

Preface

The contemporary view of the Smart City is very much static and infrastructure-centric, focusing on installation and subsequent management of Edge devices and analytics of data provided by these devices. While this still allows a more efficient management of the city's infrastructure, optimizations and savings in different domains, the existing architectures are currently designed as single-purpose, vertically siloed solutions. This hinders active involvement of a variety of stakeholders (e.g., citizens and businesses) who naturally form part of the city's ecosystem and have an inherent interest in jointly coordinating and influencing city-level activities.

The book presents a coherent, novel vision of Smart Cities, built around a value-driven architecture. It describes the limitations of the contemporary notion of Smart City and argues that the next development step must actively include not only physical infrastructure, but ICT and human infrastructure as well. In the authors' opinion, this requires emphasizing and tightly integrating research and technological solutions from the areas of Internet of Things (IoT) and Social Computing. The book portrays the novel Smart City as an especially suitable environment for the proposed integration, and describes how the city's stakeholders would benefit from it, mostly by being able to run and participate collectively in complex, coordinated activities involving the city's infrastructure and services, but especially other stakeholders and their devices. The described activities require provisioning and scaling of the ICT infrastructure, collective communication and coordination mechanisms, as well as direct and indirect controllability mechanisms, especially with respect to human participants.

The format and the content of the book is meant to give an overview of contemporary developments in the areas of IoT and Social Computing research, and to set a research road map for a future tighter integration of the two areas in the context of the Smart City.

November 2016

Vienna,
The authors

Smart Cities

The Internet of Things, People and Systems

Dustdar, S.; Nastić, S.; Šćekić, O.

2017, XV, 268 p. 78 illus., 40 illus. in color., Hardcover

ISBN: 978-3-319-60029-1