



‘Smartcities, Big Data, Cloud & IoT’

By Nicholas Jeffery, Director of Data Centre Solutions Group, CBRE

The “smart city” might sound like an idea from the future, but that future is now, in fact, many key capabilities already exist today. Remote building environmental controls, traffic mapping apps, automated parking systems – a wide range of smart technologies are up and running in municipalities around the world.



Technological hurdles remain, of course, but one of the main challenges of smart city development is not so much the creation of new technology, but the better implementation and integration of those currently in use. It’s a matter of connecting the individual silos that already exist, using the example of my morning commute into work to illustrate the challenge.

For my drive into London, I might use a smartphone app like Waze, a community-based traffic and navigation system that plots the most efficient route based on real-time traffic data generated by its users. Then, upon entering central London, I’ll pay the city’s congestion charge and then make way to my office where I’ll search for a parking space. With better integration, however, my smartphone app might move from picking the best route to then helping me find parking once I neared my office.

The application could tell me “Nicholas, the best car parking space that has space left is not the one you usually go to, please allow me to direct you to another one”. And when I get to that space, it is already reserved for me, and when I drive in the camera recognizes my car and it tags me as arriving at 9:15 in the morning, when I leave it tags me on the way out and bills me.

Additionally, the congestion charge system might not only assess the charge but also gather information on where and when I entered the zone and at what point and when I left it, allowing city traffic flow managers to better understand the migration of traffic through the capital.

Central to all this is the ability to handle, coordinate, and analyse the vast quantities of data a well-integrated smart city would generate.

People are expecting devices like autonomous vehicles and their refrigerators and home security systems and mobile devices to all be connected. And that means connecting and processing the vast amounts of data these devices produce in meaningful ways that lead to meaningful improvements in quality of life.

My team at CBRE sees data centre as being the beating heart of a smart city. Because without a robust and reliant data centre (regardless if it is in the cloud or not), you can't collect, analyse, store and archive all of the data you are gathering from a smart city or the IOT devices. I see it like the Vitruvian man where the brain is the IOT device making all the intelligent decisions, the veins are the wireless and wireline access lines pumping data around the city to the extremities like the fingers and toes. As we know the network has to be strong otherwise the city/body will experience poor circulation / packet loss to the remote buildings such as utilities and remote offices.

My colleagues and I have begun presenting this notion of "data centres as being a big part of a smart city" to leaders of municipalities around the world and have received an enormous response.

Additionally, CBRE has gathered into one group resources addressing the full range of smart city needs, ranging from smart building technologies to labour force analytics. The company is also building strategic alliances with firms that have needed know-how in other areas key to smart city development, like mass transit, for instance.

And while it might at first seem curious that a real estate firm would take such a central role in smart city development—as opposed to, for instance, a Silicon Valley tech stalwart—it makes sense once you consider the fact that much of the data essential to a smart city's operations is generated in real estate.

From smart parking to transportation to green and automated office space to the locations of the municipal data centres themselves, real estate is central to the very notion of a smart city.

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