). New York, NY: Harper Perennial.

that can be used to also discover a problem rather than a algorithmic (goal oriented).¹⁵

Researchers and scholars have defined innovation as the general process of creating something different, which occurs with the conversion of existing knowledge and ideas into a new benefit, such as new or improved process or services.^{16,17} Innovation is inexplicably related to change – either to take advantage of changing environments or to influence the environment.¹⁸ The nature of innovation is to bring in or create new, change what is existing or improve the existing and the aim of innovation is to succeed, differentiate or compete.¹⁹ Either which way, you require adaptable and resilient people and organizations since innovation depends on the acceptance of new ideas, services, products, processes, systems or structures.²⁰ Newness also should not be confused with blue sky thinking,²¹ as it can be looking at old problems from different angles or even taking what is available and applying it in another context or modifying it. Innovation is embedded in the process of learning and discovery.²² Innovation also has been separated from creativity in the sense that 'Invention is the creative act, while innovation is the first or early employment of an idea by one organization or a set of organizations with similar goals'.²³

Western scholarly debates on creativity and innovation begin with the fact there is no clear definition of these terms. Further, innovation seems the bigger word that creativity. This suggests that there is an inherent gap in the Western scholarly approach to understanding the terms and the basic understanding of the Arabic words *Al-Ibda'* (creativity) and *Al-Ibtikar* (innovation).

In terms of the innovation process in the public sector, it is the search for and application of new technologies within organizations, new and improved ways of delivering government services and new or untried management process and systems

¹⁵Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of personality and social psychology*, 45(2), 357.

¹⁶McNabb, D. E. (2006). *Knowledge management in the public sector: A blueprint for innovation in government*. ME Sharpe.

¹⁷Mulgan, G., Tucker, S., Ali, R., & Sanders, B. (2007). Social innovation: What it is, why it matters and how it can be accelerated. Retrieved from http://eureka.sbs.ox.ac.uk/761/1/Social_Innovation.pdf. Accessed on 21 August, 2018.

¹⁸Damanpour, F. (1991). Organizational innovation – a meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34(3), 555–90.

¹⁹Baregheh, A., Rowley, J., & Sambrook, S. (2009). Towards a multidisciplinary definition of innovation. *Management decision*, 47(8), 1323–1339.

²⁰Thompson, V. A. (1965). Bureaucracy and innovation. *Administrative Science Quarterly*, 10, 1–20.

²¹Van de Ven, A. (1986). Central problems in the management of innovation. *Management Science*, 32(5), 590–607.

²²Dosi, G. (1990). Finance, innovation and industrial change. *Journal of Economic Behavior & Organization*, 13(3), 299–319.

²³Becker, S. W., & Whisler, T. L. (1967). The innovative organization: A selective view of current theory and research. *The Journal of Business*, 40(4), 463.

(Goldsmith & Eggers, 2005).²⁴ More importantly, innovation is of many types²⁵ suggesting that there is tremendous opportunity and scope in its usage, provided it was directed wisely so as not to squander the greatest resource a nation has – its people.

Innovation needs the creative confluence of many minds because of *adjacent possible* – the ability to make other new ideas feasible through a single innovation by building, expanding or modifying the original innovation.²⁶ We recognize this in practice in spinoffs and industry clusters and spillovers. Research finds it is not cooperation that is important for R&D spillovers so it must be the soft factors like open innovation alliance or the sharing of proprietary material.²⁷ But an important part of the so-called adjacent possible is what Steven Johnson, the popular science author calls the *hummingbird effect*²⁸ – the unanticipated secondary effects that will ripple out from that innovation. This is clearly where governments must develop future foresight capabilities.

