

Towards Smart Inclusive Cities

MAURO ROMANELLI

mauro.romanelli@uniparthenope.it

University of Naples Parthenope

Abstract

Cities are rethinking the urban future, following a smart city view towards urban development to drive inclusive urban growth and improve the quality of life, shaping the city as an inclusive community and engine of sustainable growth. A smart city helps shape the city of the future, using the potential of information technology to serve both economic and social life, and transform the urban community in a significant way. Inclusive cities protect the value of a city, thus enhancing community development. Smart inclusive cities help support sustainable urban development, strengthening collaborative and open frameworks within urban communities. Currently, several European cities are selecting a smart city vision to develop the city as an open, innovation-led, socially inclusive community. As smart communities, cities of tomorrow employ information and communication technology (ICT) to drive sustainable, open and inclusive urban growth and innovation, improving the quality of life, strengthening smartness as an ability to develop the city as smart inclusive community. Cities are shaping a smart pathway and building an open and inclusive environment for smart urban community development. The study aims to identify the pathway that cities are following to drive the city as smart, sustainable and inclusive urban community. In the study, exploratory case studies drawn from smart city urban planning are duly discussed concerning three cities that are designing a smart future and thus rethinking a smart inclusive urban development. The three European cities of Wien, Paris and Florence, which are planning a smart urban future, to shape inclusive and open innovative urban communities, are hereby discussed.

1. Introduction

Many cities are planning their future, promoting smart and inclusive urban growth to improve the well-being of urban communities and providing solutions to the challenges of tomorrow (Angelidou, 2017; Lee *et al.*, 2022). Today, cities are constructing a sustainable and wealthy urban future in order to improve the quality of life as the key driver and objective of urban policies, using technologies to drive smart, sustainable and inclusive urban growth, shaping socially inclusive urban communities (Eger, 2005; Martinez, Mikkelsen and Phillips, 2021; Yigitcanlar, 2021).

The urban future relies on smart, sustainable and inclusive urban communities as better places to live, work and play (Lara *et al.*, 2016). Following the *UN 2030 Agenda for Sustainable Development* and the *New Urban Agenda*, the sustainable urban future relies on inclusive cities driving socially inclusive growth. Future sustainable urban development relies on socially

inclusive and prosperous cities as smart cities and communities as drivers of sustainable inclusive urban growth and innovation (European Commission, 2012; European Economic and Social Committee, 2015; European Commission, 2017).

As open and bottom-up cities that belong to the people (Sennett, 2007), inclusive cities promote social and economic health and wellbeing of the whole urban community (Stren and Polèse, 2000), protecting the cultural and human value and potential of a city (Knight, 1995). As information, organisational and interactive space (Knox, 2010), and net action (Czarniawska, 2002a), cities achieve long-term and successful matters (Czarniawska, 2002b), driving smart, sustainable, competitive and inclusive growth, shaping inclusive cities as drivers of social innovation (European Commission, 2010; European Union, 2011). Cities aim to plan intentional urban development to become sustainable urban communities, supporting their human, social and cultural potential (Knight, 1995), and combining technological innovation and urban development, promoting smart urban innovation that relies on collaborative processes (Nijkamp and Perrels, 1994; Nilssen, 2019) in order to preserve the urban ecosystem and improve the quality of life (Yigitcanlar, Dur and Dizaroglu, 2015). Cities are rethinking smart urban planning and strategy to make the city as smart, socially open, inclusive and collaborative community, involving different stakeholders and citizens, focusing on social and human capital (Yigitcanlar and Teriman, 2015; Mora and Bolici, 2017; Fernandez-Anez, Fernández-Guell and Giffinger, 2018; Komninos *et al.*, 2019; Nielsen, Baer and Lindkvist, 2019). The smart city vision helps drive collaborative innovations that involve urban stakeholders (i.e., private, public, no profit sectors, citizens, users) to develop new solutions (Hartley, Sørensen and Törting, 2013), shaping urban spaces open to possibilities of public collaborative and multi-actor innovation (Sørensen and Törting, 2018).

European cities are rethinking their future and planning smart and inclusive cities. Florence, Paris and Wien are each designing the city of tomorrow as a smart, open, sustainable and inclusive community, putting people first, and promoting urban spaces as collaborative and organisational environments for urban innovation and social inclusion as drivers of urban value creation. As reported in the *Paris Smart and Sustainable* framework, “Paris must strive to become more connected, sustainable, attractive, inclusive and resilient” (p. 7), reinventing an inclusive city and offering all citizens good living conditions, developing the potential of digital transformation within urban environments to drive innovation and inclusion as drivers for a better quality of life and a cohesive and prosperous urban future for urban communities. In the *Firenze Smart City Plan*, the smart city is viewed as a social, living and intelligent organism that both strengthens and brings together technological, social, human and organisational capabilities to promote open innovation and support social inclusion as a way to face and solve urban problems and to drive social changes, creating opportunities for new urban knowledge and value creation. While in the *Wien Smart City Strategy Framework*, “a smart city will also strive for a high degree of social inclusion” (p. 4). The smart city strategy aims to drive the city as a liveable and socially inclusive space for future generations. “Smart City Wien means to uphold and further increase Vienna’s high quality of living and social participation” (p. 11).

Cities rediscover the role of technological innovation for sustainable, urban wealthy, inclusive and human-centred growth within communities that support collaboration and social life as symbolic values (Meijer and Thaens, 2018). The smart city is transitioning to a socially-oriented stage, abandoning the technology-led one (Joss *et al.*, 2019), making the city as socially-inclusive community, and driving smart open innovation urban ecosystems

(Paskaleva, 2011). Smart cities involve technology, management and policy issues and help drive inclusive urban growth (Nam and Pardo, 2011a, 2011b; Gil-Garcia, Pardo and Nam, 2015). Furthermore, smart urbanism helps build more inclusive and open cities (Odendaal, 2021) by strengthening stakeholder engagement (Mora *et al.*, 2019). The cities of the future are planning smart and inclusive urban growth and multi-level governance, to improve quality of life, focusing on citizens and the community (Therrien, Usher and Matyas, 2020; Chang *et al.*, 2022), following a smart vision to construct an urban innovation ecosystem for a sustainable future (Zygiaris, 2013).

Smart and inclusive cities enable the urban community to promote technology and a policy for sustainable urban growth (Yigitcanlar *et al.*, 2019), thereby supporting sustainable, long-term and wealthy urban development for an enhanced quality of life (Paskaleva, 2011). Increasingly, cities are rediscovering themselves as socially inclusive urban communities while becoming smart cities (Hollands, 2008; Anttiroiko, Valkama and Bailey, 2014; Waghmare and Singhal, 2022), employing digital technologies for inclusive urban governance (de Hoop *et al.*, 2022), and empowering the citizens (Martin, Evans and Karvonen, 2018). Sustainable smart urban ecosystem relies on community inclusion and engagement (Palumbo *et al.*, 2021). Smart inclusive development relies on a city building a citizen-centric smart city as the driver of social and economic growth and inclusion. Inclusive smart cities support human-centred design and enable diverse stakeholder participation in urban growth (Liang, De Jong, Schraven and Wang, 2021; Malek, Lim and Yigitcanlar, 2021). Cities are adopting a smart vision of urban planning to achieve sustainable, social and inclusive urban development and innovation (Lee, Babcock, Pham, Bui and Kang, 2022).

