Smart Cities and Innovative Urban Technologies

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From the Guest Editors

Smart Cities and Innovative Urban Technologies

Over the past two decades smart urban technologies have begun to form the backbone of new and large "intelligent" infrastructures, particularly in the privileged corners of the developed world—e.g., Amsterdam, Barcelona, Melbourne, San Francisco, and Singapore. Along with this development, dissemination of the smart city ideology has had a significant imprint on the planning and development of cities and their regions. Given the increasing popularity of the topic, this special issue concentrates on two highly interrelated concepts—*smart cities* and *innovative urban technologies*—and contains scholarly writings that provide some invaluable insights into the spatial effects of information and communication technologies and into knowledge production practices of our cities and societies.

This special issue consists of seven articles. These writings target the academic community as well as practitioners, such as spatial developers, planners, and public administrators, in order to increase the understanding of the dynamics and factors affecting the conceptual maturation of smart cities. Under the smart cities and intelligent urban technologies conceptual umbrella, the foci of these articles include economic growth, technological innovations, and social and political aspects of technological progression taking place in urban environments. The special issue also pays particular attention to global cities and relevant extensive analyses.

Information generated in these writings, particularly regarding the challenges and opportunities of smart cities and innovative urban technologies, are intended to benefit key local actors when they make decisions in their cities and/or peripheral locations. We believe this special issue will shed further light on the generation of a clearer understanding of smart cities, technology-concentrated geographies, innovation and knowledge creation hubs, and policy and planning implications of innovative technologies. This makes the special issue particularly of interest to those engaged in smart city and innovative urban technology research, practice, and policy making.

The first paper of the issue, by Nicos Komninos, Christina Kakderi, Anastasia Panori, and Panagiotis Tsarchopoulos ("Smart City Planning from an Evolutionary Perspective"), extends the evolutionary thinking and emerging dynamics of cities to smart city planning. The paper uses Thessaloniki, Greece as a case study to reveal a smart city strategy that has the potential to enhance the economic, environmental, and social sustainability of a city. The study reveals the complex dimension of smart city planning as a synthesis of technologies, user engagement, and windows of opportunity, which are fuzzy at the start of the planning process.

In the second article, Tan Yigitcanlar and Md Kamruzzaman ("Smart Cities and Mobility: Does the Smartness of Australian Cities Lead to Sustainable Commuting Patterns?") concentrate on smart mobility. The paper investigates smart mobility from the angle of sustainable commuting practices in the context of smart cities. The study reveals that overcoming the need for car-based travel for fragmented work activities while increasing smartness through the provisioning of broadband access should be a key item on the smart city agenda.

The security vulnerabilities of smart cities are examined in the third paper of the special issue by Rob Kitchin and Martin Dodge ("The (In)Security of Smart Cities: Vulnerabilities, Risks, Mitigation, and Prevention"). The study adopts a normative approach to explore existing mitigation strategies, suggesting a wider set of systemic interventions. It reveals how this

approach might be enacted and enforced through market-led and regulatory measures, and then examines a more radical preventative approach to security.

The issue continues with the fourth paper by Juho Kiuru and Tommi Inkinen ("E-Capital and Economic Growth in European Metropolitan Areas: Applying Social Media Messaging in Technology-Based Urban Analysis"). The research explores European metropolitan areas in relation to their Twitter messaging activity. The study applies a quantitative approach combining social media activity with regional economic variables. The paper reveals the most social-media-intensive locations in Europe in relation to innovation and start-up messaging.

In the fifth paper, by Luca Mora, Mark Deakin, Alasdair Reid, and Margarita Angelidou ("How to Overcome the Dichotomous Nature of Smart City Research: Proposed Methodology and Results of a Pilot Study"), introduce a research methodology for conducting the multiple-case study analyses, and tests the practical feasibility, effectiveness, and logistics of such a methodology by examining the smart city initiative of Vienna. The findings reveal how the application of the proposed methodology can help smart city researchers codify the knowledge produced from multiple smart city experiences, using a common protocol.

The sixth paper, by Becky Loo and Winnie Tang ("'Mapping" Smart Cities"), focuses on a systematic review of the development and functionality of digital maps. The study uses six domains depicting smart cities and reflects the digital map development against them. The study discloses that progress in digital mapping has supported and enabled smart city initiatives. The findings of the study stress the importance of smart mapping as an essential step in promoting smart cities and highlight mapping's usefulness in supporting smart cities initiatives.

The seventh and final paper, by Tan Yigitcanlar, Marcus Foth, and Md. Kamruzzaman ("Towards Post-Anthropocentric Cities: Reconceptualizing Smart Cities to Evade Urban Ecocide") acts as a coda to the special issue. This study provides a retrospective view of the origins of the smart city concept, presents the most recent perspectives on new interpretations of the smart city notion, and provides a commentary on the potential directions for a better reconceptualization of smart cities to evade a most likely urban ecocide.

We cordially thank the contributors of the special issue for their high-quality research papers and the editorial staff of *Journal of Urban Technology* for their support in preparing the special issue. We hope that this issue brings forth new ideas and stimulates future research interests in the fields of urban planning, civil engineering, urban development, economic geography, urban technology, and other related disciplines. We also express our warm appreciation to the expert scholars, who participated in the double-blind peer-review process and provided their constructive comments and insightful suggestions for improvement. Finally, we thank the Editor-in-Chief, Richard Hanley for giving us the opportunity to edit this special issue.

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