

The Rise Of Mega Cities And Data's Work – Did The Budget Get It Right?

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Macrae, March
20, 2015,
11:40 am



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Sean Jackson, CMO at EXASOL, an analytic database management software company, believes the UK Government is finally getting something spot on

According to this year's **Budget**, "smart city technology could prove transformative". When you consider this statement in the context of the United Nations estimates that by 2050 some two-thirds of the world's population will be living in cities, twice that of 1950, the **budget** put it lightly.

With increasing urbanisation, new and somewhat daunting challenges are faced by local governments and civic administrations, as well as the private sector, as they aim to respond to the needs of their citizens and improve the quality of life in such large urban areas. They are all too aware of the fact that as populations increase and as more people migrate to built-up areas, so the challenge for local services becomes more prevalent. Schools, hospitals, roads, power, utilities, interconnectivity, waste, the list of things that an increase in population puts more stress on is endless.

So what does this have to do with data? Much continues to be made of the **big data phenomenon**, but it's not about big data or the internet of things or whatever other jargon we're hearing. It is about driving outcomes that mean something. So let's talk about the big data phenomenon in a different way.



Consider the ability for us all to lead much better lives in the towns and cities where we live. Data can radically change both where we live and how we live – today. Data can shape our towns and cities and turn them into so-called smart cities, places that are interconnected

digitally and where data is being emitted at such mind-blowing rates that local authorities can make use of it in order to improve the quality of life and better serve its citizens.

Data is only one part of the equation

But the data is only one half of the equation. Faced with this deluge of data in a wide variety of forms and formats, civic authorities and town planning organisations know that every chance of improving the quality of life must begin by harnessing the data available, analysing it and taking data-driven actions as a result. And it is simply staggering just how much data our towns and cities are generating.



The other half is the ability to harness the information and data, analyse it and turn it all into meaning quickly that can be actioned and will actually help those in power trying to help improve life in our urban landscape. Responding to the challenges and improving people's lives, towns and cities will require

local planning teams and administration bodies to think differently, and more emphasis will be placed on the consumption and analysis of large data volumes generated by day-to-day life. Indeed, 90 percent of the world's data was generated in the last two years alone.

How is it being used in the here and now

Good examples include in the area of refuse collection and recycling. Here, sensors in residents' waste bins can tell the local council when and where the most volume is coming from, whose bin is ready to be emptied and which residents need to pay more as they have more waste. GPS sensors in dustcarts can be used to see where and when they can be deployed the most efficiently. What route would be best to take in order to collect the rubbish in the most cost-effective way? The data is there in terms of sensors and vehicle tracking devices. At MIT's Senseable City Lab, 5,000 pieces of rubbish in Seattle were geo-tagged and tracked around the country for three months to find out whether recycling was really efficient.

Another example is in the area of healthcare where local hospitals, care bodies and doctors surgeries can employ digital solutions to administer patients more efficiently. Data can be pulled from many sources to find out where and when the best healthcare can be administered. Is it at home, at the doctors' surgery or in hospital? Again, the data is there when we log in at the surgery or when the nurse



scans your barcode on your patient care record. Another example is in the US. The Hedometer project which analysed social media for key words and drew correlations between people's location found that in areas with an obesity problem, the words 'starving' and 'heartburn' were tweeted much more. This creates important policy insights.

Another example can be seen in mobility. As more people move about, so the pressures on our transport systems become more apparent. By studying how and where people travel, councils can ensure the right vehicles and the right services are offered at the right time. Models can be built to determine which roads need to be maintained the most often, which commuting corridors needs to be supported most, which public transport routes should be offered. The data's all there in traffic flow systems, when we swipe our Oyster cards or when we use our credit cards to jump on a Boris bike.

It's just the tip of the iceberg

Urbanisation and how big data can help improve our lives is just one example of where data can really be put to good use. Clearly, there are many other cases, too, but in the area of smart cities and improving people's lives, where we are today with data and information is akin to being at the tip of the iceberg.

It's definitely an exciting time. And while others continue to talk about big data on its own and spout hackneyed phrases centred around the 3 Vs, I would much prefer to answer the "so what?" question and explain real-life examples of how big data is helping to improve lives.