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Editors

# Mediterranean Cities and Island Communities

Smart, Sustainable, Inclusive and Resilient

 Springer

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# Preface

The *core theme* of this book concerns *sustainable development*, which, still in our times, remains a key planning goal, largely defining the policy agenda at the global and mostly the urban level, illuminated as the one being under severe pressure due to the rapidly escalating urbanization trend in the current ‘Urban Age’ (Suzuki et al. 2010; Smith 2012), but also possessing a decisive role in reaching global sustainability objectives. Shaping a sustainable future for urban constellations seems to be a rather intriguing goal, which has to be achieved within a globalized decision environment, marked by high complexity and uncertainty as well as an evolving economic, environmental, social, institutional, and technological context.

Speaking of the *technological context*, amazing developments have been taking place during the last decades, as a result of the convergence of telecommunications, computers, consumer electronics, and interactive media. These mark the transition toward a new paradigm in the post-industrial era, at the core of which lies ‘information.’ The power of information and communication technologies (ICTs) and their abundant applications in various sectors and scientific/policy fields have broadened the perspectives of various actors (policy makers, businesses, people, institutions, etc.) to search, gather, store, elaborate, generate, present, and visualize as well as transmit information in various forms (Bangemann 1994), guiding thus more *informed and knowledgeable* decisions. Based on this power, modern technology is nowadays perceived as a powerful lever for reshaping the economic, societal, and governmental/institutional scene, largely affecting the ways people live, produce, consume, work, commute, socialize, interact, etc., and supporting the migration of economic and social transactions from ‘place’ to ‘space,’ i.e., an electronically created environment, where *value* flows in webs (Kelly 1998).

Within such an environment, the concept of *smart city* was born, a currently ‘hot’ theme in the research and policy agenda for coping, among others, with the unprecedented sustainability challenges faced by cities. Although the smart city concept remains a core issue of research endeavors for almost two decades now, and despite the plethora of scientific articles exploring the various dimensions addressed to this concept (economic, social, environmental, technological, educational, etc.), it is still a highly ambiguous, fuzzy, and equivocal concept, a concept

that, as quite successfully was stated by Zait (2017: 3), “... *strives to clarify its identity*”. Nevertheless, smart city developments seem to have created high ambitions so far with regard to their ability to effectively and efficiently handle or, according to others’ view, largely determine the aspects of economic development and prosperity, organizational performance, social equity, and quality of living in urban environments (Stratigea 2012; Stratigea et al. 2017a). Moreover, their potential toward providing access to data, information and knowledge; supporting interaction and networking; and steering intelligence gathering has been largely acknowledged, mainly due to their value to create more active and informed citizens and leverage community development perspectives (Albert et al. 2009).

The *geographical focus* of this book is the *Mediterranean Region*, a very special area of the world, and a ‘*hot spot*’ in many respects (climate change, urbanization, scarcity of resources, political instability, etc.), but also a *cradle* of civilization, an area endowed with distinguishable natural and cultural resources, a mild climate zone of the planet. Smart city developments acquire a unique meaning and essence in seeking to achieve sustainability objectives in the large number of *small and medium-sized cities and communities as well as insular territories*, lying in the Mediterranean Region. These are distinguished for their highly valuable historical/cultural heritage; the coastal character of numerous cities; the globally recognized tourist attractiveness with severe repercussions to sustainability and adequate resource management; the high vulnerability with respect to natural disasters (e.g., earthquakes and floods); the peripherality and limited accessibility both within the Mediterranean area (e.g., insular regions) and at the European context (cities in the periphery of the European territory); etc. (Stratigea et al. 2017b). Moreover, Mediterranean cities are currently confronted with peculiar and disturbing circumstances caused by the severe recession state, which strongly affect efforts for paving smart and sustainable urban development paths and re-orient the setting of policy priorities, while they result in pretty high levels of unemployment, brain drain, considerable in- and out-migration movements, and destabilization of production patterns.

Speaking of the notion of smart cities in this specific environment and taking into account the very peculiar features of Mediterranean cities, the editors of this book share the conclusion of Meijer and Bolivar’s (2016) work, stating that a city:

- Cannot be characterized as ‘*smart*’ or ‘*stupid*’ and its progress should be explored in an integrated way in all three key domains of a smart city, namely smart technology, smart people, and smart governance, taking into consideration its *structural and cultural attributes*.
- Can progress gradually in smartening up to one or more of these domains, with this progress being largely determined by a city’s *historical context, needs and future expectations as well as challenges ahead*.

