



# THE GLOBAL SMART CITY

Challenges and Opportunities  
in the Digital Age

FILIPPO MARCHESANI

# **The Global Smart City**

This page intentionally left blank

# The Global Smart City: Challenges and Opportunities in the Digital Age

BY

**FILIPPO MARCHESANI**

*University G. d'Annunzio, Italy*



United Kingdom – North America – Japan – India – Malaysia – China

Emerald Publishing Limited  
Emerald Publishing, Floor 5, Northspring, 21-23 Wellington Street, Leeds LS1 4DL

First edition 2024

Copyright © 2024 Filippo Marchesani.  
Published under exclusive licence by Emerald Publishing Limited.

**Reprints and permissions service**

Contact: [www.copyright.com](http://www.copyright.com)

No part of this book may be reproduced, stored in a retrieval system, transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without either the prior written permission of the publisher or a licence permitting restricted copying issued in the UK by The Copyright Licensing Agency and in the USA by The Copyright Clearance Center. Any opinions expressed in the chapters are those of the authors. Whilst Emerald makes every effort to ensure the quality and accuracy of its content, Emerald makes no representation implied or otherwise, as to the chapters' suitability and application and disclaims any warranties, express or implied, to their use.

**British Library Cataloguing in Publication Data**

A catalogue record for this book is available from the British Library

ISBN: 978-1-83797-576-1 (Print)

ISBN: 978-1-83797-575-4 (Online)

ISBN: 978-1-83797-577-8 (Epub)



INVESTOR IN PEOPLE

# Contents

About the Author	<i>vii</i>
Introduction and Overview	<i>ix</i>
<b>Chapter 1</b> Introducing and Understanding Smart Cities	<i>1</i>
<b>Part One: Internal Implementation of Smart City Ecosystems</b>	
<b>Chapter 2</b> Digital Implementation in the Smart City Ecosystem	<i>15</i>
<b>Chapter 3</b> Orchestrating the Implementation of the Smart City	<i>31</i>
<b>Chapter 4</b> Geographic Patterns in Smart City Implementation	<i>55</i>
<b>Part Two: Urban, Economic, and Competitive Outcomes of the Smart City Projects</b>	
<b>Chapter 5</b> Urban Environment in the Smart City	<i>77</i>
<b>Chapter 6</b> Economic and Business Environment in the Smart City	<i>99</i>
<b>Chapter 7</b> Urban Attractiveness and the Competitive Edge of the Smart City	<i>117</i>

<b>Chapter 8 Navigating the Smart Cities: Conclusions and Final Remarks</b>	<i>137</i>
Appendix: Methodological Approach	<i>161</i>
References	<i>175</i>
Index	<i>199</i>

## About the Author

**Filippo Marchesani** is Researcher at the Department of Management and Business Administration at the University “G. d’Annunzio” Chieti-Pescara. He holds a PhD in Accounting, Management, and Business Economics. He was a visiting researcher at the University of Girona (Spain). His research interests focus on cities competitiveness, smart cities, smart tourism, innovation and entrepreneurship. He sits on the editorial board of Springer Nature *Business & Economics Journal* and is a peer-reviewer for several international journals. He has recently published these issues in *International Marketing Review*, *Technological Forecasting and Social Change*, *Cities*, *Journal of Cleaner Production*, *Current Issues in Tourism*, *International Journal of Tourism Cities* and has contributed to several books.

This page intentionally left blank

# Introduction and Overview

In a world shaped by the juxtaposing forces of digital technologies and globalization, there is an urgent need for profound reflection on the intricate interaction between contemporary cities, the urban environment, users, stakeholders, and their transformative impact on society at large. This book aims to present a comprehensive exploration of the current state of cities, focusing on both organizational and strategic perspectives, in order to better understand the complex and still understudied ecosystem of smart cities.