7.3. The UAE Context: Focus on Innovation

The focus behind the UAE government's innovation strategy was on improving the quality of life, increasing economic diversification, enhancing knowledge economy, improving competitiveness, creating high skilled jobs and promoting entrepreneurship. In line with the vision to be one of the most innovative countries in the world by 2021, the UAE 2014 Innovation strategy's key constituents included the following: (1) Institutions and regulatory environment, (2) Innovative products and services, (3) Knowledge and technology, (4) Infrastructure, (5) Competitive advantage, (6) Funding and investment and (7) Human capital and research.²⁹

In 2018, this strategy was updated to be forward looking – towards the year 2071, the centennial celebrations of the formation of the federation. The innovation strategy wanted to develop the type of thinking that would encourage experimentation and taking well-thought-out risks to achieve the goals of UAE Centennial

²⁴Edvinsson, L., Dvir, R., Roth, N., & Pasher, E. (2004). Innovations: the new unit of analysis in the knowledge era: The quest and context for innovation efficiency and management of IC. *Journal of Intellectual Capital*, 5(1), 40–58.

²⁵Stephens, M. (2018). *Op. cit.* Compiled from various sources like Gopalkrishnan & Damanpour, 1997; Pol & Ville (2009); Tidd and Bessant, 2014; C. Clayton; Breschi et al., 2000 for example.

²⁶Kauffman, S. (2000) *Investigations*. Oxford: Oxford University Press.

²⁷Fritsch, M., & Franke, G. (2004). Innovation, regional knowledge spillovers and R&D cooperation. *Research Policy*, 33(2), 245–255; Han, K., Oh, W., Im, K. S., Chang, R. M., Oh, H., & Pinsonneault, A. (2012). Value cocreation and wealth spillover in open innovation alliances. *MIS Quarterly*, 291–315.

²⁸Johnson, S. (2015). *How we got to Now - Six innovations that made the modern world*. New York, NY: Riverhead Books.

²⁹UAE Government Portal. (2018). National innovation strategy. Retrieved from <https://government.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/national-innovation-strategy>. Accessed on 6 August 2018.

2071.³⁰ The focus of the strategy was to enabling people to shift from pure focus on vital sectors to the goals and outcomes in the following seven areas: exploration, future skills, quality of health, living and life, green power, transport and harnessing technology to serve humankind. Exhibit 7.2 gives a recap of both innovation strategies.

Exhibit 7.2: UAE National Innovation Strategy 2014 and 2018.³¹

In October 2014, Sheikh Mohammed launched the UAE National Innovation Strategy with the aim of making the UAE one of the most innovative nations in the world within seven years with the four main tracks:

- (1) The first track will establish a stimulating environment for innovation in the form of supportive institutions and laws. It will shape specialized entities such as innovation incubators as well as technological infrastructure to fuel innovation in all sectors. It will also focus on research and development in various innovation fields.
- (2) The second track will develop government innovation by institutionalizing innovative practices with the support of an integrated system of modern tools. The strategy requires all government entities to reduce spending by one per cent and dedicate the savings to research and innovation projects. National training and education programs on innovation will also be launched.
- (3) The third track will encourage private sector innovation by stimulating companies to establish innovation and scientific research centres, adopt new technologies and develop innovative products and services. The UAE will attract pioneering international firms in key innovation sectors, establish innovation communities and zones and support applied research in areas of national priority. It will also enhance the UAE's position as an international centre to test innovations.
- (4) The fourth track will prepare individuals with highly innovative skills by concentrating on science, technology, engineering and mathematics, including the creation of educational material for schools and universities. The aim is to establish a national culture that encourages innovation and entrepreneurship through partnerships between the public, private and media sectors.

The framework for the strategy is structured around the following *three key pillars*:

- (1) *An innovation-enabling environment*: the strategy seeks to develop an environment that promotes and enables innovation by developing the right regulatory

³⁰UAE Government Portal. (2018). National strategy for advanced innovation. Retrieved from <https://government.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/national-strategy-for-advanced-innovation>. Accessed on 6 August 2018.

³¹UAE National Innovation Strategy. Retrieved from <https://government.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/national-innovation-strategy>. National Advanced Innovation Strategy. (2018). Retrieved from: <https://government.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/national-strategy-for-advanced-innovation>

Exhibit 7.2: (Continued)

framework, providing comprehensive enabling services, enhancing the technology infrastructure and ensuring the availability of investments and incentives.

- (2) *Innovation champions*: the strategy seeks to create innovation champions in individuals, companies, institutions and government.
- (3) *Innovation priority sectors*: the strategy targets stimulating innovation in seven sectors. They are: Renewable energy, transport, education, health, technology, water and space.