Having the above in mind, in the chapters to follow research efforts, progress and evidence-based results emerging from the Mediterranean scenery are presented, while also experiences from the research community and practitioners outside this

geographical focus area are brought on board. Moreover, we consider that the effort to smarten up Mediterranean cities, these peculiar in terms of size, distinct natural and cultural assets, sustainability objectives and their intensity, starting point in smart city progress, and under severe stress due to the austerity, places, has to follow a *human-centric, place-based, and problem-solving approach*, in alignment with their historical paths and distinct cultural trajectories forged through the centuries.

Before embarking on the themes presented by the *twelve chapters* of this book, it should be mentioned that this constitutes a cooperative effort of numerous distinguished researchers and younger colleagues who, Mediterranean or not, are sharing our concerns and have largely contributed to the realization of this edited volume.

The book is organized into *twelve chapters*, which are shortly outlined in the following.

More specifically, the first two chapters of this essay have a specific focus on the technological dimension of the smart city, presenting recent developments in support of smart city data visualization and monitoring (Chap. 1) as well as the concept and constituents of a smart city ecosystem (Chap. 2).

Thus in Chap. 1, on “Virtual Reality for Smart City Visualization and Monitoring”, Manousos Bouloukakis, Nikolaos Partarakis, Ioannis Drossis, Manos Kalaitzakis, and Constantine Stephanidis explore a new paradigm for creating immersive experiences in virtual reality. This work claims that in the context of smart developments, new visualization challenges are emerging that can largely support a digitally enabled dialogue in urban planning processes. This dialogue is based on cutting-edge technologies embraced by smart city components in the current IoT era, enabling complex scenarios to be explored and decision-making, prediction, and intelligent actuation to be undertaken. The authors claim that in a smart city context the need for information visualization is increasing, in order this to be properly communicated to end users in a smart, sustainable, and resilient way, while the necessity for strengthening interactivity of end users with data visualizations for better grasping the urban environment and the policy options ahead is also raising. Toward this end, the chapter builds on top of ongoing research work carried out at the Human–Computer Interaction (HCI), Laboratory of ICS-FORTH, Crete, in the domain of visualizing and interacting with information in ambient intelligence (AI) environments. The scope of this work is to end up with the design of an interactive Smart City Visualization framework, incorporating advanced user interaction techniques, such as gesture-based interaction with high-resolution large screen displays in alternative contexts of use and immersive VR experiences. To this end, several gesture-based interaction techniques have been validated in order to conclude with a sufficiently rich, ergonomic, intuitive, and easy to perform and remember set of gestures that are adaptable to user and context requirements, while remaining metaphorically appropriate for the addressed functionality. Additionally, big data visualization is accomplished by employing 3D solutions. The proposed design supports experiencing and interacting with information through VR technologies and large displays, offering improved visualization capacity and enhanced dimensionality of data, thus overcoming issues related to data complexity and heterogeneity.

In Chap. 2, on “Building a Smart City Ecosystem for Third Party Innovation in the City of Heraklion”, a research team, consisting of Manos Kalaitzakis, Manousos Bouloukakakis, Pavlos Charalampidis, Manos Dimitrakis, Giannis Drossis, Alexandros Fragkiadakis, Irimi Fundulaki, Katerina Karagiannaki, Antonis Makrogiannakis, Georgios Margetis, Athanasia Panousopoulou, Stefanos Papadakis, Vassilis Papakonstantinou, Nikolaos Partarakis, Stylianos Roubakis, Elias Tragos, Elisjana Ymeralli, Panagiotis Tsakalides, Dimitris Plexousakis, and Constantine Stephanidis, deals with the implementation of the Internet of things (IoT) and open data infrastructure in a specific Greek smart city, the city of Heraklion, Crete. Heraklion is one of the pioneer cities joining the smart city journey in the Greek territory, consecutively awarded by the Intelligent Community Forum (ICF) (years 2012, 2013, and 2014). This work describes the use of Internet of things (IoT) and open data infrastructure in the city of Heraklion, as planned and implemented by the Institute of Computer Science of the Foundation for Research and Technology—Hellas (ICS-FORTH). The focus is on presenting the implementation of mature research and developments, aiming at promoting the domains of telecommunication and networks, information systems, signal processing, and human–computer interaction in building the core of Heraklion ICT infrastructure, which is currently being released and becomes available to the municipality and the public through the Heraklion Smart City Web portal. It is expected that such infrastructure will, in the future, act as a core pillar for tracking paths to sustainable growth and prosperity in this specific city, supporting enhanced overview of the municipality over the city; fostering more effective planning and improved decision-making processes; enhancing the context of social services offered by the Heraklion municipality; and, ultimately, leading to improved quality of life for both citizens and visitors.

