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Leonidas G. Anthopoulos

Understanding Smart Cities: A Tool for Smart Government or an Industrial Trick?

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Leonidas G. Anthopoulos
Project Management Department
Technological Educational Institute (TEI)
Larissa
Greece

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Writing a book is really a hard and demanding process, which many times questions your patience and courage. Thankfully, I had my wife and kids supporting me during this discipline, who I missed for long and I would like to thank for their understanding and encouragement.

Foreword

This book gives an overview of smart cities and related activities. The book first reviews smart technologies, smart services and then visits a number of smart cities in practice, and then discusses how to govern smart cities to create a smart government. The book helps readers to understand smart cities and their future from various aspects.

From the 1990s to the 2000s, digital cities, the early stage of smart cities, had been developed and had become operational in Europe and Asia. At first glance, it seems natural to regard today's smart cities as the successor of digital cities. It is also natural to think that their differences are due to the technologies they use, i.e., digital cities are characterized by activities based on web services, while current smart cities demonstrate sensory services. This interpretation is not wrong but not so persuasive, because some of digital cities have been developed to connect virtual and real cities. For example, we started a digital city Kyoto in 1998 to make it real by establishing a strong connection to the physical Kyoto: The digital city complemented the corresponding physical city, and provided an information center for everyday life for actual urban communities. We thought "digital" and "physical" make things "real."

Let us submit two keywords "digital city" and "smart city" to Google Trends on trial. We learn that the smart city movement evolved ten years after the termination of digital city activities. In the meantime, global optimization of resource usage was attracting increasing attention around the world. Though there certainly are technological advances from digital to smart cities, it is more meaningful to see "digital city," the early stage of smart cities, as the exploration of cyber space, while the current "smart city" is the exploitation of physical space. The definitions and examples of smart cities are well investigated and summarized in this book that can trigger broad discussions on future cities.

One evolution of future cities, we may say, is the socialization of commerce. A typical example is Industrie 4.0 in Germany. The initiative aims at networking a large number of manufacturing companies to create a nation-wide supply chain. Large-scale factories in developing countries for mass production are no longer necessary. Instead, a network of many companies for mass customization will

appear regionally. Another evolution is the commercialization of society. Networking of unused resources in society can reveal profitable resources. A typical example is called the sharing economy. Since most cars in large cities are idled in parking lots, it is reasonable to share them to reduce environmental burden. We can expect the convergence of the two evolutions in the future, i.e., for-profit and non-profit activities will be connected seamlessly to sustain our society.

This book provides a good step to explore such a future direction of cities and human societies.

Kyoto, Japan
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Prof. Toru Ishida[1]
Department of Social Informatics
Kyoto University

[1] http://www.ai.soc.i.kyoto-u.ac.jp/～ishida.

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Papers that have been conceptualized by this book, contributed to its context and being referenced wherever they are utilized:

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About the Author

Leonidas G. Anthopoulos is Associate Professor at the Business School of the TEI of Thessaly and Director of the Postgraduate Program in Project and Programme Management. Dr. Anthopoulos has extensive IT research, planning and Management experience with regard to the development and deployment of complex IT projects. He is a member of various committees, worth mentioning the ITU Smart City Focus Group, Associate Editor of the IJPADA journal (IGI-GROUP) and editor of book collections. Some of his articles can be found on Government Information Quarterly, Information Polity, Transforming Government, etc. His research interests concern, among others, Smart City, e-Government, Enterprise Architecture, Strategic Management, etc.