Drawing upon analysis of factual data, empirical evidence from primary and secondary sources, interviews, and compelling case studies, this book delves deeply into the concept of smart cities. It examines their multifaceted role in shaping our lives, critically assessing their benefits and limitations and providing implications and suggestions for various stakeholders, including public managers, policymakers, and citizens.

As smart cities assume an increasingly pivotal role in society, this book contributes to the ongoing discourse by providing novel insights into the trajectories of smart city projects. It investigates the impact of these initiatives within organizations and beyond, while also addressing the managerial challenges and consequences within the urban environment. By presenting a synthesis of theoretical lenses from diverse fields such as urban studies, management, and economics, this book offers a comprehensive understanding of the smart city phenomenon and its far-reaching implications.

This book is structured into two parts, each offering a distinct perspective to contribute to the debate: the organizational aspect in the first part and the strategic aspect in the second. This structure aims to provide a comprehensive and global understanding of the phenomenon of smart cities.

After the introductory chapter, which provides an overview and guidelines on smart cities, the first part of this book, titled “Internal Implementation of Smart City Ecosystems,” delves deep into the internal implementation of smart city projects. Specifically, it examines the digital implementation, internal dimensions, and the geographical and strategic differences that influence the implementation of smart city projects.

In the first part of this book, the second chapter titled “Digital Implementation in the Smart City Ecosystem” provides an overview of the digital implementation in smart city ecosystems. It explores the role of data ecosystems and the Data Value Chain in smart cities, along with the challenges and opportunities they bring. This chapter also highlights the interaction between local and national data

ecosystems and the importance of digitalization in smart city processes and services. Interviews with smart city managers, policymakers, and technicians offer valuable insights into the practical implementation and impact of data management in urban development. The third chapter, “Orchestrating the Implementation of the Smart City,” focuses on the six strategic dimensions of smart city projects: governance, environment, people, living, mobility, and economy. Through in-depth analysis, case studies, and interviews, this chapter aims to provide a comprehensive understanding of these dimensions and their significance in smart city development. It challenges prevailing media portrayals of smart city strategies and explores the internal implementation and objectives of smart cities within each dimension. Chapter 4, “Geographic Patterns in Smart City Implementation,” examines the geographical differences and approaches influencing smart city projects worldwide. It discusses the impact of contextual factors on smart city initiatives and explores the strategic and geographical approaches shaping their implementation. This chapter analyzes citizen-based, technology-based, and decision-making-based development in smart cities and examines the influences of different regions on smart city projects, including Europe, North America, Latin America, and East and South Asia.

After analyzing the internal structure, organizational aspects, role and management of technology, as well as the geographical and governance approaches to smart city projects, the second part of this book shifts focus to the urban, economic, and competitive outcomes of these projects. It discusses the implications of smart projects and their potential impact on various outcomes, such as internal development, economic environment, and city attractiveness. Thus, moving to the second part of this book, Chapter 5, “Urban Environment in the Smart City,” delves into the urban outcomes of smart city projects. It focuses on the digital and environmental aspects of smart cities, discussing the advancements in digital systems, environmental benefits, and improved quality of life for citizens. This chapter incorporates interviews, case studies, and international research to offer a comprehensive understanding of the impact of smart cities on the urban ecosystem. The sixth chapter explores the economic and business environment of smart city projects. It highlights the potential of smart cities to foster innovation, entrepreneurship, and economic growth. By analyzing the interplay between smart cities and the entrepreneurial ecosystem, this chapter examines the economic outcomes of smart cities, including business creation, startups, and the overall economic environment. It provides insights into the relationship between smart cities and economic prosperity. Chapter 7 focuses on the competitive outcomes of smart cities. It explores how smart cities can gain a competitive edge by offering advanced and innovative environments that attract citizens, businesses, and tourists. This chapter discusses marketing innovation, internationalization, and the competitive landscape of smart cities. It emphasizes the importance of city attractiveness in a globalized world and presents challenges and future prospects for smart city development.