Although many studies focus on the role of smart and sustainable transformation, only a few studies investigate how cities are rethinking their sustainable future in terms of smart and inclusive development. Inclusive urban growth helps to shape sustainable urban development that relies on smart city vision and policies that enable place-based collective intelligence (Angelidou *et al.*, 2018). Smart city strategy, planning and policies contribute to shaping the city as socially inclusive urban community. Which urban future development do cities aim to achieve? How are cities interpreting the smart vision and approach to urban social growth by planning the smart and sustainable urban community? The research question refers to how cities are rethinking and planning the urban future by adopting a smart view to drive urban development and innovation to shape the city as a socially inclusive urban community. The study aims to elucidate how cities are rethinking their urban future, following a smart vision to drive the city as a smart and inclusive community and an engine of sustainable development, social growth and innovation. Cities are planning an urban inclusive future, selecting a smart city vision, to track a pathway for building an open, inclusive and socially innovative city.

The article is structured in five sections. Following the introduction, the theoretical background is presented, emphasising that the future of urban development relies on cities designing smart inclusive cities and communities. In the third section, the methodological approach is presented. The fourth section describes and reports on three illustrative case studies of three European cities (i.e., Paris, Wien and Florence) that are planning and rethinking the future urban development by planning a smart city vision for making the cities inclusive communities. Finally, the findings, discussion, implications and conclusions are outlined.

2. Towards a smart and inclusive urban future

2.1. Smart cities help drive cities of the future as communities

As smart innovative urban communities, cities improve urban competitiveness and quality of life leading to urban communities that are engines of innovation (Appio, Lima and Paroutis, 2019). A smart city aims to improve the quality of life and support both community development, and sustainable urban growth and innovation (Nam and Pardo, 2011a; Deakin *et al.*, 2012; Stratigeia, 2012). The smart city vision helps cities to enable collaborative open innovations to identify new solutions for urban development, fostering effective stakeholder engagement and involvement along organisational and management capabilities (Hartley, Sørensen and Törfing, 2013; Paskaleva and Cooper, 2018). Cities understand the potential of information technology to develop and implement smart and sustainable solutions that boost the quality of life and inclusive urban growth (Bătăgan, 2011). In addition, smart cities employ a strategic technology plan to improve the quality of life, shaping the city as urban inclusive and interconnected space (Giffinger *et al.*, 2007), strengthening the connections between productivity, economic growth and human capital within urban ecosystems (Shapiro, 2006; Albino, Berardi and Dangelico, 2015), developing a smart change-oriented community, and promoting sustainable inclusive growth and participatory governance (Caragliu, Del Bo and Nijkamp, 2011; Deakin, 2011). Smart cities open up to a promising and prosperous future: “smart cities convey an idea for the ideal future of an urban settlement” (Angelidou, 2017: 2). “Smart city is an important future-oriented concept, which has potential to integrate new technologies, social systems and ecological concerns” (Anttiroiko, Valkama and Bailey, 2014: 332). As drivers of sustainable urban development, cities adopt and implement a smart city strategy and vision, strengthening the community, technology and policy to enable the city to become smart inclusive city (Yigitcanlar *et al.*, 2019): “what needed is to make the city itself ‘smart’ – that includes its people, in other words smart community” (Yigitcanlar *et al.*, 2019: 8). Moreover, smart cities support the potential of urban communities, enabling businesses, public bodies and citizens to build urban values, cohesion and innovation (Dameri, 2013).

Smart cities promote and extend a high quality of life in urban environments. Sustainable urban development relies on a smart city as an engine of public value and a driver of urban innovation and liveability (Nam and Pardo, 2011b; Pardo *et al.*, 2021). A smart city utilises ICT extensively to provide a high quality of living to its citizens (Yigitcanlar, 2017). A city is smart in shaping a smart community (Yigitcanlar *et al.*, 2019), and fostering community development, “seeking to empower local individuals and groups by providing them with the necessary skills and information to affect changes in their own communities” (Stratigeia, 2012: 382). According to Gil-Garcia, Pardo, and Nam (2016: 5), “a smart city should be seen as a continuum in which local government officials, citizens, and other stakeholders could think about the initiatives that attempt to make the city a better place to live”. The smart city is a social and technological phenomenon (Gil-Garcia, Pardo and Nam, 2015; Meijer and Thaens, 2018). According to Angelidou (2014: S3), “smart cities are all urban settlements that make a conscious effort to capitalise on the new Information and Communications Technology (ICT) landscape in a strategic way, seeking to achieve prosperity, effectiveness and competitiveness on multiple socio-economic levels”. As a conceptual urban development model, smart cities utilise human, collective, and technological capital to enhance and develop social and economic prosperity and growth in urban communities (Angelidou, 2014), promoting a digital-enabled collaborative framework and space “which generates solutions with the

involvement of citizens, companies, and public authorities” (Komninos, 2014: 7). As a net action (Czarniawska, 2002a), cities employ information technology to create a smart city and transform the urban community in a significant and positive way, promoting effective collaboration among urban stakeholders, shaping the smart urban community (Lindskog, 2004; Eger, 2005; Gil-Garcia *et al.*, 2016; Lara *et al.*, 2016). Cities select a smart growth and innovative view (Nam and Pardo, 2011a), shaping urban spaces as organisational and interactive space (Knox, 2010), adopting a human-centred and collaboration-led vision to urban innovation and development (Paskaleva, 2011; Andreani *et al.*, 2019). As a vision for change, the smart city makes the city a smart innovative community (Deakin, 2014). Cities develop smartness as a human-centred, collaboration-driven and community-led vision to urban development and transformation (Lara *et al.*, 2016; Gil-Garcia *et al.* 2016), rediscovering the community approach (Allwinckle and Cruickshank, 2011), and fostering collaboration and social networking (Komninos and Tsarchopoulos, 2013; Meijer and Bolívar, 2016), thereby driving continuous urban changes for sustainable urban future, and improving wealthy urban communities (Yigitcanlar, 2021). Cities advance as *loci* of innovation and innovative milieus (Shearmur, 2012), driving smart urban innovation (Nilssen, 2019) and building collaborative platforms relying on the potential of human, organisational and technological capital emerging within cities and communities (Vallance, Tewdwr-Jones and Kempton, 2020).