In 2018, the National Strategy for Advanced Innovation was introduced, based on enabling people to shift from focusing on vital sectors to the goals and outcomes in seven areas: (1) exploration, (2) future skills, (3) quality of health, (4) living and life, (5) green power, (6) transport and (8) harnessing technology to serve humankind.

The strategy aims to develop a type of thinking that encourages experimentation and taking well-thought-out risks to achieve the goals of UAE Centennial 2071 which is based on four key pillars:

- (1) education (investing in high technology);
- (2) economy (diversifying the imports and exports and relying less on oil;
- (3) raising productivity of the national economy), development of the government (fortifying country's reputation); and
- (4) cohesion of society (building Emirati values and ethics for future generations, enhancing society's cohesion).

Source: Compiled by authors.

Under this advanced strategy, the aims outlined were to: (1) establish a national platform for innovation, communication and learning; (2) encourage the community to take on the spirit of initiative; (3) try out new models of government for serving society; (4) test advanced economic patterns and lay the groundwork to create new sectors; (5) achieve scientific breakthroughs that focus on the welfare of people; and (6) collaborate with leading international institutions and companies specialized in the field of innovation. Area 2071³² is an outcome of this type of thinking where a dedicated space was purposefully designed to create an ecosystem to connect corporates, governments, start-ups, investors, the youth and the public in order to co-create the future. Dubai Future Foundation was created in 2016 with the vision to 'See The Future, Create The Future'. With the adoption of the Dubai Smart City initiative, innovation was a necessary part of the future where citizens, residents, businesses and visitors could have access to seamless interconnected government services (*for an idea of Smart Dubai milestones look at Appendix 1*). The launch of Dubai10X in 2018, was to refocus government initiatives on disruptive innovations

³²For more on Area 2071. Retrieved from <https://area2071.ae/the-space/>

and move away from safe incremental innovations. Clearly, there was much to do. HH Sheikh Mohammed said:

Traditionally, governments are known all over the world to be resistant to change and bureaucratic organizations that are last to adopt disruptive innovation. The future is a collection of ideas and ambitions that are made and tested in experimental laboratories, and today's initiative transforms Dubai into the world's largest laboratory for the governments of the future.³³

7.3.1. UAE Innovation Strategy Execution

To execute the UAE innovation strategy across the government entities and the seven priority sectors, there was a need to improve on or change roles and responsibilities of employees, maybe in some cases the organizational structures and culture to better implement the strategy. The UAE government recognized the need to assess global best practices and use strategic innovation centres for governance and implementation of the innovation strategy.

Innovation strategy is defined as a timed sequence of internally consistent and conditional resource allocation decisions that are designed to fulfil and organization's objectives.³⁴ Examples in the literature from Australia, Canada and Sweden in the execution of innovation strategies by the government highlight the following factors being vital for its success: collaboration, continuous dialogue and learning innovation policy.³⁵ Innovation requires fast and safe prototyping and experimentation, a sharing of lessons learnt including failures and some long-term commitment to the purpose behind the idea – value to the people of the country.

According to the review of the scholarly literature and local and global government reports, often innovation frameworks have seven dimensions. These seven dimensions are as follows:

- (1) Managed innovation process: combining non-traditional and traditional approaches to government innovation strategy.
- (2) Strategic alignment: building support.

³³For more on Dubai 10X. Retrieved from <http://www.dubaifuture.gov.ae/our-initiatives/dubai-10x/>

³⁴Ramanujam, V., & Mensch, G. O. (1985). Improving the strategy-innovation link. *Journal of Product Innovation Management*, 2(4), 213–223.

³⁵Cassiman, B., & Veugelers, R. (2006). In search of complementarity in innovation strategy: Internal R&D and external knowledge acquisition. *Management Science*, 52(1), 68–82; Faems, D., Van Looy, B., & Debackere, K. (2005). Interorganizational collaboration and innovation: Toward a portfolio approach. *Journal of Product Innovation Management*, 22(3), 238–250; Verganti, R. (2003). Design as brokering of languages: Innovation strategies in Italian firms. *Design Management Journal (Former Series)*, 14(3), 34–42; Landabaso, M. (1997). The promotion of innovation in regional policy: proposals for a regional innovation strategy. *Entrepreneurship & Regional Development*, 9(1), 1–24.