Concluding the book, Chapter 8 offers practical guidelines for navigating the landscape of smart cities. It synthesizes the key points covered throughout this book and addresses the challenges and opportunities of smart city initiatives. This

chapter emphasizes the need for ongoing adaptation and innovation in the rapidly evolving digital age.

In conclusion, “The Global Smart City: Challenges and Opportunities in the Digital Age” aims to provide a comprehensive understanding of the smart city phenomenon and its implications. It offers valuable insights and recommendations for policymakers, public managers, and citizens. By incorporating interdisciplinary perspectives and empirical evidence, this book makes a significant contribution to the ongoing discourse on smart cities. It encourages readers to embrace the challenges and seize the opportunities presented by smart city initiatives to create sustainable, efficient, and equitable urban environments.

This page intentionally left blank

## Chapter 1

# Introducing and Understanding Smart Cities

### Abstract

This chapter examines the transition from traditional cities to smart cities, with a focus on integrating digital technologies, data, and services into the urban environment. The concept of a smart city aims to create urban spaces that are more efficient, sustainable, and livable by fostering collaboration among stakeholders such as government, businesses, and citizens. This chapter highlights that this transformation encompasses not only technological advancements but also significant social, cultural, and economic implications. It emphasizes the need to rethink urban governance, citizen engagement, and public service delivery. By leveraging data for decision-making, smart city technologies enable cities to optimize urban services and streamline internal operations. Strategically, smart city development aims to attract businesses, investors, and visitors through improved services, sustainability, and accessibility. This chapter also explores how smart cities can enhance their competitiveness by promoting innovation, entrepreneurship, and a dynamic environment for residents and tourists. Moreover, it discusses how digital technologies enable smart cities to offer personalized and interactive experiences to visitors. Overall, this chapter provides a comprehensive perspective on the potential benefits and opportunities arising from smart city transformations, encompassing efficiency, sustainability, economic growth, and enhanced visitor experiences. It serves as a valuable resource for interpreting and understanding various aspects of the book.

*Keywords:* Smart cities; city; digital technologies; urban transformation; entrepreneurial urbanism; urban planning; smart governance

## 1.1 From City to Smart City

In recent years, the concept of a smart city has gained significant attention as cities around the world are transforming to adapt to the digital age. The rise of

## 2 *The Global Smart City*

digital technologies has revolutionized the way we live and work, and cities have been at the forefront of this transformation. Cities have always been centers of innovation, but the digital era has brought about new opportunities and challenges for urban development. As a result, cities are now transforming into “smart cities” with the aim of creating more efficient, sustainable, and livable urban environments (Albino, Berardi, & Dangelico, 2015; Caragliu, del Bo, & Nijkamp, 2011; Vanolo, 2014).

Throughout this book, we will delve deeper into these dynamics and conjectures to provide a broader understanding of the transformation from a traditional city to a smart city. We will analyze the integration of digital technologies, data, and services into the urban environment, aiming to create more efficient, sustainable, and livable urban spaces as well as the outcomes and the effective impact of those transformations. However, it is crucial to note that this change goes beyond the urban realm and carries significant social, cultural, and economic implications. It necessitates a fundamental shift in the internal and external management and operation of cities, calling for a re-imagining of urban governance, citizen engagement, and public service delivery.

The smart city approach places great emphasis on collaboration among various stakeholders, including government, businesses, and citizens, in order to co-create innovative solutions and tackle complex urban challenges. By embracing the concept of smart cities, cities aspire not only to enhance their infrastructure and service delivery but also to foster social inclusion, technological adoption, and economic growth. The integration of digital technologies enables cities to improve residents’ quality of life, promote sustainability, and drive economic development through the creation of new industries and employment opportunities (Caragliu et al., 2011; Linde, Sjödin, Parida, & Wincent, 2021; Vanolo, 2014). However, it is important to recognize that this transformation is not solely centered on technology. It encompasses a comprehensive understanding of the needs and aspirations of the people who inhabit and work in these cities. Therefore, in this book, we will explore the internal and external aspects of the smart city transformation, including data privacy and security concerns, citizen engagement and participation, and the importance of collaboration among different sectors and stakeholders. By considering these factors, this book aims to provide a comprehensive perspective on the transformation from a traditional city to a smart city, providing internal (organizational) and external (strategic) perspectives.

