



Smart city makes accessing government services a delight, inspiring 90% public happiness in 2016

A citywide network of smart sensors integrated with analytics and real-time dashboards establishes the platform for Dubai's government to provide citizens, businesses, and visitors with a seamless experience across dozens of city services, making everything from finding parking to accessing healthcare easier, faster, and more satisfying.

Government for the people

Using technology and big data analytics, future cities can deliver services more efficiently, saving money, and creating happier citizens.

The reality today is that public sector organizations such as city government must be as responsive to their customers (citizens) as any business. A more responsive government leads to a more engaged citizenry and can help reduce problems that plague modern society, including poverty, disenfranchisement, and even crime.

However, to become engaged with their government, citizens expect a customer-driven experience when interacting with city services. They expect those services to be accessible and integrated with one-stop portals instead of going through multiple tedious steps for every request. Moreover, the sheer amount of data generated by citizens on a daily basis requires sophisticated tracking and data analytics systems to manage that data and leverage it to return value back to the public.

One way cities can address these demands is by becoming smarter. This is the future of cities, where departments and services, external communications systems, and even the Internet of Things (IoT) are integrated to provide a more satisfying experience for citizens, businesses, and visitors.

By building a future city today, governments can substantially improve quality of life. Using smart technology and analytics, a city can create new services tailored to what the people want and need—like an app to find convenient parking, a portal for vital medical services, intelligent traffic management to help drivers avoid congestion, and much more.

A future city also has monitoring and measurement systems to gauge public satisfaction with its services. Sensors placed throughout the city and integrated with feedback mechanisms allow city officials to gain insights into which systems are working well, which are not, and how the city can evolve to better serve its citizenry.

All of this comes back in the form of a happier, healthier, and safer population that can contribute more robustly to the economy and society as a whole.

2.5B

gigabytes new data created every day

292

exabytes mobile data traffic in two years

“If public sectors flip their point of view from being inside out, and focus instead on what citizens want, that’s when you begin to see services offered across agencies.”

Suparno Banerjee, Global Leader of HPE for Future Cities Initiative

The happiest city on earth

Dubai is the most populous city in the United Arab Emirates (UAE), with nearly 4 million residents living within 1,600 square miles.

Dubai is known for luxury shopping, ultramodern architecture, and a lively nightlife scene. For more than a decade, the city has been working toward the vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Ruler of Dubai, to deliver impactful smart services for the Government of Dubai. Two years ago His Highness raised the bar to improve services even more and make Dubai the happiest city on earth.

To achieve this vision, Dubai is modernizing government services to create a “future city” like no other. While most future city projects focus on a particular area of infrastructure, such as energy distribution and metering, the visionary Smart Dubai initiative places people’s happiness, not technology, at the core of its strategy. The end goal: to improve quality of life, drive economic growth, and create sustainable communities for the people who live in and visit the city every day.

4M

residents

1,000

e-services

1st

on the Mercer Quality of Living Survey for Middle East and Africa

“Our aim is not to have the most data, but to unleash the greatest value from data, creating new opportunities and improved experiences for all.”

His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai



An aerial photograph of Dubai, showing the city's skyline with numerous skyscrapers in the background, a large body of water in the middle ground, and a sandy beach with some buildings in the foreground. The sky is clear and blue.

26+

government departments

200

smart initiatives

Citizens expect a unified city experience

Dozens of government organizations must be unified to provide citizens with a consistent and satisfying city experience.

Like most city governments, Dubai is comprised of numerous departments and services, each representing a point of interaction—and determinant of happiness—for its citizens. Dubai's challenge was to unify dozens of city organizations to provide citizens with a consistent and satisfying experience regardless of the city service with which they engage.

Following a detailed assessment of its current state, the City of Dubai identified six strategic dimensions of city life that needed to be unified and enabled with citizen-centric services. These dimensions include Smart Living, Smart Economy, Smart Governance, Smart Mobility, Smart Environment, and Smart People. The key to positively impacting all six dimensions is coupling data with automation and citywide connectivity to drive efficiency, gain real-time intelligence, deliver smart service apps, and centralize monitoring and management of public happiness.

“We are trying to create more efficient city government that provides a seamless experience for our citizens. To be truly impactful, our Smart Dubai initiative must be all-inclusive and span all the different dimensions of the city.”

Wesam Lootah, CEO of Smart Dubai Government, City of Dubai

Unlocking data to benefit all

Legacy infrastructure was siloed across multiple departments and was simply not designed to support the kind of big data analytics needed for Smart Dubai.

Data is the fuel of Dubai's future city transformation. Putting data to work toward improving the city's happiness quotient required efficiently sharing data across government entities, and even opening it up to the public.

However, Dubai's existing technology infrastructure couldn't support the data demands of the Smart Dubai initiative. Legacy systems were siloed within individual city departments. Moreover, they were not designed for the type of big data analytics and dynamic application development required by a future city.

du Telecom, a leading telecommunications provider in the UAE, was selected as the Strategic Partner of Smart Dubai Office for the development and implementation of the Smart Dubai Platform. du needed a System Integrator to develop the platform the City of Dubai needed to unlock the true value of data. By opening up access to data of all types from many sources, Dubai's Future City would create efficient sharing across city departments and services. The city also needed orchestration and analytics technologies to enable greater innovation and insight, advancing beyond simply generating data for isolated processes to intelligently harvesting data to develop smart, innovative applications that directly benefit Dubai citizens.

“Technology by itself does not create happiness—it is a means to an end. When technology is applied in innovative and creative ways, it can be used to build solutions that connect people, improve efficiency, build wealth, and create jobs. These are the things that will lead to greater happiness of our citizens.”

