COMMERCIAL REPORT: CGI

Smarter ways to view emerging technologies

By Chris George

The pressures facing our cities are significant. As someone who has worked closely with government departments and local authorities, I have recognised that while there are significant challenges that require innovative thinking, these can be managed – and the use of technology is key to the future of our cities.

As well as growing populations, urban infrastructure is beginning to creak, not only with increased usage, but also under the weight of growing expectations. Technology has become such a vital part of our everyday lives, that if it doesn't deliver immediate solutions, it has a far-reaching impact.

Having worked alongside the Public Sector for almost 20 years, I have seen how our cities are facing these formidable challenges.

I have also seen how it is absolutely no-good in trying to play catch up. These are problems that need to be addressed proactively, looking forward to the future needs of our cities. Of course innovation is a massive part of achieving that, but what I have recognised is the crucial aspect of connecting cities.

This means not only open information, but sharing of resources and engaging those who work and live in our cities to have stronger participation in the process.

It also takes strong and visionary leadership to identify the problems that need to be addressed now to ensure our future cities are places that can serve the needs of all sectors of the population, particularly an ageing one, with emphasis not only on the economic prosperity, with job creation and retention being crucial, but also the health of our populations and the prospect of closing inequality gaps.

This can, of course, place huge strain on public sector budgets, but future cities will need to face their increased populations with an even greater focus on reducing consumption, emissions and waste. It's clear that electricity will be the dominant power source for transport and be distributed via intelligent grids, with integrated storage that will allow extensive renewable generation and real-time balancing of supply and demand.

I have also seen how connectivity between all our devices and machines has been growing at a rapid rate. This is becoming seen as 'the Internet of Things' in which devices, systems and services will become interconnected and provide ever-smarter connectivity. The Internet of Things (IoT) includes examples such as wearable devices and driverless cars and Gartner predicts that nearly 26 billion devices will be on the Internet of Things by 2020.

Looking to how our cities will function, it's clear to see how the Internet of Things will be the driving force behind managing the smart city infrastructure, transport, emergency services and helping the elderly, as well as optimising energy, building and general resource use.

> The Internet of Things will see devices, systems and services becoming interconnected and smarter

The Smart Metering initiative will allow customers to make informed decisions about their bills

The Smart Metering initiative, in which the Department of Energy and Climate Change (DECC) aims to have a smart meter installed in every British household and small business by 2020, will connect to the Smart Energy Grid. This programme, which CGI is helping to implement, will empower consumers to take control of their energy bills by making decisions about how much and, more importantly, when they consume energy.

If I can provide a further, practical example of one issue that has been tackled in Scotland, CGI runs the smart ticketing infrastructure for the concessionary travel scheme. We worked together with Transport Scotland to implement one of the largest Integrated Transport Smartcard Organisation (ITSO) ticketing schemes in the world.

Making public transport a more attractive option will be a vital part of cities of the future and already this system facilitates in the region of 12 million journeys every month. By 2050, just 35 years away, 70 per cent of the world's population will live in cities, according to the World Health Organisation. That's something we cannot halt, but I'm confident that the current forward thinking is already starting to tackle the potential issues.

Chris George is CGI's vice president with responsibility for the Scottish Public Sector. His focus is on helping the Scottish Public Sector to reform its public services and move towards Scotland's Digital Future. Chris joined CGI in 1995 and has held various roles focused on government and public sector.

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