Towards Smart(er)Cities

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Introduction

• A recent paper by Holland (2008) asked the real smart city to stand up and for cities to stop relying on the self-congratulatory nature of their claims to be smart.

• This presentation reflects on these critical insights and goes on to look at the smart card legacy of cities by focusing attention on the social capital of networked communities.
Smart Cities

- According to Holland (2008):
  - cities often claim to be smart, but without defining what this means
  - the all too "self-congratulatory" tone they strike in making such claims in not enough
  - this is because images of the digital city, intelligent city, high-tech districts and neighbourhoods, all fail to convey what it means to be smart and why it is important for cities to be defined in such terms.
• Holland (2008) asks this question because:
  – cities all over the world are beginning to brand themselves smart. Such smart city forerunners like: San Diego, San Francisco, Ottawa, Brisbane, Amsterdam, Kyoto and Bangalore, are all now setting a trend for others to follow.
  – Other cities keen to follow in their wake and become smart are: Southampton, Manchester, Newcastle, Edinburgh, Edmonton and Vancouver.

• It appears the rush to become a smart city has begun to gather apace and as a consequence, pressure is now growing for cities to become even smarter
Smart(er)Cities

• Holland (2008) suggests if cities are to become smart(er), they should not base their claims on a marketing campaign designed to rebrand themselves, but on an understanding of ‘intelligent cities’ and knowledge of how such developments can help them become smart(er).

• For according to Komninos’ (2002), account of intelligent cities, becoming smart(er) means:
• applying a wide range of electronic and digital technologies to communities and cities
• using ICTs to transform life and work within a region
• embedding such ICTs in the city
• the territorialisation of such practices in a way that bring ICTs and people together, so as to enhance the innovation, learning, knowledge and creative approach to problem solving which they offer.

Komninos (2002)
This is seen as paving the way for the definition of intelligent cities which are smart(er) in that they:

“…are territories with a high capacity for learning and innovation, which is built-in to the creativity of their population, their institutions of knowledge creation and their digital infrastructure for communication”. … [and are concerned] with people and the human capital side of the equation, rather than blindly believing that IT itself can automatically transform and improve cities.”

Holland (2008: 306)
This definition of smart(er) cities and their constituency is seen as being of particular value because it:

“creates a real shift in the balance of power between the use of information technology by business, government, communities and ordinary people who live in cities”

Holland (2008:316)
• Holland’s (2008) representation of smart(er) cities is valuable for defining what is meant by the term and constituency it serves.

• However, as with all such accounts, it is less than comprehensive and tends to overlook much of the smart city legacy of particular relevance to this project. These being:
  – The development of smart cards in Southampton as the “first smart city”
  – The emergence of “smart(er) communities” in the UK and across Europe
Smart cards

• Southampton is the city which first attempted to develop a portal capable of supporting smart card applications.

• This e-government initiative, promoted under the triple-helix model of the University, City and their ICT consultants, develops a smart card customising access to a variety of services distributed across the public and independent sectors.

• It is also supported by the transactional-based logic of multi-application management architectures and business model allowing applications to be added to and removed from the card dynamically by the user.
Smart(er) communities

• It is the ability which this portal has to deal with multiple transactions simultaneously and as a ‘bundles of services’ in real time, that has attracted so much attention from those seeking to further such developments.

• This has meant shifting attention away from the e-commerce challenges of the enterprise architecture and transaction-based business logic underlying such e-Gov service development and towards the ‘social capital of networked communities’.
myEdinburgh.org

Figure 1 The eGov services of myEdinburgh’s Information Portal and Community Grid
• Figure 2 sets out the R&TD which the IntelCities project has carried out to integrate myEdinburgh’s portal and community grid for learning (CGfL)
• As the illustration shows, the portal and CGfL have been augmented and turned into e-learning platforms, supported by knowledge management systems and digital libraries for developing ICT-enabled networks
• ICT-enabled networks with the innovative and creative partnerships needed to develop the social capital required for cities to be smart(er) in engaging citizens and empowering communities as key constituents of digitally-inclusive regeneration programmes.
Making the city smart(er)

1990s
Information via cities’ websites

2000s
City portals for online information services

2004/5
INTELCITIES
Online web-based eLearning system integrated & inter-operable with other cities’ platforms

2005+
SMART CITIES
Having an e-learning platform, knowledge management & library with the org-ware communities needed to support digitally inclusive regeneration projects across Europe – meeting advanced visualization, simulation and benchmarking requirements

Static and limited online information on administration, policy, strategic planning and land use

Dynamic & interactive services allowing online service transaction related to transport, land use, planning, housing, taxation etc

Knowledge transfer & capacity building via:
- Networked communities
- Virtual organizations
- Managed learning environments
- Learning partnerships
Developing platforms for online citizen engagement

High level programmes with the intelligence needed to be smart in meeting the networking, innovation and creativity requirements of successful partnerships and the ability of digitally inclusive regeneration programmes to develop the social capital underlying the modernisation of urban villages and their neighbourhoods as sustainable communities.

Smart card legacy

Development of social capital

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Figure 2: The Development of Digitally-Inclusive Regeneration Programmes
Lessons learnt

• We must be circumspect as to the claims cities make to be smart
• Any realistic understanding of what it means to be smart, should be based on an understanding of ‘intelligent cities’ and knowledge of how such developments can help them become smart(er)
• Armed with such a knowledge, smart cities ought to focus on the humans capital side of the equation and:
  “create a real shift in the balance of power between the use of information technology by business, government, communities and ordinary people who live in cities”
• The development of smart cards in Southampton as the “first smart city” and social capital underlying the emergence of “smart(er) communities” in the UK and across Europe, provide excellent examples of how to do this.