- (3) Government foresight: understanding emerging trends.
- (4) Public insight: understanding articulated and unarticulated needs.
- (5) Core technologies and competencies: leveraging and extending corporate assets.
- (6) Organizational readiness: the ability to take action.
- (7) Disciplined implementation: managing the path from inspiration to government impact.

These approaches should be successfully tailored to the seven government priority areas. By successfully executing innovation strategies, the benefits that can be accrued are³⁶: new growth strategies, new ventures, new partnerships & collaborations, new practices, sustainable innovation, continuous dialogue and learning innovation policy. There was an urgency to implement innovation and creativity strategies especially in Dubai, where there was a clear mandate to bring in 'public sector thinking into the private sector' and focus on Dubai10X.

7.3.2. *Mohammed Bin Rashid Centre for Government Innovation*

Established in 2014, the Mohammed Bin Rashid Centre for Government Innovation (MBRCGI, Runco & Jaeger, 2012) aims to develop an integrated system of modern tools to help government entities to adopt innovation in the sector and provide innovative services to the public. The Centre is focused on establishing the culture of innovation in various areas of public sector activity. The operating model of MBRCGI is based on three main pillars: Innovative Ideas, Innovative Capabilities and Innovative Culture. MBRCGI facilitates events and government innovation laboratories intended to support the development of innovative services and find solutions to challenges. It is also working on training national talents and promoting their capacity in government innovation, in addition to building a global network of partnerships with universities and specialized institutes such as Cambridge University.

The following innovation laboratory events were created and launched prior and during the year of innovation in the UAE: Cabinet Retreat (2013), The Ministry of Environment & Water's Government Innovation Lab (2014), The Ministry of Health's Government Innovation Lab (2014), The Ministry of Social Affairs' Government Innovation Lab (2015), The 'Our Youth Innovates' Laboratory (2015) and The 'Gender Balance in Governments' Laboratory (2015).

In addition, MBRCGI launched Afkari and Ibtakar Talks – a communication platform. Public sector innovation diplomas could be earned through MOOCs – for example, a four-week Arabic content diploma in 'Innovation in Government'. The purpose was to help the citizens and public government officials embrace the seven stages of innovation (1) identify opportunities and challenges (2) generate

³⁶Crossan, M. M., & Apaydin, M. (2010). A multidimensional framework of organizational innovation: A systematic review of the literature. *Journal of Management Studies*, 47(6), 1154–1191.

ideas (3) develop and test the ideas (4) make the case (5) deliver and implement (6) grow and scale and (7) change systems.³⁷ According to the Government Innovation Framework report,³⁸ most public sector innovations fell into four areas – services, process, policy or systems. In the broader context, moving away from a vertical problem-solving approach to a horizontal problem-solving approach, innovation clearly could be applied to products, services, processes, experiences, society, governments, markets, sourcing, industry, economy, entrepreneurship, etc.³⁹

7.3.3. Innovation Assessment and Benchmarking Activities

The relevant innovation assessment and benchmarking activities implemented by the Dubai Government in the simplest terms, using the four-step process (Azmi, 1995) are as follows:

Step 1: Assessment – the Government of Dubai has an independent institute (MBRCGI⁴⁰) to review and look inside the government entities and its' sectors, conduct internal assessments, along with several dimensions of innovation, that is, through the critical analysis of the current state, effectiveness, pain/barrier points, and identify critical areas to benchmark externally.

Step 2: Benchmarking – the Government of Dubai has an independent institutes to review and look outside the government entities/sectors, with the notion of understanding the best practices of other the government entities/departments and sectors (both inside and outside). For example, a Global Star Rating System for Services was introduced in 2015 to rate service delivery channels and interfaces in the Federal Government, including call centres, websites, smart applications and customer service centres.