2.2. Smart inclusive cities improve the quality of life for people and communities

In the information age, cities support social inclusion, building smart cities and communities to support quality of life, thus opening up to accountable, open innovative and sustainable cities (Castells, 2000; Eger, 2005; Paskaleva, 2011). “Community inclusion and engagement in the functioning of an urban ecosystem is a distinctive attribute for sustainable smartness” (Palumbo *et al.*, 2021: 11). The idea underlying the vision of smart cities is to design an inclusive urban community. Increasingly, cities of the future will become smart, inclusive and sustainable cities and communities, developing social and technological issues for urban sustainability and competitiveness (Begg, 1999; Eger, 2005; Khan and Zaman, 2018), shaping inclusive urban ecosystems relating to social and environmental topics (Blasi, Ganzaroli and De Noni, 2022). As an interconnected and sustainable community (Lazariou and Roscia, 2012), a smart city helps to shape the city of the future as an engine of social and inclusive innovation (Anttiroiko, Valkama and Bailey, 2014), providing solutions for sustainable urban, social and economic development (Mora and Bolici, 2017). Smart cities support inclusive, social and responsible growth, preserving citizens’ capabilities and the rights of future generations (Deakin *et al.*, 2012; Peris-Ortiz *et al.*, 2017). Moreover, the smart city vision helps shape inclusive urban development. Smart cities enable open and inclusive urban innovation, empowering citizens for the smart inclusive transformation of the city as an urban community (Paskaleva, 2011), where local stakeholders contribute to the well-being of the city (Lara *et al.*, 2016). Furthermore, smart cities enable urban stakeholders and communities to make the city an inclusive, open, democratic and collaborative space for social innovation and sustainable urban growth (Lee *et al.*, 2022). Specifically, as smart inclusive communities, cities put people first, and foster human and social capital at the heart of sustainable smart urban development. “Smart cities also require ‘smart citizens’ if they are to be truly inclusive, innovative and sustainable” (Paskaleva 2011: 158).

Smart cities shape smart, sustainable, inclusive, open and innovative urban communities (Lindskog, 2004; Osborne, Kearns and Yang, 2013; Lara *et al.*, 2016; Kummitha and Crutzen, 2017), and help design progressive communities via digital technology to be socially inclusive, improve quality of life, and support urban governance, sustainability and competitiveness, thus developing social capital (Paskaleva, 2011). According to Joss *et al.* (2019), the smart city is driven by social and public needs and interests that help address a coherent use of technology. Smart city transitions tend to shape inclusive and sustainable cities opening up to economic and social organisational processes that foster a collaborative framework for inclusive urban transformation (Lee *et al.*, 2022). Smart urbanism enables inclusive cities (Odendaal, 2021), aligning human, social, cultural, economic and environmental factors (Mora *et al.*, 2019). Inclusive smart cities develop policies that foster social and economic transformation (Waghmare and Singhal, 2020). Such development relies on the use of technology for driving urban transformation, shaping a human-centric environment and design that enables active collaborative and participatory processes, and shapes citizen-centric smart cities, focusing on people and public values (Liang *et al.*, 2021; Malek, Lin and Yigitcanlar, 2021).

The smart city model helps to provide a response to social and organisational factors (e.g., conflicting values, heterogeneous stakeholders and developers; see Anttiroiko, Valkama and Bailey, 2014), leading to open innovation that relies on “using ICT for delivering more sustainable and inclusive cities with better quality of life for their citizens through delivering better services and goods in a mutual and creative relationship” (Paskaleva, 2011: 161). Smart cities use digital technology to be progressive and socially inclusive, starting with people and human capital (Hollands, 2008), connecting human, institutional and technological components of urban environments to shape the city as an inclusive community (Nam and Pardo, 2011b), making cities more sustainable as well as inclusive and people-centred communities (Chang *et al.*, 2022). Smart and truly inclusive cities focus on citizen empowerment to drive long-term sustainability and inclusive growth, and improve quality of life (Paskaleva, 2011; Martin, Evans and Karvonen, 2018). They help build sustainable and inclusive cities, meeting the expectations of urban society in the 21st century (Osborne, Kearns and Yang, 2013). More importantly, a smart city helps to shape the city of the future where technology helps improve the social needs and quality of life of people and communities (Lazariou and Roscia, 2012), following a human-centric driven view for technological and social innovation (Costales, 2022). As smart-driven and inclusive urban communities, cities enable citizens to promote social innovations and technological advancements, thus fostering community entrepreneurship (Kummitha and Crutzen, 2017).

3. Methodology

The study employs a qualitative, descriptive and exploratory methodology to analyse how cities are rethinking their future development as inclusive, smart and sustainable communities. While cities are planning to transform urban environments into smart cities as an urban policy priority, they are rediscovering the smart city as an opportunity to drive the city to become a smart and inclusive community. European cities are rethinking the urban future, employing ICT to shape smart, sustainable and inclusive urban communities. Some European smart strategy frameworks are reported and described below. Within European documents and reports, the need to drive sustainable growth relies on cities developing

information technology to build smart, inclusive and sustainable cities and communities as engines of urban innovation and socially inclusive growth. The study focuses on three case studies, Paris, Florence and Wien, which refer to cities that are rethinking their urban future and redesigning the urban development planning by adopting a smart strategy as a vision for driving the city as a sustainable urban community. The cities' sample was selected by considering how certain European historically and culturally relevant and different cities are addressing a smart urban development by virtue of variety and diversity of approach and following common pathways of social growth. Three smart cities and their development planning for the urban future were selected to make illustrative and exploratory examples that showcase us the need for cities regarding the commitment to face the global, environmental and social challenges of the future, constructing a smart and human-driven framework to improve urban competitiveness, quality of life and prosperity of urban communities. The phenomenon of cities adopting a smart view of urban development to shape inclusive and sustainable communities is emerging and is still in progress in contemporary times. These illustrative cases are used to explore a phenomenon that is still happening. The smart city frameworks reported illustrate the attempt to shape a smart inclusive city as an innovative and emerging phenomenon and enable cities to evolve as inclusive communities. The study follows a multiple case study methodology. A case study refers to an empirical inquiry to investigate a contemporary phenomenon, whereas the boundaries between the phenomenon and the context are not clearly evident (Yin, 2009). The research methods involves case selection and data collection from policy documents. In particular, smart city strategy framework (*Paris Smart and Sustainable Looking ahead to 2020 and beyond*, *Firenze Smart City Plan* and *Wien Smart City Strategy Framework*) adopted by the municipalities of Paris, Florence and Wien as policy documents are considered information sources to collect and analyse data and information, and to investigate how some European cities are rethinking and planning their urban future development coherently with a smart city view by designing a smart and inclusive community as an engine of urban innovation and social growth. A descriptive case study research was employed for the qualitative analysis of the smart city strategy adopted by municipalities to make the city as smart city and community (Angelidou, 2014; Angelidou, 2017; Mora and Bolici, 2017; Sancino and Hudson, 2020). Investigating strategic choices regarding smart city strategy design helps understand the pathway cities are following in building their urban future (Angelidou, 2014). Following Yin's (2009) guidelines that ensure the regularity of the construct, planning, and execution of the case study, this methodology aims to provide a comprehensive understanding of the phenomenon at hand without the rigidity of a predefined structure for observations and analysis.

Several reasons led us to select these cases. Firstly, all three cases refer to the smart city vision as urban development framework that may revitalise the city as a community, improving processes, services and quality of life of the city thus becoming a more sustainable community. Secondly, planning a smart city view towards urban development means enhancing the potential of ICT as an enabler of urban, social and collaborative innovation as a driver of social inclusion. Thirdly, the selected cities are looking at the future, tracking a pathway step by step identifying technology as a source that opens up organisational, social and human processes that contribute to urban creation and prosperity in the long-term.