As technology in a smart city context is perceived as a *lever* and a *new force* for effectively *governing cities*, in a smart, sustainable and resilient way, within a highly connected, knowledge-, and information-intensive era (Stratigea 2012; Lövehagen and Bondesson 2013; Stratigea and Panagiotopoulou 2014, 2015; Stratigea et al. 2017a), the next two chapters elaborate on the role of technology for improving governmental processes and services offered (Chap. 3) or, even more, supporting the transition from government to smart governance (Chap. 4).

More specifically, in Chap. 3, on “Smart Cities on the Cloud”, the Urban and Regional Innovation Research Unit (URENIO) group members Christina Kakderi, Panagiotis Tsarchopoulos, Nicos Komminos, and Anastasia Panori elaborate on the topic of cloud developments and their value with regard to more effective and digitally enabled public/municipal service provision within such an environment. They stress the significant benefits of cloud computing, as these emerge from the abundance of publications on the topic, ranging from governmental reports to corporate studies. They also numerate the significant benefits of cloud computing and their potential toward smart government, and the more effective and digitally enabled service provision to citizens and businesses, as a result of migration of these services to the cloud. The authors also point out the value added by such a migration, both in terms of big data storage and analytic capabilities as well as in

terms of smart city service provision, while also arguing that despite the availability of information, the landscape with regard to cloud computing adoption is still quite blurry. At the core of the paper lies the effort to provide methodological guidance on the potential offered and the steps that need to be undertaken in order the cloud computing paradigm to be taken up in a smart city context. In this respect, they present, in a roadmap form, the steps that need to be followed for migrating public services to the cloud, along with a set of recommendations that facilitate decision-making at various stages of this process. They also argue that the adoption and use of cloud computing should not be perceived as an isolated action of an organization or a city authority/governmental agency but, on the contrary, it should be part of a wider strategic model, based on open innovation practices, i.e., use of open-source technologies for the cloud platform and applications, use of open data, adoption of user engagement methodologies, use of innovative business models.

Shifting from smart government to smart governance is nowadays a remarkable trend, reflected in the efforts of many cities around the globe. Smart governance actually represents a new city government state that targets the strengthening of capacity of urban systems and their constituents for: tackling contemporary challenges and risks in a rapidly evolving, complex, and uncertain global environment; and producing value for local communities in a smart, sustainable, and inclusive way.

Along these lines, Chap. 4, co-authored by Nektaria Marava, Andreas Alexopoulos, and Anastasia Stratigea, elaborates on the smart governance topic in the work entitled “Tracking Paths to Smart Governance: The Case of Korydallos Municipality—Greece”. The paper attempts, in its introductory part, to set the ‘scene,’ within which decision-making at the urban level is taking place, sketching a range of contemporary challenges and the necessity for cities to cope with them in a stagnating economic environment. Next, in order paths leading to smart governance to be traced, this work capitalizes on the rich literature on smart cities and smart governance so as to conceptualize smartness and smart governance and shed light on key organizational attributes that can pave the way toward the transition from government to smart governance. Based on these attributes, the trajectory toward smart governance of a rather typical, small and medium-sized, Mediterranean city—Korydallos Municipality—is highlighted by tracking institutional, organizational, societal, etc., developments in the time span 2004–2016. The scope of the empirical study is to: illuminate barriers and gaps in the trajectory of the specific city to smart governance, both before and during the economic recession, faced by the Greek economy, thus exploring also austerity impacts in such an effort; and provide useful inferences and evidence-based results for similar cities that strive to ride the smart governance wave.

In the current globalized, turbulent, and highly uncertain times, both *technology*, offering effective and efficient ways for spatial (large) data management and ubiquitous, time- and place-independent interaction, and *citizens and stakeholders groups’ engagement* in decision-making processes for making more knowledgeable and vision-driven policy decisions have been largely recognized as *carriers of change* in various public realms and have been largely acknowledged for paving

more sustainable and resilient future development paths in both urban and rural environments. The next four chapters of this book are falling within this context and deal with *technological and/or community engagement aspects* for handling critical challenges rising in urban (Chaps. 5 and 6) and peripheral/rural (Chaps. 7 and 8) environments; all sharing a common attribute, namely the weight attached to cultural aspects for reaching sustainability objectives in both Mediterranean and non-Mediterranean city contexts.