Internally, the transformation to a smart city involves changes in the way cities are planned, managed, and operated and the digital implementation act as a drive (and objective) in this transformation (Pittaway & Montazemi, 2020). Specifically, in the smart city trajectories, there is a greater emphasis on using data to inform decision-making processes. For example, smart city technologies can be used to monitor traffic flow, energy consumption, and air quality, among other things (Benevolo, Dameri, & Auria, 2016). These data can then be analyzed to identify areas for improvement and optimize urban services. Smart city technologies can also be used to improve communication and collaboration among different departments and stakeholders. By using digital platforms and tools,

cities can streamline internal processes and reduce bureaucracy, making them more agile and responsive (Linde et al., 2021).

The transformation to a smart city also has significant strategic implications. Smart cities are designed to be more efficient, competitive, and attractive to businesses, investors, and visitors (Taylor Buck & While, 2017). By using digital technologies and data, smart cities can offer a range of benefits to their users, including faster and more reliable services, more sustainable and livable environments, and greater accessibility and inclusivity. These benefits can help cities attract and retain talent, businesses, and investment, enhancing their economic and social development (Christofi, Iaia, Marchesani, & Masciarelli, 2021; Kummitha & Crutzen, 2019; Lee, Florida, & Acs, 2004; Marchesani, Masciarelli, & Doan, 2022).

By considering both organizational and strategic perspectives in smart city development, this book will also explore how smart cities can enhance their competitiveness by improving their urban and economic environments, creating a conducive atmosphere for citizens, students, tourists, businesses, and entrepreneurs to thrive. In this regard, on the one side, smart city initiatives have the potential to foster innovation and entrepreneurship, generating new opportunities for startups and small businesses (Hollands, 2015; Sofronijevic, Milicevic, & Ilic, 2014). On the other hand, they also attract residents and tourists who are drawn to a dynamic environment and the multitude of opportunities it offers (Del Chiappa et al., 2016; Marchesani, 2022; Marchesani, Masciarelli, & Bikfalvi, 2023).

In doing so, smart cities can enhance their attractiveness to visitors by offering a wide range of digital services and experiences. Through the utilization of digital technologies and data, smart cities can provide personalized and interactive experiences to visitors, resulting in increased satisfaction and loyalty (Marchesani, 2022). For example, smart city technologies can enable the provision of real-time information on local attractions, events, and amenities, making it easier for visitors to navigate the city and discover new things (Del Chiappa et al., 2016).

In conclusion, this book will delve into these specific aspects of smart city development analyzing and discussing how the integration of digital technologies and data can not only improve efficiency and sustainability but also foster economic growth, innovation, and entrepreneurship. Additionally, we will explore how smart city initiatives can enhance the visitor experience, making cities more appealing and engaging for tourists. By examining these dimensions, our aim is to provide a comprehensive understanding of the potential benefits and opportunities that smart city transformations can offer.

## **1.2 Definition of Smart City**

The term smart city has become increasingly popular in recent years, with cities around the world investing in digital technologies and data to improve their urban environments. However, despite the widespread use of the term, there is no widely agreed-upon definition of what a smart city actually is (Albino et al., 2015). This

#### 4 *The Global Smart City*

is somewhat of a paradox, as it is difficult to measure the impact and outcomes of something that is not well-defined.