Specifically, the methodology based on case studies refers to research concerning the relationships between the issues drawn from smart city framework planning and the impact on urban development and benefits for communities. The smart city is a conceptual urban

development model that involves human and technological capital to support the collaborative efforts and developments of urban communities (Angelidou, 2017). The case studies are considered to describe how cities are in transition to designing smart and inclusive communities to drive urban transformation and sustainability following strategic planning as a flexible means to face and solve the operational challenges ahead (Lee *et al.*, 2022). A city's strategy for becoming smart relies on strategic urban planning and a smart city framework, and shapes different development cultures (Angelidou, 2017). Smart city strategies elucidate how a city aims to become smart, innovative and inclusive going into the future as sustainable urban community (Turnbull, 2007).

4. Smart urban strategy and planning: rethinking smart and inclusive urban futures

Cities are defining a smart city strategy to design collaborative, inclusive and participatory processes and principles (Mora and Bolici, 2017). Rethinking smart urban planning helps to produce a smart, socially open, inclusive city by involving stakeholders and citizens (Nielsen, Baer and Lindkvist, 2019) to improve quality of life, preserving urban ecosystem relying on users' participation and multi-actor decision-making (Yigitcanlar and Teriman, 2015; Komninos *et al.*, 2019). Moreover, cities are planning a smart urban strategy and vision to identify an urban sustainable and inclusive pathway for development. In this study, three illustrative case studies are reported to elucidate that smart and inclusive urban development is emerging. Some European cities adopt smart vision planning that helps in understanding how cities are rethinking their urban future as smart and inclusive urban development. The analysis of the case studies reveals that cities adopt a smart vision to shape the city of the future as a sustainable and inclusive community by strengthening a collaborative framework; thus, fostering urban environments as collaborative spaces that enable various stakeholders to improve the quality of life of those citizens living within living urban communities.

4.1. Paris Smart and Sustainable: Looking ahead to 2020 and beyond (2015)

In the document *Paris Smart and Sustainable Looking ahead to 2020 and beyond* (2015), it is stated that Paris aims to become a more connected, sustainable, attractive, inclusive and resilient city. "A smart and sustainable Paris embodies social, ecological, cultural, economic and technological convergences with the citizen at its center" (p. 26) as reported in the *Paris Smart and Sustainable* framework. Digital transformation helps make the city smarter as a more inclusive urban community. Social inclusion is an issue of information technology's use. In particular, digital inclusion arises from the development of new technologies by offering multichannel services and expanding access to digital use. The aim and ambition of a city going smart into the future are to reinvent the city for all citizens. Inclusion, innovation and resilience are powerful driving forces for the 21st-century city. New knowledge and technologies offer effective tools for engendering social, economic, cultural and environmental progress to develop social cohesion, solidarity and coexistence. A smart and sustainable city embodies social, ecological, cultural, economic and technological convergences with the citizen at its centre. Paris is changing by facing the global and societal challenges of today, proceeding towards a smart and sustainable future. To become a smart and sustainable community, cities use the potential of information technology to improve the quality of life

within urban communities. Smartness helps drive the city towards a sustainable future related to the improvement of the quality of life. The smart and sustainable city is acting as an open, future-driven, inclusive and innovative platform that develops new services that put technology, data, interoperability and interconnected networks front and centre. Developing the city of the future means bringing together social, technological and organisational dimensions for driving a smart and sustainable city that relies on three pillars, as subsequently described: the *connected city* is viewed as a tool that relies on constantly changing infrastructures such as communication networks, connected devices and sensors, to continually integrate technological advances. The *connected city* offers high-quality public interest services and provides convenient access to them for citizens: innovative tools provide digital technologies for enabling an open, citizen-oriented, smart and sustainable city. Digital platforms open to new services and enable interoperability and information exchange. Hence, the *open city* is a method that means stimulating citizen participation and collaborative projects, exchanging, sharing and co-creating with researchers, scientist and academics, strengthening the innovation ecosystem and promoting public innovation by transforming public administration, simplifying processes and reorganising departments, improving public services through city employees who contribute to reinventing the administration with their ideas and practices. Furthermore, the *open city* as a method relies on an open innovation approach by referring to people's intelligence, encouraging citizen participation, open data and project co-creation. Open innovation relies on identifying the solutions of tomorrow through collective intelligence and collaborative processes that involve public stakeholders, businesses, researchers and citizens. An open city is an inclusive community that places people at the core of the urban system by enabling them to provide socially innovative inputs and contribute to the co-design of information, knowledge and social exchanges. The *connected city* as a tool relies on using digital technologies as a source of inspiration to form a network through which information becomes accessible, to enable citizens' initiatives to emerge. A *sustainable city* is a goal and place where technology serves people, improving their inclusion in city life, thus allowing them to be involved in public services creation and policy decision-making processes. It is a place where different networks cooperate to improve everyone's lives. The sustainable city is an inclusive community meeting economic, social, cultural and environmental imperatives to contribute to value creation. Smart cities are places where technology supports people and helps include them in city life, bridging the gap between new public services and policymaking. In particular, a smart and sustainable city relies on the intelligent work of citizens and enables people to face global challenges and play a proactive role in building the urban future.

4.2. *Smart City Wien Framework Strategy (2014)*

Wien is a city looking at the urban future by rethinking smart, sustainable and inclusive policies and actions to make innovative urban environments. The document *Smart City Wien Framework Strategy (2014)* refers to an urban framework strategy that is looking at the 2050. The aim is to drive Wien as a place that fosters and supports innovation as an engine of inclusive growth and communities. Wien aims to become a smart, innovative and inclusive city in the future. In particular, it is acknowledged that the future is designed in the cities that are places of major social innovations, changes and renewal. Being a smart city for Wien helps raise quality of life and improve the degree of social and community participation. The

framework concerns all target groups of the city: citizens, businesses, no profit institutions and public organisations. The framework document refers to upcoming challenges and an overview of objectives and policy areas. The objectives are the highest possible resource preservation; innovation leader through cutting-edge research; a strong economy and education; and ensuring a top-level quality of living. In the document, it is clearly stated that the smart city also means promoting and strengthening social inclusion, that is: the city takes account of the needs of all residents. As a smart inclusive city, Wien supports social inclusion processes by meeting the needs of many different population groups, recognising diversity and promoting high social security, supporting high quality living through high standards of public services and enabling development to be perceived by all citizens. A smart inclusive city enables co-determination and participation to shape the development of the city, opening up to debate and dialogue through involvement, and drives social innovation and progress relying on technological developments that meet the needs of citizens and contribute to enhancing the interaction of different individuals and organisations. The *Smart City Wien 2050 vision* relies on some key concepts to be developed and implemented in actions: quality of living, sustainability, prosperity, opportunities for education and workplaces. Social inclusion is an objective related to the quality of living improvements. Ensuring quality of life relies on focusing on social inclusion to strengthen life satisfaction. The role of ICT is to contribute to simplifying life and enabling people to handle transactions anywhere and anytime and to continue professional education without boundaries. Promoting smartness is viewed as a change process. It is clearly elucidated as the mission of a city progressing becoming smart: to not let anybody down, to integrate the social component in the development process and to allow people access to the same degree of participation. The goal is to ensure a top-level quality of living focusing on social participation and inclusion, safety and security, leisure quality and culture, openness, diversity of gender roles and an equally high degree of social participation as key factors that enable urban development. Promoting a smart and sustainable city strategy relies on rethinking urban governance models strengthening co-ordination and cooperation as ways for constructing shared collaborative and governance processes that involve all the stakeholders within the urban community. Moreover, it is necessary to strengthen the cooperation on Wien's smart city issues with universities, research centres and institutions to stimulate social innovation as a vision, engendering new opportunities for urban value creation. Developing a smart strategy relies on strengthening the participation of citizens and experts as a driver of open innovation, co-determination and multi-actor management via technology's potential. Wien's smart city fosters social inclusion considering the needs of all residents. That is, meeting the needs of many different population groups, recognising this diversity, maintaining high levels of social security and high standards of public services and healthcare systems, strengthening codetermination and participation to ensure democratic frameworks of governance as a means for smart city development, stimulating social innovations and progress, sustaining both social and technological developments more strongly inspired by the needs of citizens, and taking particular account of the interaction between individuals and organisations.

