



دبي الذكية
SMART DUBAI
HAPPY LIVING حياة أسعد



كلية محمد بن راشد
للإدارة الحكومية
MOHAMMED BIN RASHID
SCHOOL OF GOVERNMENT



Dubai Smart Cities Forum Series

SESSION 6: BRINGING SMART
CITIES TO LIFE
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Key Themes:

Smart Cities, Open Data, the Internet of Things, Digital Infrastructure, Data Sharing, Implementation of Smart City Policy, Real Life Smart City Applications.

Introduction:

Dubai is in the process of investing heavily in its technological infrastructure as part of the city's ongoing efforts to be at the forefront of an approach – shared by many cities globally – to become a 'smart city'.

This was the sixth installment of the 'Dubai Smart Cities Forum', a series of ongoing events hosted by the Mohammed bin Rashid School of Government in partnership with the Executive Council of the Government of Dubai, that serve as a platform for various institutions to discuss the most pertinent issues faced by the current 'smart' city movement. These institutions range from private sector vendors to government entities based both regionally and globally.

This session, titled 'Bringing Smart Cities to Life' aims to explore how various different approaches to technology policy, such as making use of 'big data' and 'the internet of things' can be combined to further develop Dubai's infrastructure and produce tangible benefits for its inhabitants.

Presentations:

1. INTRODUCTION TO SESSION

DR ALI AL MARRI

EXECUTIVE PRESIDENT, MOHAMMED BIN RASHID SCHOOL OF GOVERNMENT

The session's proceedings were formally opened by Dr Ali Al Marri, Executive President of the Mohammed bin Rashid School of Government. He did so by providing a brief overview of the overall scope and aims of the Dubai Smart Cities Forum before highlighting the five events in this series that preceded this one.

The first five sessions of the Dubai Smart Cities Forum focused on why the development of 'Smart Cities' is a relevant and pressing issue for policy

makers in the region, the significant potential that the emergence of 'Big Data' management presents for Government, the 'Internet of Things', 'Enabling Smart Services' by strengthening ties between the public and private sectors, and lastly, how we can go about making the most of 'Open Data'. This session will focus on 'Bringing Smart Cities to Life' by looking at how the topics discussed in the aforementioned sessions can combine to produce noticeable outcomes that benefit Dubai's citizens.

2. DUBAI VIEW

AHMAD JULFAR

CEO ETISALAT GROUP

Dubai Data's ultimate goal is to develop the city's data inventory over time, with the aim of including all government entity data sets.

Open data is a key component in enabling Dubai's transition to being seen as a 'smart' city. It should play a prominent role in the city's development both in the short term and in the long term particularly as it has been announced by the UAE's leadership that 2015 will be the year of innovation.

In order to look at the overall impact that Dubai's 'Smart City' initiative is trying to make, we need to look back at when the concept was first introduced to policy Makers in Dubai by Sheikh Mohammed bin Rashid Al Maktoum.

When Sheikh Mohammed first announced that Dubai was going to start implementing 'smart city' strategies, he did not speak about technology at all. In fact, the word 'technology' simply did not come up in the discussion. The predominant aims of becoming a smart city, is to make the lives of people simple, happy and to help businesses achieve their objectives.

When looking at things in a more specific context, such as in the telecommunications industry, when we talk about Smart cities or smart government, the first words that often come to mind are 'technology', 'ICT', 'applications' and the like. Technology is certainly a key component of smart cities, it plays a predominant role, but it is not a main driver; it is only an enabler to get us to our ultimate goal of making the people of Dubai happy – not just its citizens, but also those who visit the

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city as tourists.

What does being a 'smart city' bring to Dubai? It makes it one of the most competitive cities in the world. In some ways, Dubai is already up there, in other ways, Dubai is a bit behind. We, as a government entity, need to help drive Dubai to be there.

Unlike cities such as Mexico City, Dubai is relatively young, and does not have as many legacy issues to deal with. As such, we see a huge opportunity to become trailblazers and become a point of reference globally regarding how to implement smart city strategy.