Wesam Lootah, CEO of Smart Dubai Government, City of Dubai

25

petabytes of data

345

smart services



Tools to spread happiness city-wide

Leading UAE telecommunications provider du Telecom selected its partner HPE to provide the expertise and big data technologies that form the foundation of the Smart Dubai Platform for building future city applications and services.

In a public-private partnership between the City of Dubai and du Telecom, HPE is the systems integrator for an all-new Smart Dubai Platform. As a trusted advisor, HPE Pointnext was charged with designing and implementing the Smart Dubai Platform using the technology selected by the city. Following a series of technical workshops, Dubai was convinced that HPE technology would best meet the city's needs.

HPE Pointnext defined a data lake as the foundation for the Smart Dubai Platform, comprised of HPE servers, storage, data protection, as well as partner solutions, all integrated with Dubai's citywide network. The data lake ingests big data from existing departmental systems, sensor data, and open data from the Internet and other sources, as well as private enterprise and personal data. The Smart Dubai Platform also uses Hortonworks Hadoop for big data analytics and application development using a wide variety of software from vendors such as MicroStrategy, Informatica, and others. Through application programming interfaces (APIs), the Smart Dubai Platform will enable virtually any government entity, private enterprise, or individual to create innovative, data-driven applications and dashboards to enhance city life.

Post implementation, HPE Pointnext will also provide ongoing operational support.

SOLUTION RECIPE

Working with strategic partner du Telecom, the City of Dubai implemented the Smart Dubai Platform built on HPE big data technologies, Hortonworks Hadoop, and analytics applications such as MicroStrategy and Informatica. The platform is the digital backbone for the future city services delivered to citizens and businesses across the city.

HPE Hardware

HPE Apollo Servers

HPE ConvergedSystem 700

HPE ProLiant BL

HPE 3PAR StoreServ Storage

HPE StoreOnce

HPE Software

HPE Helion Stackato

HPE Helion OpenStack

HPE Pointnext

Datacenter Platform Modernization

Cloud First Networking

Storage Transformation and Data Migration Solutions

CloudSystem Services

HPE Partners

du Telecom

Hortonworks Data Platform

VMware

MicroStrategy

Informatica

Transformation Solutions

Enterprise Hybrid Cloud

Infrastructure Virtualization & Consolidation

Enterprise-grade Hadoop

“What we liked about working with HPE is that they came in with a comprehensive proposal. HPE went beyond being only the system integrator, to also provide the services and technologies, whether it is servers, storage, or software.”

Wesam Lootah, CEO of Smart Dubai Government, City of Dubai

Smart services make for happy citizens

Dubai is leveraging data to create delightful experiences for its businesses, residents, and visitors.

Dubai is rolling out multiple projects to enable Smart Dubai services across the city. First is the Dubai Pulse portal, enabling end users to securely consume data for building dashboards and smart applications.

Government entities and individuals will be able to create their own dynamic and personalized dashboards through the Dubai Pulse portal. For example, government managers could gain real-time views of social media sentiment about particular services to gauge happiness and make necessary adjustments.

Future city applications developed through the Dubai Pulse portal could help consumers find the closest parking place to their favorite store at the mall or get road closure alerts to avoid unpleasant traffic delays.

Dubai has also launched the first-ever Smart Dubai Happiness Meter, which gauges delightful experiences across the entire city.

Due to enhanced government efficiency with its future city initiatives to date, the city is saving an average of AED 358 million per year, with even greater social and economic opportunities expected from the new Smart Dubai Platform.

“Our advice for other cities looking to the future is to put the citizens at the center of their transformation and embrace private-public partnership. By collaborating with our partners from the beginning, we could make sure that everybody was aligned around our shared vision and that we were executing the initiative together.”

Wesam Lootah, CEO of Smart Dubai Government, City of Dubai



Smart Dubai inspires a whole region

From hosting Expo 2020 to equipping police with Google Glass technology, today's future city investments are leading to tomorrow's safe and happy citizens.

Under the Dubai Plan 2021, the future city strategy includes over 100 initiatives and a plan to transform 1,000 government services into smart services, mostly based on data. Dubai, together with neighboring city Abu Dhabi, is also deploying over 5,000 WiFi hotspots to offer free internet for the public.

With the city in preparations to host Expo 2020 through 2021, Dubai is also investing heavily on smart transportation systems by deploying traffic sensors, launching mobile traffic apps, and also looking at introducing driverless vehicles in the city's ecosystem.

The Dubai Plan 2021 covers all other areas of a future city, including healthcare, commerce, education, safety, telecommunications, tourism, and utilities, where 250,000 smart meters are set to be deployed by 2018.

In the area of public safety, one of the city's plans is to introduce Google Glass technology to the police to create the world's smartest police stations, also by 2018.

Inspired by initiatives such as Smart Dubai, other major city authorities in the region are expected to accelerate their plans to develop technologically advanced, economically sustainable, and citizen-centric cities. Through partnership and collaboration, these city authorities will leverage the vast array of expertise and technologies available in the region to engage with citizens and create a more positive and productive city life for everyone.

“Today if somebody moves into a new city, or opens up a business, they don’t think about generating their own electricity. They think of it as a utility to just plug their equipment into and consume. This is what we are doing for big data with the Smart Dubai Platform.”

Wesam Lootah, CEO of Smart Dubai Government, City of Dubai

\$8B

investment in future city initiatives

1,000

smart government services

250K

smart meters by 2018

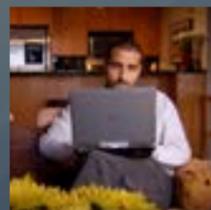
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