

## **Dubai e-government's smart city roadmap: Popular participation and voluntary location information**

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### **Abstract**

This paper assesses Dubai's spatial & location-based online client services, access to public participation and provision of voluntary geographic information. Geographic Information Systems and Location Based Services are crucial components of Electronic Governance and Smart Cities as they represent dependent variables within complex Information and Communication Technologies (ICT), not limited to government. Public participation in decision making for urban system is axiomatic with or without digital technologies and to mitigate this challenge the federal government of UAE outlined a policy and provision guidelines for use of public participation technologies. This paper concludes by re-emphasising Dubai's strengths and weaknesses caused by implementation of the smart city model.

### **Keywords**

E-government, Smart city, Participation, Dubai

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## **Introduction**

Smart, Smarter, Smartest: Beyond technology, what makes a city smart has discussed in previous studies by Bin Touq (2015a, 2015b) and Bin Byat (2015). As with all evolutionary changes in technologies and energy systems, the Internet of Things and Internet of Everything can be used in Smart City amalgam and represents an irresistible dynamic force of history as reported by Townsend (2015) and Evans (2013). The bottom line for smart city play remains, first and foremost, the financial capital to buy into a costly and technological heavy infrastructure.

## **Situating Dubai among global smart city ranks**

The seven member states of the United Arab Emirates share a federal government system that has made great strides in participatory e-government. The UAE system of governance operates a dual process whereby a Federal system functions in cooperation with the seven emirates, each of which organizes its own local e-governance processes. The Federal system, however, sets standards and guidelines for the individual emirates to adapt and adopt. In particular, one such Federal guideline emphasizes a roadmap toward e-participation and eventual empowerment for individual residents, both citizens and expatriates (Ijeh, 2015, 2010). The Shanghai Index ranks Dubai at 14<sup>th</sup> in ICT, and 17<sup>th</sup> in both Smart Economy and Smart Governance, and cumulatively at 16<sup>th</sup> in the world (see Figure 1). Thus, in less than a half century, Dubai has grown from a small desert coastal port to a world-class urban centre and commercial entrepot, achieving the status of a global brand for lifestyle excess as well as excellence (SASS, 2014).

<b>Shanghai Index</b>	
<b>Aggregate</b>	<b>Criteria</b>
<b>Smart infrastructure</b>	Internet access
	Broadband quality
	Intelligent transport
	Digital systems
<b>In smart economy</b>	Innovation Capacity
	Software Development
	Content industries
	Digital Creativity
	Virtual interactivity
	Cultural Experience
<b>In smart governance</b>	Services to Residents
	Services to Businesses
	Public Management
	Social Networking

Figure 1 - Shanghai Index, 2014

### **Citizen and non-citizen participation in Dubai**

The reading world is currently weighed down under a tsunami of print and other media materials focusing on the Middle East, North Africa, Islam and Muslims, much of it being so redundant and ill informed as to be more useful as recycled paper. Like many cities, Dubai has set specific planning and development targets. Yet it also has established a Plan 2021, with that deadline for accomplishing a specific target level of both smartness and sustainability as reported by the Official Dubai 2020 Expo website, by Cohen's (2014), Maroto (2015) and Ijeh (2015). If predicated on popular suffrage, or universal voting rights, even UAE citizens will have to wait for that to

unfold in a staged step-by-step process, while even the highest social classes and most valued sectors of expatriate residents will probably never see it come to them.

<b>Dubai Plan 2021</b>	
<b>Aggregate</b>	<b>Criteria</b>
<b>Digital-city strategies</b>	IP network infrastructure
	E-Government / Gov 2.0 Services
	Digitization of processes & systems in urban planning
<b>Digital-society initiatives, which involve human interface to</b>	Stimulate the community
	Strengthen social capital
	Engender digital inclusion
<b>Digital-society initiatives include</b> <b>also</b>	Urban action forums and service interfaces
	Hyper-local websites
	Support networks
	Volunteering networks
	Collective action
	Car-pooling networks
	Innovation incubators
	Digital divide programs
Social network platforms	

Figure 2 - Dubai Plan 2021

But if the world of Web 2.0 and social networking brings closer correspondence among government, NGOs, the business communities and expatriates committed to living,

working and investing in the UAE, especially Dubai, they may find that their individual and collective voices will gain a credible hearing and potential response. In fact Dubai's entrepreneurial model of governance and cluster developments such as Health City, Design District, and Silicon Oasis have already established active leadership groups, bringing together citizen investors with resident entrepreneurs and innovative professional practitioners. Working together with government institutions and in public-private partnerships, such groups are already influencing policies and decision-making about direction, growth and development of cluster enterprises across local, regional and global commercial and professional networks. As Dubai's leadership has invested in world-class events facilities with ambitions to evolve as a major host city for a wide range of events, these cluster groups have become key network players in organizing events and steering such activities toward Dubai venues.

Coupled with such professional leadership and industry groups, software development and application design teams have formed to supply Dubai-related activities and facilities with specialized applications, from arts and media to sports and leisure, events, commerce, education and development. In fact, many of these activity and user groups, with their affiliated networks and Web 2.0 applications, have a global presence more like San Francisco or Singapore than any typical MENASA city as reported by Kotkin *et al.* (2014), Sassen (2012) and Csomos (2013).

Thus, Dubai's unique demographic context warrants unique participation measures that encompass all stakeholders in decision-making regardless of nationality. That is a very open spectrum. I argue that is already reality on the ground when it comes to taking stakeholders into decision-making. For example, entry to the UAE is easily accessible to and affordable for the majority of estimated 1

billion people surrounding the UAE. This is done to capture the tourism and travel market between Asia and the Americas.

While multicultural integration is important, it might cause the sensibilities of citizens and long-term foreign residents, especially those in higher social and economic brackets who are accompanied by families. But design elements that encompass both smart and sustainable technologies can also feature aesthetic and lifestyle elements that appeal to different market niches (Ijeh, 2016). The current Dubai urban design guidelines for low- to mid-rise residential and mixed-use commercial complexes emphasize facades that simulate traditional heritage, to balance the enormous spatial mass of modern/post-modern super-high-rise towers (Ijeh, 2015).

In the context of the GCC, people demand more PPGIS and use of technology to make government services transparent. This research explores why some government departments were users of PGIS and others were not. There is a political explanation for the PGIS use for government services. The existing literature on the widespread use of PGIS offers several thoughtful explanations for variations in adaptation of location-based services and a participatory model of government services delivery:

Firstly, the demographic structure of the country (the majority of residents are non-citizens, a minority of residents are citizens) which is motivated the oil-rich government to adopt technology in keeping with less demand for non-citizen labor. Secondly, the security threat compelled the government to set up sophisticated security systems to safeguard the nation. Thirdly, the role of the champion leader has a personal commitment to advance technology for government services such as PGIS. Lastly, once the institution of government was in place, it changed

the service delivery model that made widespread use of PGIS continuities.

## **Conclusion**

This article has presented an assessment of Dubai's spatial & location-based online client services, access to public participation and provision of voluntary geographic information. This article's aim of evaluating Dubai's approach to development as a smart city is demonstrated. The article considered existing technologies used for participation in the global information and communication system. This article concludes that the enormous global public accessibility appetite to increasingly low-cost devices and software with a specific focus on information-based management of local problems has aided as an emerging technology the participation in decision making polices for urbanisation and seems unstoppable.

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