Step 3: Development and Adaptation – the Government of Dubai encourages innovation-thinking to be embedded within its government entities. For instance, the what employees can do is 'Ask': How can we innovate beyond this understanding of 'external best-in-class'? and/or 'How can we adopt and adapt this understanding in line with our organization's specific business needs, culture and organizational readiness?' A recent example of the way this has been embedded within the organizations is the appointment of one employee as the Chief Innovation Officer across each Dubai Government entity.

³⁷MBRCGI. (2018). *Innovation tools*. Retrieved from <https://www.mbrcgi.gov.ae/en/enable/tools>. Accessed on 1 July 2018.

³⁸MBRCGI. (2015). *Government innovation framework*. Retrieved from https://www.mbrcgi.gov.ae/docs/default-source/default-document-library/gov_innovation_framework_en.pdf. Accessed on 1 July 2018.

³⁹Gopalakrishnan, S., & Damanpour, F. (1997). Review economics, of innovation research in sociology and technology management. *Omega, International Journal of Management Science*, 25(1), 15–28.

⁴⁰Mohammed Bin Rashid Centre for Government Innovation. Retrieved from <https://www.mbrcgi.gov.ae/en>

Step 4: Institutionalization – the Government of Dubai understood the criticality to own and shepherd the practice of innovation into routine operation across the UAE government entities and sectors. This is done by gathering and incorporating feedback into cycles of continuous improvement and provision of evidence-based research. As mentioned in the report, Edge of Government, ‘In the words of HH Sheikh Mohammed bin Rashid Al Maktoum: “We aim to make innovation a government habit, a daily practice, and a solid organisational culture [...]” [...] (where the aim is) to turn innovation into organised institutional work and embed an innovation culture within the DNA of Government’.⁴¹

This report looked at best practices around the world and identified six approaches to solving public sector problems were identified.

- (1) Process transformation: adapts the knowledge and technology embedded in existing processes to create radically new approaches to public challenges.
- (2) Active infrastructure: involves deploying infrastructure that is flexible, multi-purpose, and able to provide evolving, real-time responses to public needs.
- (3) Behaviour-inspired government: exploits systematic patterns in human cognition and behaviour to dramatically improve government policy and programme effectiveness.
- (4) Technology reinvention: applies existing technology and established scientific principles to new challenges.
- (5) Collective intelligence: incorporates input, insight, and involvement from orders-of-magnitude more participants in the processes of government and collective decision-making.
- (6) Data-led effectiveness: makes distributed data publicly available and easily integrable for use in diverse government and civilian applications.

7.4. Perception of Creativity and Innovation in the Dubai Government

A study (Abdurrahman, 2010) of the perception of innovation and creativity was conducted across the government of Dubai, UAE in 2017. A sample of 979 participants completed an online survey (Abdurrahman, 2010) that explored factors relating to the individual, team and organization (Abdurrahman, 2010). Of the respondents, 59% were male (Exhibit 7.3a) (Abdurrahman, 2010). The mean age of the sample was 39.2 years. A majority of the respondents (79.6%) possessed an undergraduate or postgraduate qualification. The mean number of years they had worked in the GCC was 9.9 years (see Exhibit 7.3b) and 50.7% of the sample were managers or professionals. Of the sample, 94% were employed full-time with 38.5% of the sample were working in organizations of more than 5000 employees.

⁴¹PMO. (2016). *The edge of government: Public innovations from across the globe*. Dubai: MBRCGI.

Exhibit 7.3a: Gender of Survey Respondents.

Source: Batey et al. (2018).⁴²

Exhibit 7.3b: Number of Years Working in the GCC (Abdurrahman, 2010).

Source: Batey et al. (2018).⁴³

Various factors such as culture, work engagement, decision-making authority and work support (see Exhibit 7.4) were analysed to understand which affects creative confidence and which affects innovative behaviour. For this study, creativity was measured as the process of idea generation, and innovation, to

⁴²Batey, M., Burd, M., Hughes, D., Moonesar, I., & Salem, F. (2018). *Op. cit.*

⁴³*Ibid.*

Exhibit 7.4: Survey Measures of Individual, Job-Design, Team and Organizational Creativity and Innovation.

