

# Foreword

The 20-chapter book before you is a highly important academic contribution to advancing the understanding of smartness as a distinctive and essential characteristic of urban society in the twenty-first century. In this capacity the book is considered a must read for academics in the field of smart city and smart government studies. It is also of the highest value to practitioners in both urban public administration and urban communities.

The agenda of urban “smartness” evolved for more than a decade; as a result, at the midpoint of the second decade of the twenty-first century, a comprehensive and well-grounded understanding of the term “smartness” in the context of cities and municipalities emerged, which this book duly documents.

So, in a nutshell what does smartness as an urban agenda for the twenty-first century mean and stand for, and why is it so important?

According to the United Nations’ WHO, by mid-2014, 54% of the world population lived in urban rather than rural spaces, which is a 20% increase from the year 1960.<sup>1</sup> By 2050, the urban share in the world population has been projected to surpass the 70% mark.<sup>2</sup> So, in less than a century, the global ratio between urban and rural populations will be more than reversed; and today, some urban centers already host populations within their city limits (not even counting the population in the entire metropolitan area around them) that are multiple in sizes compared with quite a few sovereign nation states around the world. Urban centers and their metropolitan areas have become the dominant hubs of economic, social, and cultural activities in the early twenty-first century. Also, these hubs compete on a global scale against each other for resources, talent, investments, influence, and wealth.

The rapid urbanization of the globe presents both great challenges and great opportunities for urban society as a whole as well as for urban government and urban self-governance as two important organizing elements of the urban society. While the concentration of human life in dense urban centers provides numerous economies of scale and efficiencies (centralized services, short-range service distribu-

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<sup>1</sup> See [http://www.who.int/gho/urban\\_health/situation\\_trends/urban\\_population\\_growth\\_text/en/](http://www.who.int/gho/urban_health/situation_trends/urban_population_growth_text/en/)—accessed 10/17/2014).

<sup>2</sup> See <http://www.fastcodesign.com/1669244/by-2050-70-of-the-worlds-population-will-be-urban-is-that-a-good-thing>—accessed 10/17/2014).

tion, proximity of connected logistic entities, short-distance transport of goods and people, low per-capita land use, and leverage of energy resources, to name a few), it also comes with a price tag (for example, in terms of crowding and its various side effects, pollution, higher crime rates, and infrastructural vulnerabilities).

A dense urban space is a highly dynamic and complex system, which at the least is self-referential, if not self-organizing,<sup>3</sup> that is, it cannot be steered like a car, and for its governance it requires sophisticated interventions and precise triggering at certain leverage points to be effectively influenced in ways that help it evolve towards and maintain desirable directions as defined by its very stakeholders.<sup>4</sup> A twenty-first-century urban space is expected to offer its citizens and business stakeholders high standards along the six dimensions of (1) quality of life (also referred to as livability or overall attractiveness), (2) democratic governance and institutions, (3) safety, (4) security, (5) rich economic opportunity and competitiveness supported by sophisticated and effective infrastructures of all kinds (individual and public transports, education, communication, information, health care, retail, research and innovation, public utilities, recreation, entertainment, culinary services, the arts, and cultural institutions, among others), and last, but not least, (6) a healthy and intact natural environment.<sup>5</sup>

Neighborhoods in twenty-first-century urban centers will increasingly play semi-autonomous roles in their governance, since they cannot be effectively managed from a single remote central point or in a stringent hierarchical fashion. At the same time, these semi-autonomous neighborhoods need to stay connected and well integrated in the greater urban whole. This interplay requires new ways of interaction and procedures, which need to be developed.

Furthermore, urban centers and their metropolitan areas compete globally for resources, talent, and investments, and the attractiveness of an urban space hinges upon its capacities to provide a balanced and sustainable mix of the six dimensions outlined above. Obviously, these dynamic, larger, denser, and multilayered urban centers need new and smarter approaches to governance, public service provision, and public administration than were available and practiced in the past.

This leads me to the concept of smartness as a twenty-first-century urban agenda. A smart urban space (also referred to as a smart city) is one that is able to create and maintain a strong attractiveness, safety and security, abundant economic opportunity, sophisticated and effective infrastructures of all kinds, and a healthy natural environment based on a model of smart democratic governance. Elements of smart governance encompass balanced innovation-, competitiveness-, and sustainability-oriented norms and policies that foster smart practices by using and sharing high-quality actionable

<sup>3</sup> P. M. Hejl, "Towards a theory of social systems: self-organization and self-reference, self-reference and syn-reference," in *Self-organization and management of social systems: insights, promises, doubts, and questions*, H. Ulrich and G. Probst, Eds. Berlin; New York: Springer-Verlag, 1984, pp. 60–78.

<sup>4</sup> J. W. Forrester, *Urban dynamics*. Cambridge, Mass.: MIT Press, 1969.