4.3. Planning Florence as a smart inclusive and integrated city

In the document *Firenze Smart City Plan* (2015), the city of the future is viewed as a smart, inclusive, intelligent and sustainable community that develops and integrates technological,

social and organisational components and capabilities of an urban ecosystem. The intelligent city of the future can develop smart answers to contemporary and future challenges that affect urban growth, by identifying cooperative and collaborative frameworks for urban governance, thus shaping a smart and sustainable future. The city of the future is a smart community that supports technological and social infrastructures to ensure a high quality of life within urban environments, putting the citizen first, searching for inclusive spaces of collaboration, dialogue and co-design that involve all urban stakeholders. In the *Firenze Smart City Plan*, cities are living organisms comprising people within the context of urban transformation through intelligent communities. Citizens play a proactive role in identifying the pathway of urban development by improving the quality of life for each and every citizen living in an urban metropolitan environment. In particular, planning a smart urban vision helps the city as a community of people to create meaning and produce culture, creativity and thinking by putting the people as the first actors of human and civil progress. Promoting smartness implies always using technology and serves to make cities more intelligent, sustainable, capable to drive innovation, and reinforcing social relationships within the urban community. A smart city refers to a city that is changing and constructing new social, urban, and economic responses to environmental and historical pressures. The smart city plan is an open space for debate, confrontation and exchange of information and knowledge among all urban stakeholders interested in contributing to urban, social, and economic development. A smart city master plan helps the city to drive continuous urban innovation, improve the quality of life within the community and to develop urban sustainable planning that relies on clear and strong distributed and collective leadership and vision. This plan considers the city as a system of processes, where all the elements of the city are interrelated and connected, promoting collaboration among all the involved stakeholders (public administration, research centres, cultural institutions, businesses, associations, groups, citizens) along the urban value chain.

A smart city strategy develops by promoting an open innovation view to ensure the stakeholders' involvement and embracing the four *Is*: (1) *integration* of all possible aspects and sectors in charge of a municipality's competences and background; (2) *innovation*, in terms of developing innovative services and approaches by relying on the potential offered by digital and interactive information technology; (3) *involvement* as a means to urge stakeholders to identify, plan, share and implement a strategic, long-term vision and goals more ambitious than the present situation; and (4) *information*, as related to the use of ICT as a way to reinforce and consolidate the relationships between municipality and citizens to monitor the implementation of an urban smart strategy. ICT emerges as a critical successful factor and facilitator of all the actions and initiatives indicated in the smart city plan. ICT is also a strategic element that spreads digital culture and contributes to digital culture growth within an urban ecosystem: involving stakeholders and citizens, developing adequate communication providing transparent, accessible and open public administration that is able to consider the inputs and contributions of citizens, to confront and communicate with citizens, thus enabling them in the policy process and inclusive and participatory decision-making stages. Connecting minds and creating the future is a concept that enables technological development and applications that support ideas, knowledge and social exchanges to support a comprehensive involvement of the urban community. Developing communication helps to reinforce citizen awareness of how to face and solve problems emerging in the urban context, and supports citizenship behaviours and participation as oriented to effective action to achieve shared objectives.

5. Findings, discussion and conclusions

The cities of tomorrow are planning their future as well as smart inclusive urban communities, developing the potential of ICT to promote inclusive social urban growth, improving the quality of life, and following a smart city framework to improve the well-being of urban communities to identify a pathway to future urban development. Smart inclusive cities contribute to a high quality of life, and achieve urban sustainability, making cities as collaborative open spaces and the *loci* of innovation that are driving pathways of urban and social inclusion. Smart, open and inclusive cities support continuous urban development and innovation, making wealthy urban communities, and empowering citizens who are involved in policies and services co-production, and ensuring a better quality of life.

Driving social inclusion by promoting smart communities within urban spaces helps ensure the quality of life and urban sustainability. As engines of urban innovation and smart and inclusive communities, cities, therefore, develop the potential offered by digital technologies, moving from a technology-enabled to a community-oriented and human-centric approach, putting the people first, focusing on human and social capital, and community, shaping urban collaborative spaces to drive continuous social and economic innovation, strengthening participation and stakeholders' involvement as a key driver for supporting the city as a collaborative, inclusive and innovation-led community.

The *Paris sustainable city vision* enables technology as a means to make the city a connected, open, inclusive and sustainable community that is engaging citizens, and developing the open city as a way to drive collaborative processes, fostering the city as organisational and informational space and engine of value creation, and strengthening participatory policy-making processes and services to drive social and inclusive growth. The connected city as a tool enhances the potential offered by technologies for human-centred urban development. The open city shapes an organisational framework relying on collaborative urban spaces that engender urban innovation, leading to the goal of a sustainable city as an inclusive community.

In the *Wien smart city framework*, the use of information technology serves for community development and helps drive the city as an inclusive and innovative community, opening up to collaborative processes that support urban value creation and social innovation. Technology is a means to enhance co-participation, co-determination and co-decision-making and inclusion as strategic and organisational view to identifying a pathway for sustainable urban development that relies on strengthening the city as an inclusive, collaboration-led and innovation-driven urban community.

Florence's smart city planning focuses on using information technology to improve the information needs of urban stakeholders and ensure integration within the urban community, to support citizen and community involvement to drive urban innovation. Developing smart inclusive cities relies on fostering stakeholders' participation and engagement, thereby shaping an inclusive urban community. Smart inclusive cities bring together integration, innovation, involvement, and information. Technology enables citizens and the community to participate in processes that drive urban value creation, innovation and sustainability.

Furthermore, smart inclusive cities contribute to open and innovative urban communities that strengthen participatory, human- and community-centred cooperative and collaborative

processes. As a social process, the urban inclusion is a driver, goal and issue of urban innovation policies as enabled by ICT in the city as a collaborative space that enables processes of urban value creation. Smart cities as inclusive communities drive urban innovation as social inclusion, adopting a human-centred smart-oriented vision to urban development, shaping the city as an innovation-driven, socially inclusive, open and knowledge-oriented community.