Level	Measure	No. of Items	Example Item
Individual	Creative confidence (measured using the Creative Self-efficacy Scale by Beghetto, 2006)	3	'I am good at coming up with new ideas'
Individual	Innovative behaviour (an adapted version of the Innovative Behaviour Scale by Scott & Bruce, 1994)	6	'I investigate and get resources needed to implement new ideas'
Individual/ job-factor	Decision-making autonomy (measured using the Decision-making Autonomy Scale from the Work Design Questionnaire by Morgeson & Humphrey, 2006)	3	'The job allows me to make a lot of decisions on my own'
Team	Work support (developed by Batey et al., 2018) ⁴⁵	6	'My supervisor gives me useful feedback about my ideas at work'
Organization	Work engagement (measured using the Utrecht Work Engagement Scale by Seppälä et al., 2009)	9	'I am enthusiastic about my job'
Organization	Creativity and innovation culture (measured using a shortened version of the Creativity and Innovation Climate Survey by Walker, 2015)	12	'We work with other organisations to develop new products, processes or services'

Source: Batey et al. (2018).⁴⁶

the subsequent stage of implementing ideas toward better procedures, practices, or products.⁴⁴ Every questionnaire item was assessed using a six-point Likert scale (Scale details are given in Exhibit 7.5). Barriers identified by the participants are coded and represented in Exhibit 7.5.

7.4.1. Barrier 1 – In-depth Understanding of Creativity and Its Relationship to Innovation

The first barrier to overcome within the organization is the education and understanding of the boundaries of creativity and innovation. This fuzziness often leads

⁴⁴Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, 40(5), 1297–1333.

⁴⁵*Ibid.*

⁴⁶*Ibid.*

Exhibit 7.5: Barriers to Creativity and Innovation.

Source: Batey et al. (2018).⁴⁷

to resentment when ideas were not appreciated, rewarded or implemented. It was clear that many individuals perhaps did not understand that creativity $\neq$ innovation.

The analysis of the data, finds that employees of the Dubai Government reported themselves as having higher levels of creative confidence (mean = 5.02) compared to innovation behaviour (mean = 4.70). A respondent said: 'Creative energy and innovative ideas are not the problem. The UAE is bursting with inspired, creative people. The problem lies in execution. Innovation requires a unique process that is iterative, that begins with the most basic questions/needs, prototypes and builds from there. These processes run counter to most standard business processes in that that are not linear'.

In some cases, opinions were being equated with ideas for example one respondent said: 'people need to be motivated by giving all chances to grow and thrive to show creativity and voice their opinion and ideas, same level for people doing same job'. Ideas (volume) were often being identified as a measure of creativity: 'Recognize each and every submission. Provide feedback about the ideas that are not up to the mark. Ask for additional information and a resubmission if the idea is not up to the standard'. This clearly indicates a gap between the understanding of creativity and innovation. Since both require a creation of value and to some extent implementation, this may lead to a feeling of disillusionment with the process of strategy implementation. Another

⁴⁷*Ibid.*

respondent said 'Give the freedom to the people to think, to act, to experiment, freely without pressuring them or expecting results always'. One participant stated 'Reward and compensate employees for any ideas that he contribute(s) in an organization'.

The Government Innovation Framework report⁴⁸ highlights the fact that innovation is a disciplined, planned and managed process unlike creativity which was dependent on flashes of innovation. The value of creativity and innovation can only come after a deep understanding of the two.

7.4.2. *Barrier 2: Organizational Culture and Government Culture*

Work support was the extent to which employees perceived themselves to receive encouragement, listening and provision of feedback from supervisors and colleagues relating specifically to creativity and innovation. Work support had the lowest score in the survey (mean = 3.95). Rewards and recognitions, diversity and inclusion and cross-cultural teams, risk-taking blame culture and HR practices seems to point to barrier from a culture point of view. One respondent wrote that was needed to encourage creativity & innovation was, 'Empowerment, trust, delegation, appreciation or recognition and freedom to expand and progress in an acceptable direction, protection from harmful work politics and tactics that slow work for personal gains or objectives or reasons, provision of resources only when absolutely needed for a better outcome, the effective identification and or protection of innovative and creative individuals and or their ideas (intellectual rights)'.