The lack of a clear definition of a smart city is a significant challenge for policymakers, planners, and researchers. Without a clear understanding of what a smart city is, it is difficult to assess the effectiveness and impact of smart city initiatives. It also makes it challenging to compare and learn from different smart city projects and to identify best practices (Boes, Buhalis, & Inversini, 2015; Camboim, Zawislak, & Pufal, 2019; Linde et al., 2021; Pittaway & Montazemi, 2020).

In the literature, there are many different definitions of what a smart city is. However, most definitions share some common features, including the role of technology, efficiency, and sustainability. Here are some of the most prominent definitions:

- Caragliu et al. (2011, p. 50): “A city is smart when investments in human and social capital and traditional (transport) and modern (ICT) communication infrastructure fuel sustainable economic growth and a high quality of life, with a wise management of natural resources, through participatory governance.”
- Bakici, Almirall, & Wareham (2013, p. 139): “Smart city as a high-tech intensive and advanced city that connects people, information, and city elements using new technologies in order to create a sustainable, greener city, competitive and innovative commerce, and an increased life quality.”
- Nam and Pardo (2011b, p. 187): “A smart city infuses information into its physical infrastructure to improve conveniences, facilitate mobility, add efficiencies, conserve energy, improve the quality of air and water, identify problems and fix them quickly, recover rapidly from disasters, collect data to make better decisions, deploy resources effectively, and share data to enable collaboration across entities and domains.”

These definitions highlight the importance of using technology and data to improve urban services and create more sustainable and livable environments. They also emphasize the importance of citizen participation and collaboration across different sectors and domains.

However, despite these commonalities, there are also significant differences between the proposed definitions. For example, some definitions focus more on the economic benefits of smart city initiatives, while others emphasize the environmental or social benefits. Some definitions also prioritize certain technologies or sectors over others.

This evolutionary nature in the definition of the concept of smart cities reflects the fact that they are complex and multifaceted phenomena that are constantly evolving. Despite their great potential, it is evident that there is still much to investigate and discuss regarding the role of smart cities in the cultural, social, and economic transformation of today's societies (Berrone, Ricart, & Carrasco, 2016; Christofi et al., 2021; Vanolo, 2014).

Throughout this book, we will strive to shed light on the internal processes and the impact of these smart city projects. By delving into the intricacies of these projects, this book aims to provide a comprehensive understanding of the dynamic and evolving nature of smart cities and their implications. Today, it is crucial to explore and analyze the cultural, social, and economic dimensions of smart city transformations to fully grasp their significance in contemporary societies.

### **1.3 Information and Communication Technologies (ICTs) and Smart City Trajectories**

ICTs have played a fundamental role in shaping modern society, transforming the way we live, work, and communicate. In recent years, ICTs have become increasingly important in the context of cities, as urban areas around the world are adopting digital technologies to improve and guide governance and urban organization (Batty et al., 2012). The use of ICTs in cities has given rise to the concept of the smart city, a city that leverages digital technologies and data to create more efficient, sustainable, and livable urban environments (Lim, Ede-lenbos, & Gianoli, 2019; Maria Lluïsa Marsal-Llacuna, Colomer-Llinàs, & Meléndez-Frigola, 2015).

The integration of ICTs and other digital technologies into the urban environment is a key component of the smart city concept. Cities are using a range of ICTs, including sensors, data analytics, and mobile applications, to monitor and manage various urban systems, such as transportation, energy, and waste management. These technologies provide real-time data on urban conditions, enabling cities to make more informed decisions and optimize their services (Badii et al., 2017; Gagliardi et al., 2017; Thatcher, Burns, & Dalton, 2021).

The implementation of ICTs in cities is also having a significant impact on the lives of urban residents. ICTs are changing the way people interact with their cities, providing new opportunities for participation, engagement, and collaboration (El-Haddadeh, Weerakkody, Osmani, Thakker, & Kapoor, 2019; Gagliardi et al., 2017; Paskaleva, 2009). For example, digital platforms and tools enable citizens to provide feedback on urban services, report issues, and participate in decision-making processes (Vecchio, Secundo, Maruccia, & Passiante, 2019). ICTs are also providing new opportunities for social and economic development, creating new jobs and businesses in the digital economy (Kummi-tha, 2018).