In the study, theoretical, organisational, managerial and social implications emerge. As organisational spaces, cities open up to collaborative spaces that involve stakeholders in value creation processes. The city as a smart and inclusive urban community is an organisational and innovative space that enables collaborative frameworks that involve different urban stakeholders interested in the sustainable future of the city. A smart inclusive city stresses the organisational dimension of the city as an open space and engine of social and economic growth and innovation. Moreover, a smart inclusive city relies on citizen empowerment, stakeholder participation and engagement as a framework that opens up new opportunities for urban value creation and shapes the city as a community and an engine of social, inclusive and sustainable growth. Cities are adopting a smart vision to shape an inclusive urban community as an engine of social innovation. There are several ways that lead to shaping the city as an inclusive community, developing a smart city strategy for urban change. Wien is proceeding towards a city of the future as inclusive smart city as a driver of urban innovation and able to achieve urban sustainability by promoting collaborative urban spaces. Paris is looking at the sustainable city as an inclusive community that relies on promoting open innovation as enabled by technology that enables the urban community as a connected city. Florence is designing a smart city vision in order to build smartness as a capability to define urban policies and support innovation, building a cohesive and inclusive urban community, ensuring mechanisms of coordination that concern community involvement, open and wide information and integration, and spaces of innovation. Importantly, building smart inclusive cities relies on developing managerial skills and competences, and promoting opportunities for collective intelligence and collaborative leadership.

While following a smart vision for future urban development, cities identify an inclusion-oriented pathway in creating opportunities for promoting urban open innovation, moving from a technology-enabled approach to a community-oriented vision that relies on collaborative processes that involve all the urban stakeholders; adopting a human-centred or techno-centric view to urban smart development and social growth; and favouring an information-driven or participative-oriented vision in the co-construction and co-innovation of a smart and sustainable urban pathway. Furthermore, smart inclusive cities as communities focus on social and human capital, put the people first and adopt a human-centred and participative-oriented view of urban growth dealing with technology, so making the city as better place for life and work, by engendering collaborative and open processes that support social inclusion as the issue of smart urban innovation.

However, there are some limitations to the study. The study is mainly exploratory and the analysis offers only three illustrative case studies to elucidate a smart city vision as urban planning helps design social and inclusive urban development models within urban communities. There are no issues regarding smart inclusive city applications that contribute to improvements of inclusive urban environments. Today, cities are facing the challenge of social inclusion as both a goal and means to shape a sustainable urban future in the long-term horizon, by selecting a smart vision to future urban growth. Cities of tomorrow shape inclusive urban communities to identify an organisational framework that opens up opportunities of

urban value creation and innovation, using the potential of technologies. Future research perspectives should include investigating the discourse about planning and designing the smart city vision as a means to promote the city as an inclusive and sustainable urban community within the context of Italian cities and communities.

Keywords:

cities, smart communities, inclusive cities

References

- Albino, V., Berardi, U., and Dangelico, R.M. (2015), "Smart Cities: Definitions, Dimensions, Performance, and Initiatives", *Journal of Urban Technology*, 22 (1): 3–21.
- Allwinckle, S., and Cruickshank, P. (2011), "Creating Smart-er Cities: An Overview", *Journal of Urban Technology*, 18 (2): 1–16.
- Andreani, S., Kalchschmidt, M., Pinto, R., and Sayegh, A. (2019), "Reframing Technologically Enhanced Urban Scenarios: A Design Research Model Towards Human Centered Smart Cities", *Technological Forecasting & Social Change*, 142: 15–25.
- Angelidou, M., Psaltoglou, A., Komninos, N., Kakderi, C., Tsarchopoulos, P., and Panori, A. (2018), "Enhancing Sustainable Urban Development through Smart City Applications", *Journal of Science and Technology Policy Management*, 9 (2): 146–169.
- Angelidou, M. (2014), "Smart City Policies: A Spatial Approach", *Cities*, 41: S3-S11.
- Angelidou, M. (2017), "The Role of Smart City Characteristics in the Plans of Fifteen Cities", *Journal of Urban Technology*, 24 (4): 3–28.
- Anttiroiko, A.V., Valkama, P., and Bailey, S.J. (2014), "Smart Cities in the New Service Economy: Building Platforms for Smart Services", *AI & Society*, 29 (3): 323–334.
- Appio, F.P., Lima, M., and Paroutis, S. (2019), "Understanding Smart Cities: Innovation Ecosystems, Technological Advancements, and Societal Challenges", *Technological Forecasting & Social Change*, 142: 1–14.
- Bătăgan, L. (2011), "Smart Cities and Sustainability Models", *Informatica Economică*, 15 (3): 80–87.
- Begg, I. (1999), "Cities and Competitiveness", *Urban Studies*, 36 (5-6): 795–809.
- Blasi, S., Ganzaroli, A., and De Noni, I. (2022), "Smartening Sustainable Development in Cities: Strengthening the Theoretical Linkage between Smart Cities and SDGs", *Sustainable Cities and Society*, 80.
- Caragliu, A., and Del Bo, C.F. (2019), "Smart Innovative Cities: The Impact of Smart City Policies on Urban Innovation", *Technological Forecasting and Social Change*, 142: 373–383.
- Caragliu, A., Del Bo, C.F., and Nijkamp, P. (2011), "Smart Cities in Europe", *Journal of Urban Technology*, 8 (2): 65–82.
- Castells, M. (2000), "Urban Sustainability in the Information Age", *City*, 4 (1): 118–122.
- Chang, J.I., Choi, J., An, H., and Chung, H.Y. (2022), "Gendering the Smart City: A Case Study of Sejong City, Korea", *Cities*, 120.

- Comune di Firenze (2015), *Firenze Smart City Plan*. Available online at https://ambiente.comune.fi.it/sites/ambiente.comune.fi.it/files/2019-11/Smart_City_Plan_it.pdf (last accessed: November 13, 2021).
- Costales, E. (2022), "Identifying Sources of Innovation: Building a Conceptual Framework of the Smart City through a Social Innovation Perspective", *Cities*, 120.
- Czarniaskwa, B. (2002a), *A Tale of Three Cities: Or the Glocalization of City Management*, Oxford: Oxford University Press.
- Czarniawska, B. (2002b), "Remembering While Forgetting: The Role of Automorphism in City Management in Warsaw", *Public Administration Review*, 62 (2): 163–173.
- Dameri, R. (2013), "Searching for Smart City Definition: A Comprehensive Proposal", *International Journal of Computers & Technology*, 11 (5): 2544–2551.
- de Hoop, E., Moss, T., Smith, A., and Löffler, E. (2022), "Knowing and Governing Smart Cities: Four Cases of Citizen Engagement with Digital Urbanism", *Urban Governance*.
- Deakin, M. (2011), "The Embedded Intelligence of Smart Cities", *Intelligent Buildings International*, 3 (3): 189–197.
- Deakin, M. (2014), "Smart Cities: State-of-the-Art and Governance Challenge", *Triple Helix*, 1 (7): 1–16.
- Deakin, M., Hirst, P., Hummerstone, E., Webb, S., Karlsson, A.-K., Blin, A.-S., Duff, M., Jordanou, M., and Deakin, M (2012), *JESSICA for Smart and Sustainable Cities*, European Investment Bank, London: Mazars LLP.
- Eger, J.M. (2005), "Smart Communities, Universities, and Globalization: Educating the Workforce for Tomorrow's Economy", *Metropolitan Universities*, 16 (4): 28–38.
- European Commission (2017), *Report from the Commission to the Council on the Urban Agenda for the EU*, COM (2017), 657 final, Brussels: European Commission. Available online at https://ec.europa.eu/regional_policy/sources/policy/themes/urban/report_urban_agenda2017_en.pdf (last accessed: November 13, 2021).
- European Commission (2012) *Smart cities and communities – European Innovation Partnership*, C (2012) 4701 final, Brussels: European Commission. Available online at [https://ec.europa.eu/transparency/documents-register/detail?ref=C\(2012\)4701](https://ec.europa.eu/transparency/documents-register/detail?ref=C(2012)4701) (last accessed: November 13, 2021).
- European Commission (2010) *EUROPE 2020. A Strategy for smart, sustainable and inclusive growth*, COM (2010) 2020, Brussels: European Commission. Available online at <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex:52010DC2020> (last accessed: November 13, 2021).
- European Union (2011), *Cities of Tomorrow: Challenges, Visions, Ways Forward*, Brussels: European Commission, Directorate General for Regional Policy.
- European Economic and Social Committee (2015), *Opinion of the European Economic and Social Committee on 'Smart Cities as Drivers for Development of a New European Industrial Policy'*, C383/24, Brussels: European Commission.
- Fernandez-Anez, V., Fernández-Güell, J.M., and Giffinger, R. (2018), "Smart City Implementation and Discourses: An Integrated Conceptual Model. The Case of Vienna", *Cities*, 78: 4–16.