Work pressure was not a factor many employees highlighted. Their frustration was more with the process and the inability to understand what would be valued. 'It has to be top down approach by providing right ambience to inculcate culture of creativity and innovation'. Traditionally, the public sector in UAE is seen as a preferred employer of choice. A research paper titled, 'Holistic Sustainability as Key to Emiratisation: Links between Job Satisfaction in the Private Sector and Young Emirati Adult Unemployment',⁴⁹ found that better salaries, benefits and working conditions than the private sector were the main reasons for Emiratis choosing the public sector (over 70%), and the most important condition was the shorter working hours. So the problem from an organizational point of view is that already the shorter working hours need to be balanced with a commitment to innovation which needs to be according to many employees compensated with either time or rewards.

Part of the challenge is that for disruptive innovation, many employees had the feeling that the objectives were not clear and felt unsure about how to manage this process, one respondent commented 'when the management has clear objectives, creative and innovative ideas would be easier to implement'. This is an outcome of

⁴⁸MBRCGI (2015). *Op. cit.*

⁴⁹Daleure, G., & I Shareef, Z. (2015). Exploring under-representation of young Emirati adults in the UAE private sector by examining emirati job satisfaction. Sheikh Saud Bin Saqr Al Qasimi Foundation for Policy Research. Retrieved from <http://www.alqasimifoundation.com/admin/Content/UserFiles/ExploringUnderRepresentationofYoungEmirati.pdf>. Accessed on 10 August 2018.

the culture where in some case risk-taking was not supported. A respondent replied 'If top management does not stimulate bottom up development, creativity and courage and maintains a culture of harsh punishment for failure, it will kill off any initiative and creativity'.

Another issue identified was the process of evaluating ideas 'creativity should be praised and recognised to encourage it more. Many creative ideas do not get through as approval process is so long with many people to go through that all have different opinions and tastes. By the time it gets to the main head of the company they have been removed or changed so much that not liked anymore'. However, employees also needed to be able to understand value – which means both costs and benefits and this seems an area that further education is required. One respondent said, 'Give the freedom to the people to think, to act, to experiment, freely without pressuring them or expecting results always'. Another said: 'Offering a new idea is interpreted as being a criticism with how the work is currently being done (and thus, by extension, a criticism of the people doing that work), which results in people getting defensive and shutting down any debate'. Another felt that 'Creative thinkers are not being taken into limelight or appreciated due to the bias in the hierarchical structure'.

Perhaps, one of the gaps is between top management and junior staff and the inherent competition that is within the system. One employee wrote 'Get rid of micro managers as they kill creativity and stop bottom-up communication and change. / Stop Departments and sections and Agencies competing with each other to be Chairman's favourite and force cooperation [...] Tolerate mistakes'. Another commented 'The traditional way of thinking and the fear from losing the position has played a major role in delaying the movement of the innovation wheel forward'. Still another senior manager felt that 'New ideas need to be aligned and should add value to the long term strategy of the organisation'.

7.4.3. *Barrier 3: Systems Approach*

From the government customer's point of view (citizen, resident, business entrepreneur, tourist, corporation, etc.), the government is often viewed as a single entity and the need to revit multiple departments for multiple purposes defies the system viewpoint. Clearly, integration is the way forward. One respondent stated 'I feel that most of the time if you are part of the same team then some sort of stagnation over powers team, to reduce this changing of positions plays a vital role & give space to employees who work in supervisory or at technical levels. The communication from technical teams to the dept. higher management should be two way communication so that corrdet & precise decisions can be taken accordingly. Lack of transparency from higher to lower/technical teams create an atmosphere of untrust or suspicion at work'.

Innovation is dependent on cross-fertilization of ideas. With over 200 nationalities living in the UAE, culturally there is a tremendous opportunity for this to occur. The government's focus on public–private partnerships brings many exciting opportunities for innovation but requires a more private sector mindset or getting

Exhibit 7.6: Global Innovation Index UAE Ranking.

