Developing the Smart City: Lessons from Milton Keynes

Reflections on an Open University in Wales seminar involving

Sarah Goncalves (Milton Keynes Council) and Enrico Motta (Open University)

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The 'Smart City' is the new zeitgeist amongst urban policymakers but what exactly is a 'smart city', and what are the benefits that it brings? Milton Keynes is one city in the UK that has developed the concept more than most and they recently brought the benefit of their experience to Cardiff. What did we learn?

Firstly, some context. Milton Keynes, one of the UK's new towns of the 1960s, is experiencing rapid growth and targeting continued expansion. With this growth come environmental challenges, traffic management issues, and emerging issues of an ageing population and increasing incidence of poor health. In this respect there are parallels with prospective trends for Cardiff and the wider metropolitan area, although – as the speakers recognised – the water scarcity experienced by Milton Keynes may be less of an issue in Cardiff! The challenge for Milton Keynes is to ensure that its ongoing growth is sustainable over the longer-term. It is here that the benefits of the MK:Smart initiative are hoped to be realised.

Financed by England's Higher Education Funding Council (HEFCE) alongside private and public sector partners, MK:Smart is an £18m initiative aimed at developing a range of 'smart city' demonstration projects testing and applying new technologies. Led by the Open University (based in Milton Keynes) and Milton Keynes Council, it both develops and applies expertise drawn from researchers, public authorities and firms. In this respect it acts as a 'living laboratory' for new applications. It also serves to raise the profile of Milton Keynes and so acts to attract new opportunities, such as involvement in Catapult Centres financed by Innovate UK. Four Catapults are currently active in Milton Keynes (Future Cities; Digital; Satellite Applications, and Transport). In contrast, Wales has only recently benefited from investment in its first Catapult Centre (for Compound Semiconductors).

For Milton Keynes Council, the aim of MK:Smart is to contribute to the Council's objectives of addressing barriers to sustainable housing and jobs growth, and improving the lives of its citizens, and to build leadership in urban governance. For the firms it is to test and demonstrate viable smart technologies, and for the Universities it is to further develop their own research capabilities. In doing so, MK:Smart focuses on six key themes:

- Mobility
- Smart houses
- Waste
- Internet of Things (sensor technologies)
- Grid and energy applications
- Satellite applications

However, this is not just about developing technological solutions to particular problems. The aim of MK:Smart is to create an integrated innovation and support programme which leverages large-scale city data to drive economic growth. At the heart of this is a data hub, which aims to collate up to 5,000 datasets, including real-time sensor data and privately-held datasets, and make these available on an open-source basis to public authorities, researchers and firms. It is the linkage of these datasets where much of the real value of the smart cities initiative will lie. As Enrico Motta highlighted, the data-centred city enables more informed decisions to be taken (by the public sector, firms and residents). The biggest challenge for a smart city is opening up (and protecting) access to data, and so much consideration is given to protocols, permissions and prohibitions.

Whilst MK:Smart is able to demonstrate many positive applications of smart-city technologies, such as improved management of parking and more efficient waste collection practices, it is proving hard to move beyond the demonstration scale. One reason for this could be a reluctance to change traditional service models and approaches, particularly in the delivery of Council services, such as adult social care. However, austerity budgets are beginning to change mindsets and the availability of open-source data is beginning to lead to the establishment of small companies seeking to find new economic applications. Over time it is possible that these innovative firms will begin to identify the new business applications that will enable the Internet of Things to contribute to sustainable business models, both for the private and the public sector.

The lessons for Cardiff are clear. There is an opportunity to use new technology to improve services and city management, but much of the benefit lies in the data being generated. To realise the value of this requires a powerful datahub, with dedicated management. The data-centred city may then enable improved urban management, the development of new applications and services, the creation of new economic opportunities, and, crucially, the stronger engagement of local residents. To reap these rewards requires a willingness to develop new approaches within public authorities and a commitment to opening up access to data. Fortunately, MK:Smart has undertaken much of the leg work in developing the protocols for open-data collection and is willing to share this experience.

The lasting lesson to be taken from the seminar came from Sarah Goncalves who stressed that a Smart City is not about the technology. Rather the Smart City is about "knowing where you want to go and how to use technology to achieve that".

Event Details

The seminar "Smart City, Bright Future – Bringing the Smart City Approach to Wales" was organised by the Open University in Wales. Held in the Life Sciences Hub, Cardiff, the seminar was addressed by Sarah Goncalves, Head of Policy and Performance at Milton Keynes Council, and Prof. Enrico Motta, Director of MK: Smart at the Open University. The seminar was introduced by Rob Humphreys, Director of the Open University in Wales. For further information on MK: Smart please see: http://www.mksmart.org/