

## Chapter 4.12

# Urban Competitiveness, U–City Strategies and the Development of Technological Niches in Songdo, South Korea

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### ABSTRACT

*This chapter is concerned with the recursive conflation between the concept of city competitiveness in ICT and different versions of the “knowledge city” concept based on ICT and digitalization, often responsible for ambiguous political discourses and unclear local economic development strategies. To overcome this problem, the chapter distinguishes both concepts, identifies links between them and illustrates a way through which national and local policies can support ICT-related city competitiveness and knowledge city strategies: the development of innovation arenas. The chapter illustrates these notions with the case of the on-going development of the Songdo district in Incheon (South Korea), its competences in ubiquitous computing and the connection between this technological prowess with the ambitions of creating one of the first and most advanced “u-cities” in the world.*

### INTRODUCTION

Cities need to be competitive, it seems. The idea that cities are competing with each other to attract and retain a number of functions and “customers” – e.g. talent, inhabitants, companies, investments,

visitors (van den Berg & Braun, 1999; Malecki, 2007) – has been gaining ground in urban practice and planning. Indeed, fueled by a rampant number of academic literatures and policy documents, during the last decade-and-a-half the notion(s) of *competitiveness* steadily entered the policy jargon

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and the agendas of many urban policymakers worldwide (Begg, 1999; Bristow, 2005).

There have been several types of celebrated, and sometimes conflated, policy initiatives to play the “territorial competitiveness game”: the support of Porter’s clusters (Porter, 1990, 2000), the steering of innovation systems (Cooke, 2001), the promotion of creative cities (Laudry, 2000; Florida, 2002), the engineering of intelligent cities (Komninos, 2002) and knowledge-based urban development (Yigitancalar et al., 2008), and so on. This phenomenon has been intimately linked with considerable fuss around the development of several urban and regional plans and strategies in which knowledge, innovation and creativity became unavoidable buzzwords. Unfortunately, the meaning of these concepts is far from stable and shared between different scholars, policy makers and stakeholders. Suffering from this conceptual conflation, lack of shared meaning and the intrinsic elusiveness of some of those concepts (Kitson et al., 2004), evidence so far shows disappointing results of territorial competitiveness and innovation strategies.

This chapter focuses in one of those arenas of conceptual and policy conflation: the role and relevance of Information and Communication Technologies (ICT) fostering urban competitiveness. The rationale here is to show that recent ICT breakthroughs – namely the contemporary developments in ubiquitous computing technologies (Weiser, 1991; Jeon et al., 2007) – can play a significant role in urban competitiveness, but this may happen through different mechanisms, which are related, but should be disentangled if we are to better inform policy making. To do so, the chapter distinguishes between the notion of *city competitiveness in ICT*, focused on the development of internationally competitive and territorially anchored clusters of economic activities, and *city competitiveness through the use of ICT*, concerned with the use of ICT in cities as a tool to foster e.g. efficient urban services, facilitate

the integration of urban functions, social inclusion and participative democracy.

After making this conceptual frame clear, the chapter explores these two dimensions through the case of the pioneer (*u*)*biquitous-city strategy* and sensor technology development taking place in the new Songdo district (hereafter Songdo) in the Korean city of Incheon, 30 Km away from Seoul. Songdo anchors several national and local policy initiatives towards the development of an international cutting-edge sensor and u-technology cluster, and hosts unique knowledge-supportive services, as well as many national and foreign companies. Simultaneously, the on-going spatial planning and infrastructure development prospects in the area are directed to provide fertile ground for the experimentation of futuristic u-city concepts and services in homes and public space, targeting demanding city users (e.g. expatriate workers). Korean government envisages a network of u-cities throughout the country, and, simultaneously, to endow national firms with first-mover competitive advantages.

The chapter proceeds by arguing that these two dimensions both relate with the district and the city’s competitiveness prospects, though in different ways. Borrowing and introducing the notion of *technological niche management* from social studies of innovation (Hoogma et al., 2002; Truffer et al., 2002), the chapter argues that these two dimensions may come virtuously together in Songdo, namely as the district plays the role of an “innovation laboratory” for exploring, testing and early exploiting u-technologies and its applications, while supporting its embeddedness in daily city life. It argues that the distinctive role of Songdo concerning the link ICT-competitiveness unfolds by providing ground for nurturing these two dimensions separately, but also by fostering the permanent interaction between the technological development of u-solutions (inside companies and R&D centers) and its real-life city applications toward an attractive, efficient and livable city. The

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