2015	2016	2017	2018
47	41	35	38

Source: Compiled by Authors from The Federal Competitiveness and Statistics Authority. Retrieved from <http://fcsa.gov.ae/en-us>. Accessed on 12 August 2018.

the job done. Very often, the public sector is the first and last job. Another employee commented, ‘Our department very much works in silos, with different sections rarely (if ever) discussing ideas or projects. This often means that new, large projects are announced, and I had never heard of these projects until that point. More collaboration means we could devise ideas, strategies, and procedures that would benefit (or at least complement) the work of various sections, not just one./ Also, creativity and doing anything new or different is actively discouraged. People here are terrified of change, particularly when it thinks it will involve more work for them (even in the short-term, as a new system is implemented). It feels like the attitude here is that ‘the status quo is to be maintained ALL THE TIME’.

7.5. Innovating Forwards

Since the time the innovation strategy was introduced in 2015, UAE has been benchmarking itself using the Global Innovation Index,⁵⁰ and in 2017 and 2018, UAE topped all Arab countries in the Index (see Exhibit 7.6). UAE has their own index. Every government department now has a CEO of Innovation. The objective it to be one of the most innovative countries in the world by 2021. Keeping in mind the findings of the survey about creativity and innovation, what is the way forward? Some suggestions from respondents included formation of a think tanks and leveraging the existing diversity of talent residing in the UAE and across departments. If the UAE vision is by 2117 to colonize Mars, what is the level of creativity and innovation required?

Thought-provoking Questions

Question 1

How can government leaders decide on effective leadership and teamwork skills to solve complex innovation management problems and communicate decisions to relevant audiences?

⁵⁰The Federal Competitiveness and Statistics Authority monitors UAE competitiveness.

Question 2

How can the governments appraise and assess the role of innovation management driving local outcomes?

Question 3

How can the government utilize advanced problem-solving skills to apply knowledge from the external and domestic factors and drivers that determine innovation management?

Question 4

With the service sector creating most of the wealth and employment within developed and emerging economies, ensuring that the sector continues to innovate presents a number of challenges. This does not only include the service innovation process itself, but also include the adoption of practices that will enhance and improve it. Discuss and analyze.

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Appendix 1: UAE Journey: From E-government to Smart Government⁵¹ (Rahman, 2015).

Highlights	Year	Brief Description	Owner
e-Dirham	February 2001	The first online service launched by the Ministry of Finance in the federal government to replace the traditional means of fees collection for government services	Ministry of Finance
e-Government program	November 2002	The Coordinating Committee for the Federal e-Government Program was formed and led by the Ministry of Finance and Industry	Ministry of Finance
e-Government strategy	March 2003	IBM was assigned to conduct an assessment study for the federal agencies and to develop an implementation plan	Ministry of Finance
e-Government implementation plan	June 2004	A memorandum of understanding with the Emirates Telecommunications Corporations (Etisalat) to provide the infrastructure for the e-government. The plan divided into three phases ending in 2007	Ministry of Finance
e-Government portal	March 2005	The launch of the first e-government portal in cooperation with Etisalat, which was exclusively assigned to implement the plan	Ministry of Finance

⁵¹Rahman, H. M. (2015). Lecture notes-MPA501 & MPA605: Knowledge management. Mohammed bin Rashid School of Government, Dubai UAE.

(Continued)

Highlights	Year	Brief Description	Owner
Assigning the Ministry of Government Sector Development to oversee the e-government program	March & July 2006	A ministerial decree was issued to move the e-government program from the Ministry of Finance to the Ministry of Government Sector Development	Ministry of Government Sector Development
Development of the information systems strategy of the federal government	June 2008	A ministerial decree was issued to assign the TRA to lead the efforts to develop a strategy for the information systems in the UAE. TRA in cooperation with Booz Allen Hamilton developed the Informational Systems Strategy of the Federal Government	Telecommunications Regulatory Authority
Development of the government service strategy	2010	The PMO developed the Government Service Development Strategy, which was the third foundational element of e-government strategy	Prime Minister's Office
Developed Dubai Smart Government	July 2013	The Dubai Smart Government was developed	Dubai Ruler's Court

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