Despite the potential benefits of ICTs in Smart Cities, their implementation is not without challenges. Cities face significant barriers in adopting and implementing new technologies, including financial constraints, technical challenges, and concerns around privacy and security. Additionally, the benefits of ICTs are not distributed evenly across urban populations, with some groups being left behind in the digital divide.

Despite these challenges, cities around the world are investing heavily in ICTs as a means of improving their urban environments. The use of ICTs in Smart

Cities is seen as a key driver of economic growth, social development, and environmental sustainability. Companies and governments are partnering to develop new technologies and services that can improve urban services and create new opportunities for citizens and businesses (Kummitha, 2018; Wiig, 2015, 2016).

The importance of ICTs in Smart Cities is also reflected in international city strategies. Many cities around the world are investing heavily in ICTs as a means of improving their competitiveness and attractiveness to businesses, users, and investors (Christofi et al., 2021). For example, the European Union promotes the guide Smart Cities' initiative to create a network of Smart Cities across Europe, using ICTs to improve energy efficiency, reduce carbon emissions, and enhance citizen participation.<sup>1</sup>

The implementation of ICTs in Smart Cities is not just about technology but also involves a fundamental shift in the way cities are managed and operated. Cities are adopting new governance models that emphasize collaboration, participation, and transparency (Meijer & Bolívar, 2016). By using digital platforms and tools, cities can engage citizens in decision-making processes, improve communication and collaboration among different departments and stakeholders, and increase transparency and accountability (Huertas, Moreno, & Pascual, 2021; Kumar, Mookerjee, & Shubham, 2018; Yuan et al., 2020).

The use of open data is also a key component of the smart city concept. Open data refers to data that is freely available to the public, without restrictions on its use or redistribution. Open data can play an important role in improving open governance, accountability, transparency, and citizen engagement (Gagliardi et al., 2017). By making data available to the public, cities can enable citizens, businesses, and researchers to develop new applications, services, and products that can improve urban services and create new opportunities.

In conclusion, the use of ICTs in Smart Cities is a key driver of economic growth, social development, and environmental sustainability. ICTs are transforming the way cities are managed and operated, enabling new forms of collaboration, participation, and transparency. However, the implementation of ICTs in Smart Cities is not without challenges, including financial constraints, technical challenges, and concerns around privacy and security. Despite these challenges, cities around the world are investing heavily in ICTs as a means of improving their urban environments and creating new opportunities for citizens and businesses.

### **1.4 Data Ecosystem and Key Actors**

In modern cities, data has become an increasingly important resource for managing and optimizing urban systems. Cities around the world are leveraging data to improve their services, enhance citizen engagement, and promote economic

---

<sup>1</sup>EPRS: European Parliamentary Research Service. Belgium. Retrieved from <https://policycommons.net/artifacts/1339578/mapping-smart-cities-in-the-eu/1949353/>

growth. However, the management of data in cities is a complex and multifaceted issue that involves a range of key actors and stakeholders (Barham & Daim, 2020; Tiwana, 2014).

The management of data in cities involves the creation of a data ecosystem that includes a range of actors, such as policymakers, governance bodies, public managers, citizens, users, and providers (Ooms, Caniëls, Roijakkers, & Cobben, 2020). These actors work together to create, collect, process, and use data to improve urban services and create new opportunities for social and economic development.

Smart Cities initiatives aim to “provide more efficient services to citizens, to monitor and optimize existing infrastructure, to increase collaboration amongst different economic actors, and to encourage innovative business models in both private and public sectors” (Marsal-Llacuna et al., 2015, p. 618). To achieve these objectives, cities need to create a data ecosystem that is well-managed, secure, and transparent.