<sup>5</sup> S. AlAwadhi, A. Aldama, H. Chourabi, J. R. Gil-Garcia, S. Leung, S. Mellouli, T. Nam, T. Pardo, H. J. Scholl, and S. Walker, "Building Understanding of Smart City Initiatives.," in *Electronic Government*. vol. 7443, H. J. Scholl, M. Janssen, M. A. Wimmer, C. E. Moe, and L. S. Flak, Eds. Berlin, Heidelberg: Springer Berlin Heidelberg, 2012, pp. 40–53.

information facilitated by state-of-the-art information and communication and other technologies along with top-notch human capital and skills as well as other resources.<sup>6</sup>

Smart government, hence, can be defined as the skilled and effective orchestration of the elements of smart governance and their interplay towards areas of administrative focus such as smart budgeting, continuous administrative modernization, security and safety, continuous infrastructure overhaul and upgrading, carbonless and clean individual mobility, participation, transparency, and collaboration, and data science-based information generation and dissemination. Over time, the areas of focus of smart government may change in the twenty-first century; however, the basic elements of smart governance will remain relatively constant.

The reader may have noticed that unlike most discourses on smart cities, smart governance, and smart government, I have so far not mentioned information and communication technologies (ICTs) or other breakthrough technologies in any prominent way. This is, of course, neither negligence nor coincidence. Modern ICTs and other technologies have facilitated the evolution of a truly global and densely connected economy in the course of only a few decades. They have facilitated the rapid creation of new markets and industries as well as the complete demolition of traditional markets and industries. Generally, they have helped obliterate many, if not most, traditional ways of doing business of whatever kind.

While ICTs and other breakthrough technologies do not “drive” change by themselves, by employing, deploying, and using novel ICTs in new ways towards new ends and new purposes, knowledgeable, purposeful, and intentioned human actors indeed do drive change. For decades ICTs have been touted as “enablers” of change, organizational, behavioral, and other; however, if not used and deployed properly, they have proven to be ineffective and were found capable of even powerfully stalling progress and change. So, whether or not novel ICTs can help bring about change towards desired new ends and new purposes critically depends upon the thorough understanding of a given new technology’s potential, a vision for its novel uses, and a resolve and capacity to make this vision a reality on part of purposeful and intentioned human actors. In other words, novel ICTs and other breakthrough technologies need to be in the hands and under the purview of smart and savvy human actors to be deployed in the ways that they can enact their full potential and make a real difference. Then, these technologies can, in fact, act as grandiose facilitators and as massive levers for change of all sorts.

Smartness, hence, is an inherent human capacity. When referring to smart cities, smart governance, and smart government, we implicitly understand that novel technologies (ICTs and others) are necessary, albeit not sufficient engines for making an urban space smarter. It requires smart people who share the vision about and then create the future of the urban space they live in.

The ongoing process of urbanization of the globe requires extraordinary human savviness and smartness in decision-making in order to cope with the looming chal-

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<sup>6</sup> H. J. Scholl and M. C. Scholl, “Smart Governance: A Roadmap for Research and Practice,” in Proceedings of the 9th iConference, M. Kindling and E. Greifeneder, Eds. Berlin, Germany: Illinois Digital Environment for Access to Learning and Scholarship (IDEALS), 2014, pp. 163–176.

lenges and to seize the emerging opportunities. In other words, smartness is not a nice-to-have attribute, but rather a necessity.

Ideally, smart (democratic) governance paves the path for smart government, which helps instigate the evolution of a smart urban space. But the smart urban agenda of the twenty-first century also has to engage, mobilize, and contribute the various urban communities and stakeholders toward cocreating the smart urban space they want to share and live in. In this vein, smart governance, smart government, and smart city are literary vehicles for promoting the discourse about our future directions of human life on this planet, which will predominantly provide an urban experience. How this experience will shape up is for us to find and smartly decide.

This book makes an important academic contribution to the discourse on smartness in the context of urban environments, governance, and government. It has three parts, which are dedicated to theories, concepts, and methodologies of smartness in the urban context (part I), case studies from around the world (part II), and citizen participation in building smart cities (part III). It represents a wide range and great diversity in terms of regions covered as well as themes in the various chapters. For example, smart-government or smart-participation initiatives in Barcelona/Spain, Istanbul/Turkey, Mexico, Milan/Italy, Moscow/Russia, New Taipei City/Taiwan, Norwegian cities, Rio de Janeiro, Porto Alegre, Curitiba and Campinas (all Brazil), and Stockholm, Göteborg, Malmö, Jönköping, and Umeå (all Sweden) were analyzed and presented among others. Themes ranged from studying and developing conceptual models for smart city-related research over detailed single and multiple case studies to recommendations and lessons learned from the cases and the literature.

The book provides global coverage and a balanced approach in representing the various scholarly approaches to smart city, smart governance, and smart government research. The list of renowned contributors to this volume is impressive, and the contributions are authoritative. Therefore, with great pleasure, I recommend to you the reading of this volume on “Smarter as the New Urban Agenda: A Comprehensive View of the 21st Century City,” which in my view represents a milestone in current research on the subject.

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