More specifically, in Chap. 5, entitled “‘The Urban Walk Architecture Talk’—Bridging Socially Engaged Art, Urban Processes and Cultural Development”, Justyna Borucka and Marta Wróblewska elaborate on the concept of public space as a theater of multi-layer and multisensory action, serving a variety of users’ needs; and the opening up of this space to outdoor artistic initiatives in a process of democratizing the public agora and promoting social inclusion and equality. In this work approach, artists were engaged in presenting and documenting sensitive areas of the city and bringing them to the attention of the public in outdoor initiatives; and vice versa; i.e., artists were guided by participants (citizens) to spaces that were intriguing or attracting them in order to interact with these places and collect/produce related content. Such an approach targets long-term effects for a specific case study—the city of Gdansk, Poland—to be reached, based on art’s descriptive power to inform and affect/motivate developments of urban and social systems, inspired by the rich local tradition and cultural heritage of the city. Of importance are the digitally enabled means established for serving work in a range of projects, implemented in Gdansk city, namely a GPS-based mobile application—G-RASS—and a social platform—the Inspirations Bank—motivating all those involved to become prosumers (producers and consumers) of content, memories, storylines, etc. The various projects implemented in the context of this work reveal the power of culture for engaging, motivating, storytelling, and building networks and identity as the ground for reaching urban development and wealth objectives.

In Chap. 6, entitled “‘Wanderlost’—A Participatory Art and Design Endeavor”, Thore Soneson and Michael Johansson address the growing complexity of life in contemporary city spaces and the imminent challenges faced by urban environments through the experience gained by ‘Wanderlost,’ i.e., a project stressing artist’s collaborations and interactive participatory setups in public, theater, and performance spaces. The paper addresses issues raised and challenges at all three stages of preparing, setting up and implementing the so-called storyworld Wanderlost, falling into the project CubeX ‘The Journey to Abadyl.’ Out of this, knowledge, methods, and participatory concepts are drawn by means of work carried out along the collaborative network PRAMnet, using as a backdrop a virtual city, the city of Abadyl. Work accomplished in this paper sheds light on collaboration, research, and methods that promote participation in a storyworld, challenging the imagination to perceive the world and our relations anew. The ‘Wanderlost’ concept as well the knowledge acquired, as authors claim, can be reused and re-situated in other urban contexts and environments, keeping the fundamental three formats with a digitally mediated tool, physically guides and explorative walks and a map of amusing and provoking artworks as a matrix.

In Chap. 7 on “Investigating Territorial Specialization in Tourism Sector by Ecosystem Services Approach”, written by Francesco Scorza, Beniamino Murgante, Giuseppe Las Casas, Ylenia Fortino, and Angela Pilogallo, the idea of ecosystem services (ES) approach forms the core for investigating territorial specialization of the tourism sector in a naturally and culturally endowed environment of the Italian periphery, the Region of Basilicata. This work uses the concept of ES, grounded on European and global initiatives, such as the ‘Millennium Ecosystem Assessment’ and ‘The Economics of Ecosystem and Biodiversity,’ as a decision support tool in order to match territorial planning and policy making with environmental assessment. More specifically, the paper builds upon interpretative models in support of the understanding and evaluating of ecosystem services and assessing their contribution to territorial tourist attractiveness and specialization. The work makes use of the Integrated Valuation of Ecosystem Services and Tradeoffs model (InVEST), a multi-package and open-source toolkit, in order the attractiveness of the Basilicata Region to be assessed, taking into consideration a range of natural and cultural assets (regional oasis, coastlines, riverside, etc.). Strengths and weaknesses of the investigated methodology are discussed, based on experiences gained by its application in Basilicata Region. The contribution of the paper to the identification of territorial tourism specialization according to ecosystem services can be proved valuable for driving more informed and knowledgeable policy decisions as to the development of sustainable, place-based, natural, and cultural tourism-related programs in a highly endowed area, such as the Mediterranean.