- Giffinger, R., Fernery, C., Kramer, H., Kaasen, R., Pichler-Milanović, N., and Meijers, E. (2007), *Smart Cities: Ranking of European Medium-Sized Cities*, Vienna: Centre of Regional Science (SRF), Vienna University of Technology. Available online at http://www.smart-cities.eu/download/smart_cities_final_report.pdf (last accessed: November 13, 2021).
- Gil-Garcia, J.R., Pardo, T.A., and Nam, T. (2015), "What Makes a City Smart? Identifying Core Components and Proposing an Integrative and Comprehensive Conceptualization", *Information Polity*, 20 (1): 61–87.
- Gil-Garcia, J.R., Pardo, T.A., and Nam, T. (2016), "A Comprehensive View of the 21 Century City: Smartness as Technologies and Innovation in Urban Contexts", in J.R. Gil-Garcia, T.A. Pardo, and T. Nam (eds), *Smarter as the New Urban Agenda: A Comprehensive View of the 21st Century City*, pp. 1–21, Cham: Springer.
- Hartley, J., Sørensen, E., and Torfing, J. (2013), "Collaborative Innovation: A Viable Alternative to Market Competition and Organizational Entrepreneurship", *Public Administration Review*, 73 (6): 821–830.
- Hollands, R.G. (2008), "Will the Real Smart City Please Stand Up? Intelligent, Progressive or Entrepreneurial?", *City*, 12 (3): 303–320.
- Khan, S., and Zaman, A.U. (2018), "Future Cities: Conceptualizing the Future Based on a Critical Examination of Existing Notions of Cities", *Cities*, 72: 217–225.
- Knight, R.V. (1995), "Knowledge-based Development: Policy and Planning Implications for Cities", *Urban Studies*, 32 (2): 225–260.
- Knox, H. (2010), "Cities and Organisation: The Information City and Urban Form", *Culture and Organization*, 16 (3): 185–195.
- Komninos, N., Kakderi, C., Panori, A., and Tsarchopoulos P. (2019), "Smart City Planning from an Evolutionary Perspective", *Journal of Urban Technology*, 26 (2): 3–20.
- Komninos, N. (2014), "Introduction: The Age of Intelligent Cities", in Komninos, N., *The Age of Intelligent Cities: Smart Environments and Innovation-For-All Strategies*, pp. 1–9, London: Routledge.
- Kummitha, R.K.R., and Crutzen, N. (2017), "How Do We Understand Smart Cities? An Evolutionary Perspective", *Cities* 67: 43–52.
- Joss, S., Sengers, F., Schraven, D., Caprotti F., and Dayot, Y. (2019), "The Smart City as Global Discourse: Storylines and Critical Junctures across 27 Cities", *Journal of Urban Technology*, 26 (1): 3–34.
- Lara, A.P., Da Costa, E.M., Furlan, T.Z., and Yigitcanlar, T. (2016), "Smartness That Matters: Towards a Comprehensive and Human-Centred Characterisation of Smart Cities", *Journal of Open Innovation: Technology, Market and Complexity*, 2 (2): 1–13.
- Lazariou, G.C., and Roscia, M. (2012), "Definition Methodology for the Smart Cities Model", *Energy*, 47 (1), 326–332.
- Lee, J., Babcock, J., Pham, T.S., Bui, T.H., and Kang, M. (2022), "Smart City as a Social Transition Towards Inclusive Development through Technology: A Tale of Four Smart Cities", *International Journal of Urban Sciences*, 1–26. DOI: 10.1080/12265934.2022.2074076.
- Liang, D., De Jong, M., Schraven, D., and Wang, L. (2021), "Mapping Key Features and Dimensions of the Inclusive City: A Systematic Bibliometric Analysis and Literature Study", *International Journal of Sustainable Development & World Ecology*, 29 (1): 60–79.

- Lindskog, H. (2004), "Smart communities initiatives", In *Proceedings of the 3rd ISOneWorld Conference*, 16. Available online at <http://heldag.com/articles/Smart%20communities%20april%202004.pdf> (last accessed: November 13, 2021).
- Mairie de Paris (2015), *Paris Smart and Sustainable Looking Ahead to 2020 and Beyond*. Available online at <https://cdn.paris.fr/paris/2020/02/26/f7dc822a66de6000cd910a145c7fca39.ai> (last accessed: November 13, 2021).
- Malek, J.A., Lim, S.B., and Yigitcanlar, T. (2021), "Social Inclusion Indicators for Building Citizen-Centric Smart Cities: A Systematic Literature Review", *Sustainability*, 13: 1–29.
- Martin, C.J., Evans, J., and Karvonen, A. (2018), "Smart and Sustainable? Five Tensions in the Visions and Practices of the Smart-Sustainable City in Europe and North America", *Technological Forecasting and Social Change*, 133: 269–278.
- Martinez, J., Mikkelsen, C.A., and Phillips, R. (2021), "Introduction: Quality of Life and Sustainability, Socio-spatial, and Multidisciplinary Perspectives", in J. Martinez, C.A. Mikkelsen, and R. Phillips (eds), *Handbook of Quality of Life and Sustainability*, pp. 1–14, Cham: Springer.
- Meijer, A., and Bolívar, M.P.R. (2016), "Governing the Smart City: A Review of the Literature on Smart Urban Governance", *International Review of Administrative Sciences*, 82 (2): 392–408.
- Meijer, A.J., and Thaens, M. (2018), "Urban Technological Innovation: Developing and Testing a Sociotechnical Framework for Studying Smart City Projects", *Urban Affairs Review* 54 (2): 363–387.
- Mora, L., and Bolici, R. (2017), "How to Become a Smart City: Learning from Amsterdam", in A. Bisello, D. Vettorato, R. Stephens, and P. Elisei (eds), *Smart and Sustainable Planning for Cities and Regions*, pp. 251–266, Cham: Springer.
- Mora, L., Deakin, M., Reid, A., and Angelidou, M. (2019), "How to Overcome the Dichotomous Nature of Smart City Research: Proposed Methodology and Results of a Pilot Study", *Journal of Urban Technology*, 26 (2): 89–128.
- Nam, T., and Pardo, T.A. (2011a), "Smart City as Urban Innovation with Dimensions of Technology, People and Institutions", in *Proceedings of the 5th International Conference on Theory and Practice of Electronic Governance*, pp. 185–194, ACM.
- Nam, T., and Pardo, T.A. (2011b), "Conceptualizing Smart City with Dimensions of Technology, People, and Institutions", in *Proceedings of the 12th Annual International Digital Government Research Conference: Digital Government Innovation in Challenging Times*, pp. 282–291, ACM.
- Nielsen, B.F., Baer, D., and Lindkvist, C. (2019), "Identifying and Supporting Exploratory and Exploitative Models of Innovation in Municipal Urban Planning; Key Challenges from Seven Norwegian Energy Ambitious Neighborhood Pilots", *Technological Forecasting and Social Change*, 142: 142–153.
- Nijkamp, P., and Perrels, A. (1994), *Sustainable Cities in Europe*, London: Earthscan.
- Nilssen, M. (2019), "To the Smart City and Beyond? Developing a Typology of Smart Urban Innovation", *Technological Forecasting & Social Change*, 142: 98–104.