One of the key challenges in managing data in cities is ensuring that citizens and institutions collaborate effectively. Citizens are a critical part of the data ecosystem, as they generate a vast amount of data through their daily activities (Nesti & Graziano, 2020). However, citizens also have concerns about privacy and security and may be reluctant to share their data with institutions unless they are assured that their data will be protected and used responsibly.

To address these concerns, cities need to create a culture of trust and collaboration between citizens and institutions. This involves developing transparent and accountable data policies, engaging citizens in decision-making processes, and providing them with the tools and resources they need to participate effectively in the data ecosystem (Mouton & Burns, 2021; Nesti & Graziano, 2020).

In addition to citizen engagement, the management of data in cities also involves collaboration between different institutional actors. Policymakers, governance bodies, and public managers all play a critical role in the management of data in cities, as they are responsible for creating policies and strategies that guide the use of data in urban systems (Bakici et al., 2013; Yigitcanlar, Kankanamge, & Vella, 2020a). These actors need to work together to create a coherent and effective data ecosystem that can support the needs of citizens and businesses.

Finally, the management of data in cities also involves collaboration with data providers, such as telecommunications companies, software developers, and data analytics firms. These providers play a critical role in the creation and management of data in cities, as they provide the tools, infrastructure, and expertise needed to collect, process, and analyze data (Asthana & Dwivedi, 2020). Cities need to work closely with these providers to ensure that they have access to the data and tools they need to optimize their services and create new opportunities for social and economic development.

This preface shows that the management of data in cities is a complex and multifaceted issue that involves a range of key actors and stakeholders. Cities need to create a well-managed, secure, and transparent data ecosystem that can support the needs of citizens and businesses. This requires collaboration between citizens, institutions, and data providers to create a culture of trust and

collaboration that can drive innovation and growth in modern cities. As cities continue to evolve and adapt to new technological and social changes, the management of data will become an increasingly important issue that will shape the future of urban development.

## 1.5 Smart City Dimensions

The concept of the smart city encompasses a range of different dimensions, each of which is critical to the success of the overall concept. The smart city dimensions are six conceptually distinct characteristics that cover all the major areas of the city, including the economy, mobility, governance, environment, living, and people (Albino et al., 2015; Vanolo, 2014). These dimensions are essential for creating a modern and sustainable urban environment that can meet the needs of citizens and businesses.

The first dimension of the smart city is the Smart Economy. This dimension is linked to a spirit of innovation, entrepreneurialism, the flexibility of the labor market, integration in the international market, and the ability to transform. The Smart Economy is essential for creating a dynamic and resilient urban economy that can adapt to changing market conditions and support the growth of businesses.

The second dimension is Smart Mobility, which is related to local and supra-local accessibility, availability of ICTs, and modern, sustainable, and safe transport systems. Smart Mobility is critical for ensuring that citizens have access to reliable and efficient transportation options, which can reduce congestion, pollution, and travel time.

The third dimension is Smart Governance, which is related to participation in decision-making processes, transparency of governance systems, availability of public services, and quality of political strategies. Smart Governance is essential for creating a democratic and participatory urban environment that can meet the needs of citizens and businesses.

The fourth dimension is Smart Environment, which is understood in terms of the attractiveness of natural conditions, lack of pollution, and sustainable management of resources. Smart environment is critical for creating a healthy and sustainable urban environment that can support the well-being of citizens and businesses.

The fifth dimension is Smart Living, which involves the quality of life, imagined and measured in terms of the availability of cultural and educational services, tourist attractions, social cohesion, a healthy environment, personal safety, and housing. Smart Living is essential for creating a livable and inclusive urban environment that can meet the needs of diverse communities.

The sixth and final dimension is Smart People, which is linked to the level of qualification of human and social capital, flexibility, creativity, tolerance, cosmopolitanism, and participation in public life. Smart People are critical for creating a diverse and innovative urban environment that can attract and retain the best talent and support the growth of businesses.