In Chap. 8 on “Participatory Planning in Support of Resilient Natural/Cultural Resource Management”, Maria Panagiotopoulou, Giorgos Somarakis, and Anastasia Stratigea deal with the issue of sustainable and resilient cultural resource management in lagging behind peripheral areas of the Mediterranean Region. The paper elaborates on the rising interest in the cultural/tourism complex which, enriched and crosscut by the radical technological developments, marks nowadays a noticeable ‘cultural turn’ of the tourism sector in numerous communities around the globe, in their effort to trace sustainable, resilient, and inclusive local development paths. The paper is grounded in the view that participation and collective action are of crucial importance in this ‘cultural turn’ and that its planning needs to be built upon the strengthening of local skills and competencies as well as the setting up of an inclusive discourse, capable of safeguarding natural and cultural resources, and handling them, in the development process, in a sustainable and resilient way. Based upon this rationale, the *focus* of the paper is on developing and implementing a *multilevel participatory spatial planning framework*, aiming at supporting policy making with regard to resilient cultural tourism development of a particular, lagging behind, and culturally wealthy rural community of Crete (former Province of Kissamos). Such a framework is: based on effective spatial data management technologies mapping tangible (and intangible) natural and cultural assets; and used for setting up digitally enabled strategic guidelines that are inspired by the sustainable and culturally resilient exploitation of these resources. These guidelines are framed by the general policy agenda at the EU and the Greek state level as well as

the policy directions set up by the Research and Innovation Strategies for Smart Specializations (RIS3) at the state/regional level, depicting the salient nature of the culture/tourism/ICT complex for gaining competitiveness in such kind of regions.

*Energy and transport* are two important sectors of concern in the context of smart, sustainable, and resilient city development, having so far attracted the interest of urban planners and policy makers as well as EU research funding. Coping with the critical impacts of the raising energy consumption and intensifying transportation burden in the emerging highly urbanized world is a crucial issue nowadays. The importance of these sectors is further highlighted in areas such as the Mediterranean, mainly due to the scarcity of energy resources and the immense visibility of the region as a notably rated, at a global level, tourist destination, attracting many visitors and exposing both sectors to severe pressures and risky high peaks (Stratigea et al. 2017b). Dealing with the challenges appearing in these two sectors, as these are witnessed by the extended literature on both of them, introduces the need for better understanding these issues by means of *data* acquiring and managing as well as making *policy choices* that are grounded in cooperative planning approaches. The latter are assisted by classical and digitally enabled participation tools, in order important issues raised to be grasped by citizens and stakeholders; their awareness and motivation to engage in more knowledgeable, smart and sustainable daily choices to be strengthened; and more qualitative and resource-efficient conditions of living in urban environments to be reached.

Along these lines, Chap. 9 entitled “A Method for Developing a Game-Enhanced Tool Targeting Consumer Engagement in Demand Response Mechanisms” by Ioannis Lampropoulos, Tarek Alskaif, Machteld van den Broek, Wilfried van Sark, and Herre van Oostendorp, attempts to shed light on the engagement of energy consumers on energy demand management. More specifically, the focus of this work is on the enhancement of consumers’ engagement in demand response mechanisms, employed by electricity suppliers, other market parties, and transmission and distribution system operators, through the use of ‘gamification’ techniques. Use of such techniques for enhancing and motivating consumers’ interaction with energy supply gives flesh to flexibility mechanisms at the demand side, an issue that is nowadays considered a key aspect for an effective energy transition, setting as a prerequisite the active participation and empowerment of consumers in the energy system. The paper argues that full flexibility is difficult to be achieved, mainly due to the insufficient consumer engagement and awareness regarding energy usage. It is also claimed that empowering energy consumers through serious games and gamification can enable a playful interaction between technology (e.g., smart metering systems, energy management systems and smart appliances) and consumers, which can result in higher engagement in demand response. A literature review on gamification techniques, carried out by this work, reveals the strategies promoted for increasing consumers’ engagement in demand response mechanisms. Finally, the paper elaborates on a user-centered, iterative design method for the development of a game-enhanced tool, through which collaboration between players can be stimulated, whereas the impact of applying the game-enhanced tool on consumer engagement can be empirically verified.