As a telecom company, we are aware of what the UAE has already achieved. The UAE is ranked number one in many different areas, we are ranked first in 'fiber optics to household penetration', overtaking both South Korea and Japan; we are ranked first for smart phone penetration; and we are also currently ranked number one for mobile data speed. These are all areas that contribute to Dubai's ICT infrastructure, which is a key foundational component of building a smart city.

We want to develop digital forms of identification for all of Dubai's residents. Whilst this has a host of benefits, we need to make sure that we take people's security and privacy into account. As such, what we need to develop is a form of digital identification that is both simple and secure.

There are two general challenges faced in the implementation of smart city technology: people and systems. People often disagree as to what the best approach to adopt is regarding what kinds of technology should be used. They tend to become more passionate and associate themselves with particular systems and applications. But we need to look at the bigger picture; we need to have shared objectives so that we can ultimately achieve Dubai's smart city goals.

Further, we need simple integration between various platforms and systems without any complications. This is what the Dubai Smart City committee is currently working on. Once we work on both of these issues, we have a lot of positive things to look forward to. Previous studies have shown that improving ICT services can help

improve a country's GDP by up to 50%. We have a great opportunity to use technology to capitalize on this growth as we already have a strong ICT infrastructure in place.

We want to collaborate with all stakeholders in order to make this smart city implementation a success. The blueprint for Dubai's Smart city ambitions looks very promising; the challenge is implementing this blueprint successfully. All of us, as stakeholders have a role in ensuring that this is the case.

3. SMART SANTANDER: THE MEETING POINT BETWEEN IOFT AND THE CITIZENS

FRANCISCO MONTEJO

SENIOR VICE PRESIDENT DIGITAL SERVICES,
ETISALAT

Today's session discusses bringing smart cities to life. We're fortunate to be learning from a real life example 'Smart Santander', a city that has already taken big strides towards becoming a 'smart city'. Being a 'smart city' is all about improving the lives of citizens. A citizen is happier, for example, knowing that when needed, emergency services are able to respond to issues quickly, such as when ambulances are given priority at traffic lights.

In previous Dubai Smart City Forum sessions, we have discussed the core components of several different types of technology. Today, in this discussion, these components are going to come to life. Today's presentation aims to convey how government, – including the European Commission – industry, research and the academic world, citizens and entrepreneurs are working together to make this happen.

PROFESSOR LUIS MUÑOZ

PROFESSOR AT THE UNIVERSITY OF
CANTABRIA AND HEAD OF NETWORK
PLANNING AND MOBILE COMMUNICATIONS

Smart cities are now being viewed as a traditional meeting point between technology and a city's stakeholders, including its citizens. This presentation will look to lay out the components that are necessary to become a smart city.

Building Smart Cities

In order to build a smart city, we need to have a good concept of what it means. In this context, a smart city is a complex ecosystem characterized by the intensive use of information and communication technologies (ICTs), which aims to make cities more attractive, more sustainable and a unique place for innovation and entrepreneurship. Cities are evolving into unique environments that allow citizens, companies and strategic alliances between the public and the private sector to thrive.

It is important to be focused when conducting research in this area. The European Commission launched 'FIRE' (Future Internet Research and Experimentation) for this purpose. Its role is to both create and support experimental facilities for supporting research and innovation in Future Internet Studies. In addition to this, the European Commission launched the idea of creating 'Open Innovation Ecosystems' that went beyond simply utilizing technology. It aimed to be more holistic in its approach to transforming society.

Smart Santander

Santander is a good example of a city that has adopted this smart city approach. Situated on the north coast of Spain, Santander is the capital of the Region of Cantabria. It has about 180,000 permanent inhabitants spread over 33km². Its economy is based largely on the services sector. The local municipality is currently focusing its efforts towards driving the city's economy towards utilizing knowledge and innovation in new ways.

The Smart Santander project aimed to use Santander as a city wide experimental facility for research and experimentation on architectures, key enabling technologies, services and applications for the Internet of Things. To do so, the approach would be as follows: 1. Build an open platform for experimentation with IoT technologies and services in Smart Cities. 2. Provide a set of initial services for the benefit of citizens for basic platform sustainability. 3. Foster an ecosystem that encourages innovation and experiments with technology, services and business models. 4. Integrate successful IoT technologies and services

for citizens and transfer these technologies to other markets.

