

Chapter 25

Cities for New Growth and Socio–Economic Dynamism?

The Case of Smart Cities and RDI–Driven Participative Democracy and Governance

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ABSTRACT

The article argues for a strategic role for cities and regions in renewing the social and economic foundations of societies, locally and globally. The cities offer an opportunity to develop - through their own strategic RDI - new human-centric social and economic dynamism for the wellbeing of human beings and the Nature. The article elaborates on sources of growth, value and wealth creation that are based on strategic RDI of cities and city-regions with firms, public agencies and citizens. This RDI may bring about new social and economic activities and means of solving major societal challenges. The article discusses (1) how to design for transformative RDI, (2) what are the forms of participative RDI and their impact on participative democracy, (3) what are the new mechanisms of governance that reflect the central role of cities in societal renewal, and (4) what is the impact of cities on overall entrepreneurial spirit, economic efficiency, and wealth creation?

INTRODUCTION

The Evolution of Smart Cities and Participative RDI

Around 2005, companies such as Cisco (with their Connected Urban Development Program) and IBM started to work with the issue: how to transform our cities with the help of modern technologies? The work was earlier initiated and partly funded by President Clinton's administration. With big industries withdrawing from cities like Detroit and Chicago and leaving people without work in deteriorating city centers and housing areas, there were many cities in crisis, struggling also with social, economic and

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environmental problems such as slums, poverty, lack of clean air or water and immigration (Glaeser, 2011). There was a clear need to reconsider the future of cities and their capacity to meet their social, environmental and economic obligations. Around 2008, IBM launched the concepts of Smart City and Smart Planet. These concepts were an outcome of wide-ranged research work and dialogue with external and internal experts about future societal challenges for mankind and how information and communication technology (ICT) may help to bring about a better future. However, at the beginning, IBM mostly concentrated on analytic algorithms and data processing technologies to make sense of the oceans of data collected on a daily basis (Zaman 2015). Over time, the key principles that define a Smart City developed as follows: information technology enables transparent administration and governance, an opportunity for efficient management of utilities such as energy, water, solid waste and effluents through use of renewables, conservation and recycling, an opportunity for creative use of public-private partnerships, and use of technology for safety and security, including networks of video cameras, intelligent patrolling and surveillance and rapid response to emergency calls. The concept also emphasizes the financial sustainability of cities and adequate social infrastructure and a transit-oriented green environment with high design focus on a minimal carbon footprint (Zaman 2015). Since then, Smart Cities have evolved into European and global collaborative networks for RDI that apply digital technologies for transforming cities to become better places to live. They have been also called Digital Cities or Cognitive Cities (Zaman 2015), reflecting either their role in bringing about digital solutions for local use and global leverage through collaboration, or their consequent impacts on cognitive cultures, education, arts, social structures and processes in order to facilitate and enrich the life in cities.

Open innovation¹ as a phenomenon developed in parallel with the spreading of internet and mobile technologies. New open and collaborative means of RDI with firms, academia, public agencies, social networks and people emerged. At the beginning, this new opening referred to R&D processes between firms; i.e. collaborative business-to-business or lead customer processes of R&D for new products, technologies and services (Chesbrough, 2003; von Hippel, 2005). Later, it also included gathering of direct feedback from markets, customers and users on the usability and experiences of products and services, especially in the early phases of innovation and market adaptation. Today, participative RDI and means of engaging people is widely used by corporate and public sectors as part of their strategic RDI and decision-making cycles. The means of experimenting and piloting with all the relevant stakeholders, even with citizens, has also been applied in public policy-making for solving societal challenges.

Today, collaborative and open RDI has moved, taking place at industry, city and region-wide technology platforms that bring together technologies, cities, regions, and people such as customers, citizens or members of social networks and developer communities (Kulkki and Turkama, 2016, forthcoming). Technology platforms and related service platforms are new ‘interlinked virtual innovation ecosystems’ for new services, media, music and other content, technology and business development; they offer a potential to become relational, interactive and knowledge and information intensive innovation ecosystems. These platforms are very flexible and dynamic in creating new value constellations² and integrative elements between technologies, services and people. Developing such innovation platforms requires, however, thorough understanding of industrial, organizational, social, institutional and human behavior that relate to processing knowledge and information. These platforms have been understood not only as technologies but as facilitators of human and social interactions, knowledge creation and innovation.

Until recently, despite all the interactive large-scale technological advancements, crowdsourcing and social media as well as our best intention to engage people, we may still have a reason to argue that we are only ‘half-a-way’ from understanding human and social behavior³. We still need to find the ways to

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