In Chap. 10 on “Tools and Technologies for Enhancing Public Engagement in Sustainable Urban Mobility Planning—The Case of Rethymno, Crete”, co-authored by Efthimios Bakogiannis, Maria Siti, Charalampos Kyriakidis, Georgia Christodouloupoulou, and Avgi Vassi, the focus is on urban transportation and more specifically on sustainable urban mobility. This topic constitutes a high priority in policy agenda, strongly supporting and motivating cities to push forward a more sustainable, energy-saving, and environmentally friendly mobility pattern. In this respect, Sustainable Urban Mobility Plans (SUMP), as a new planning perception, have come to the forefront, setting as a key component for their development citizens’ engagement in developing and implementing a shared vision of mobility aspects in their cities. Taking into consideration that, in Greece, maturity and practices in participatory planning in general and sustainable mobility planning in particular are lagging behind the common know-how and practice of other European cities/states, this work attempts to establish an integrated participatory methodological approach in developing SUMP, in alignment with guidelines established by the European Union on this topic. The participatory context adopted embeds the use of both classical (i.e., questionnaires, mini surveys, workshops, and public meetings) and ICT-enabled participation (i.e., map-based questionnaires, inclusive Web-based participation) tools in order the highest possible public engagement level in the decision-making process to be achieved. Additionally, these tools are utilized for collecting commuting data from citizens/visitors as well as public opinions for future planning purposes, while the emphasis is placed on the development of a Web-based crowdsensing tool as a key for gathering distributed knowledge and views on sustainable urban mobility issues. This approach is tested in a specific case study, the city of Rethymno, Crete, Greece, a coastal Mediterranean urban environment, distinguished for its beauty and its role as a highly attractive tourist destination of the Crete Region. Finalization of this empirical exercise will facilitate identification of barriers to participation as well as effective ways for eliminating them and supporting more active public engagement in SUMP development in coastal urban environments.

In Chap. 11 on “Location—Allocation Modeling for Emergency Evacuations in the Aegean Sea”, a joint effort by Dimitris Kavroudakis, Christos Kalloniatis, and Panagiotis Theodorou, the focus is on a sensitive but highly important part of the Mediterranean Region, namely the insular communities, i.e., lagging behind regions due to their isolation from the mainland. More specifically, the issue of emergency health service provision is explored, namely a crucial issue for many Mediterranean islands, lacking equal access to health infrastructure, compared to the mainland. The issue becomes more important, considering the large number of visitors that resides in such islands for a certain period of the year, with seasonality of island’s population challenging local decision-making regarding health services’ provision. This chapter analyzes the spatial distribution of national aero-evacuation means, such as helicopters, in order to inform the debate about decentralized services of emergency evacuations in the Aegean sea, while elaborating on a location–allocation model of helicopter bases in the islands of the Aegean Sea. The results of this work aim at shedding light on the spatial optimization of the helicopter bases in the

area and discuss the trade-off conditions of emergency evacuation services in such a fragmented geographical space. Finally, after utilizing a number of large-scale geographical simulations for allocating a number of aero-evacuation bases, the use of spatial analytics is illustrated for making informed decisions in areas, where dynamic seasonality of population seems to be a severe obstacle for rationalizing decision-making on health services' provision.

The power of technology in general and ICT in particular has been largely acknowledged as a key driver for re-engineering and/or reshaping the *economy*, with the tourism sector being a prominent example of this argument, as a highly data- and interaction-intensive sector. Gaining competitiveness in this specific sector implies the heavy use of powerful information management and communication platforms (Palmer and McCole 2000; Stratigea et al. 2008), seeking to achieve effective, real-time, reliable, direct, time-, and cost-saving exchange of information between both the tourist businesses (B2B interaction) and the tourist businesses and their customers (B2C interaction). ICT-enabled data management and interaction potential in a smart city context have supported the dawning of a new concept, the smart tourism (Buhalis and Amaranggana 2014; Panagiotopoulou et al. 2018). This reflects the increasing reliance of destinations, tourism industries, and tourists on emerging forms of ICTs that allow *massive data amounts* to be collected, managed, transformed, visualized, and communicated, properly forming value tourism propositions (Gretzel et al. 2015). Within the evolving smart city tourism ecosystem, newly emerging trends appear, such as the *sharing economy* in the accommodation sector, an important issue explored in the last chapter of this book and a considerable contribution for a globally acknowledged tourist destination as the Mediterranean as a whole.

More specifically, Vicky Katsoni elaborates on the “Sharing Economy Perspectives in the Tourism Accommodation Sector”, in Chap. 12 of the present edited volume. The focus of this work is on digitally enabled newly emerging tourism market trends, appearing in this highly important sector for the Mediterranean Region, but also for other regions of the world as well. More specifically, the focus of the paper is on the new provocative and hybrid economic activity of the sharing economy, and its counterpart in the tourism sector, where sharing economy has managed to bypass well-established distribution channels and disrupt the traditional structure of the tourism business. The paper attempts to: elaborate on the types and presence of the sharing economy in the tourism accommodation sector, and its disruptive innovation nature; analyze developments with regard to the sharing economy framework in the Greek tourism industry; and elaborate on the potential impacts of the shared economy in tourism, while also discussing potential future implications of these trends.

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