City Scale Deployment

In order for this project to be a success, it was important to look at how technology could be used to improve all aspects of a city's infrastructure, including the following areas: street parking management, traffic management, environmental monitoring, noise monitoring, park and garden irrigation, augmented reality and participatory sensing.

Holistic Management in Smart Cities

Having run this city wide project for four years, a plethora of information about IoT devices, applications and services were made available. This was made possible as a result of the considerable amount of data that was generated and subsequently accumulated. This, in turn, has allowed more urban services to be integrated into the city's infrastructure in the short and medium term. In order for this project to be sustainable in the long term, Santander needs to rely on an open platform that allows for the integration of new and legacy infrastructures.

IoT & Big Data Experimentation

Big Data will play a key role in building cities that are autonomic. Whilst it is fundamentally important, using big data alone is not enough. The main enabler for innovation and knowledge creation that would make use of big data is a city's 'brain'. This 'brain' is heavily reliant on adopting a holistic view to smart cities, one that includes transversal cooperation among services instead of the traditional silos that are commonly used. The city of the future has to be predictive and operate proactively rather than simply being reactive.

Big data should become just one of many tools that will enable smart cities to grow organically, thus encouraging citizens to actively participate in the design of services and technologies that will be adopted in the future.

Policy Recommendations

The following policy recommendations have been derived from the key themes discussed during the Fourth Dubai Smart Cities Forum. They serve to further inform entities in both the private and public sectors that wish to actively contribute towards Dubai's 'smart' city goals:

1. **Making Digital Infrastructure Development a Priority:** It is vital that time and financial resources are invested into adequately developing a city's digital infrastructure as it acts as a foundation upon which smart services can be produced.
2. **Further Collaboration Amongst Government Entities:** Government entities in Dubai have already adapted to collaborate with one another. However, greater levels of collaboration between government entities will allow for the production of more substantial smart services that can capitalize fully on multiple resources simultaneously.
3. **Greater Private Public Interaction:** The government would benefit from the significant technological resources and insights that private sector can provide towards developing the city's infrastructure.

Speaker Bios:

Ahmad Julfar Chief Executive Officer Etisalat

Ahmad Julfar is the CEO of Etisalat Group. Mr. Julfar was appointed in 2011, taking over responsibility for Etisalat Group's overall strategy and overseeing operations in all 19 of Etisalat Group's markets across the Middle East, Asia and Africa. He represents the Group at international forums and conferences growing Etisalat's reputation for leadership in innovation and quality.

Professor Luis Muñoz Head of the Network Planning and Mobile Communications at the University of Cantabria, Spain

Francisco Montejo joined Etisalat on January, 2015. He is responsible for the design, development, launch and management of Etisalat's Digital Services which includes Cloud & Datacenter, M2M, Digital Security, Smart Cities, Digital Commerce, Digital Health and Digital Education Vertical Propositions. Previously, Francisco was the Chief Operating Officer of Telefónica Soluciones, the largest ICT integrator in Spain.

Professor Raed Awamleh Dean, Mohammed bin Rashid School of Government

Professor Raed Awamleh is the Dean of Mohammad Bin Rashid School of Government. Prior to Joining MBRSG, he was Middlesex University's Dubai Campus Director and Pro Vice Chancellor. Professor Awamleh was also the Dean of Academic Affairs at the University of Wollongong in Dubai and a Professor in Management. Raed specializes in leadership and strategy and holds a PhD in Management from the University of Mississippi (USA), an MBA in Finance from Mercer University (USA), and a BBA from Yarmouk University (Jordan).

About DSCF

The Dubai Smart Cities forum brings together industry experts and organization leaders to share expertise, discuss challenges, and review best practices as part of joint efforts towards realizing the Dubai Smart City Initiative. The sessions are designed to update government officials and decision makers with the latest developments in smart city projects.

About MBRSG

The Mohammed Bin Rashid School of Government is committed to promoting good governance through enhancing the region's capacity for effective public policy.

The School uses a four-pronged approach, which includes applied research in public policy and management, academic programs in public policy and administration, executive education programs and knowledge forums for scholars and policy makers.

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