- Odendaal, N. (2021), "Everyday Urbanisms and the Importance of Place: Exploring the Elements of the Emancipatory Smart City", *Urban Studies*, 58 (3): 639–654.
- Osborne, M., Kearns, P., and Yang, J. (2013), "Learning Cities: Developing Inclusive, Prosperous and Sustainable Urban Communities", *International Review of Education*, 59 (4): 409–423.
- Palumbo, R., Manesh, M.F., Pellegrini, M.M., Caputo, A., and Flamini, G. (2021), "Organizing a Sustainable Smart Urban Ecosystem: Perspectives and Insights from a Bibliometric Analysis and Literature Review", *Journal of Cleaner Production*, 297. DOI: 10.1016/j.jclepro.2021.126622.
- Pardo, T.A., Gil-Garcia, J.R., Gascó-Hernández, M., Cook, M.E., and Choi, I. (2021), "Creating Public Value in Cities: A Call for Focus on Context and Capability", in E. Estevez, T.A. Pardo, and H.J. Scholl (eds), *Smart Cities and Smart Governance: Towards the 22nd Century Sustainable City*, pp. 119–140, Cham: Springer.
- Paskaleva, K.A. (2011), "The Smart City: A Nexus for Open Innovation?", *Intelligent Buildings International*, 3 (3): 153–171.
- Paskaleva, K.A., and Cooper, I. (2018), "Open Innovation and the Evaluation of Internet-Enabled Public Services in Smart Cities", *Technovation*, 78: 4–14.
- Peris-Ortiz, M., Bennett, D.R., and Yábar, D.P.B. (2017), "Preface", in M. Peris-Ortiz, D.R. Bennett, and D.P.B. Yábar (eds), *Sustainable Smart Cities: Creating Spaces for Technological, Social and Business Development*, pp. ix–xii, Cham: Springer.
- Sancino, A., and Hudson, L. (2020), "Leadership in, of, and for Smart Cities: Case Studies from Europe, America, and Australia", *Public Management Review*, 22 (5): 701–725.
- Sennett, R. (2017), "The Open City", in T. Haas and H. Westlund (eds), *The Post-Urban World: Emergent Transformation of Cities and Regions in the Innovative Global Economy*, pp. 97–106, London and New York: Routledge.
- Shapiro, J.M. (2006), "Smart Cities: Quality of Life, Productivity and the Growth. Effects of Human Capital", *The Review of Economics and Statistics*, 88 (2): 324–335.
- Shearmur, R. (2012), "Are Cities the Font of Innovation? A Critical Review of the Literature on Cities and Innovation", *Cities*, 29: S9–S18.
- Sørensen, E., and Törting, J. (2018), "Co-Initiation of Collaborative Innovation in Urban Spaces", *Urban Affairs Review*, 54 (2): 388–418.
- Stratigeia, A. (2012), "The Concept of 'Smart Cities': Towards Community Development?", *Networks and Communication Studies*, 36 (3-4): 375–388.
- Stren, R.E., and Polèse, M. (2000), "Understanding the New Sociocultural Dynamics of Cities: Comparative Urban Policy in a Global Context", in R.E. Stren, and M. Polèse (eds), *The Social Sustainability of Cities: Diversity and the Management of Change*, pp. 3–38, Toronto: University of Toronto Press.
- United Nations (2017), *The New Urban Agenda*, United Nations Conference on Housing and Sustainable Urban Development (Habitat III), Quito, Ecuador, October 20, 2016. Available online at <https://habitat3.org/the-new-urban-agenda/> (last accessed: November 13, 2021).
- United Nations (2015), *Transforming Our World: The 2030 Agenda for Sustainable Development*, A/RES/ 70/1, September 25–27, 2015, New York, NY. Available online at

- https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf (last accessed: November 13, 2021).
- Therrien, M.C., Usher, S., and Matyas, D. (2020), "Enabling Strategies and Impeding Factors to Urban Resilience Implementation: A Scoping Review", *Journal of Contingencies and Crisis Management*, 28 (1): 83–102.
- Turnbull, S. (2007), "A Framework for Designing Sustainable Urban Communities", *Kybernetes*, 36 (9-10): 1543–1557.
- Vallance, P., Tewdwr-Jones, M., and Kempton, L. (2020), "Building Collaborative Platforms for Urban Innovation: Newcastle City Futures as a Quadruple Helix Intermediary", *European Urban and Regional Studies*, 27 (4): 325–341.
- Vienna City Administration (2014), *Smart City Wien Framework Strategy*. Available online at <https://www.wien.gv.at/stadtentwicklung/studien/pdf/b008384b.pdf> (last accessed: November 13, 2021).
- Waghmare, M., and Singhal, S. (2022), "Monitoring and Evaluation Framework for Inclusive Smart Cities in India", *Development in Practice*, 32 (2): 144–162.
- Yigitcanlar, T. (2017), "Smart Cities in the Making", *International Journal of Knowledge-Based Development*, 8 (3): 201–205.
- Yigitcanlar, T. (2021), "Smart City Beyond Efficiency: Technology-Policy-Community at Play for Sustainable Urban Futures", *Housing Policy Debate*, 31 (1): 88–92.
- Yigitcanlar, T., and Teriman, S. (2015), "Rethinking Sustainable Urban Development: Towards an Integrated Planning and Development Process", *International Journal of Environmental Science and Technology*, 12 (1): 341–352.
- Yigitcanlar, T., Dur, F., and Dizdaroglu, D. (2015), "Towards Prosperous Sustainable Cities: A Multiscalar Urban Sustainability Approach", *Habitat International*, 45: 36–46.
- Yigitcanlar, T., Kamruzzaman, Md., Foth, M., Sabatini-Marques, J., da Costa, E., and Ioppolo, G. (2019), "Can Cities Become Smart without Being Sustainable? A Systematic Review of the Literature", *Sustainable Cities and Society*, 45: 348–365.
- Yin, R.K. (2009), *Case Study Research: Design and Methods*, London: SAGE.
- Zygiaris, S. (2013), "Smart City Reference Model: Assisting Planners to Conceptualize the Building of Smart City Innovation Ecosystems", *Journal of the Knowledge Economy*, 4 (2): 217–231.